2011 - 2013 CATALOG/STUDENT HANDBOOK
Southwest Virginia Community College

CONTENTS

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Continuing Education & Evening Coordinator–1.800.822.7822
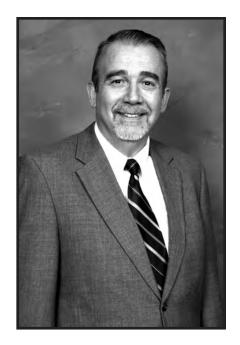V/TDD 276.964.7235 - Fax SWCC @ 276.964.9307
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PLEASE
BRING THIS CATALOG WITH YOU
FOR USE IN REGISTRATION

Message from the President

Dr. J. Mark Estepp

A warm welcome to you from Southwest Virginia Community College. Our mission is to prepare you to meet the requirements necessary for success in the global workplace or in a university setting. Whatever your career or personal goals, Southwest is the place to begin. The college offers a firm foundation on which to build your future.

We care about your success. At Southwest you will have the opportunity to work with one of the most dynamic groups of professors in the country. In addition, the large variety of programs and classes available at the college makes it easy for you to select one that's just right for you.

In addition to academics, your college experience at Southwest can have many levels, including participation in a variety of club and organization activities. This, coupled with a breathtaking campus nestled in the foothills of the Clinch Mountain Range, makes for an exciting educational adventure.

Come and see what Southwest has to offer. We would love to get to know you better and show you around our beautiful campus. Stop by, email, or phone - we're looking forward to seeing you soon.

PROGRAM OFFERINGS

Career Studies Certificates:

2011-2013 ACADEMIC YEAR CALENDAR

SUMMER SESSION 2011

May 31 . . . . Student registration
June 1 . . . . First day of classes [regular session and term 1]
June 6 . . . . Last day to register, add a course, and to receive tuition refund or change from credit to audit [term 1]
June 10 . . . . Last day to register, add a course, and to receive tuition refund or change from credit to audit
. . . . [regular session]
June 20 . . . . Last day to withdraw from class without academic penalty [term 1]
July 1 . . . . Last day of classes [term 1] and Student Registration [Term 2]
July 4 . . . . College closed-observance of independence day
July 5 . . . . First day of classes [term 2]
July 11 . . . . Last day to register, add a course, and to receive tuition refund or change from credit to audit [term 2]
July 11 . . . . Last day to withdraw from class without academic penalty [regular session]
July 13-15 . . . . Fall semester early registration for new and returning students
July 22 . . . . Last day to withdraw from class without academic penalty [term 2]
Aug 3 . . . . Last day of classes/final grades due

FALL SEMESTER 2011

August 16 . . . . Faculty/staff in-service day
August 17, 18 . . . . Student orientation
August 19, 22 . . . . Registration
August 23 . . . . First day of classes
August 30 . . . . Last day to add day and evening on-campus/video/web classes
September 5 . . . . College closed-labor day holiday
September 6 . . . . Last day to register for off campus classes
September 9 . . . . Last day to change from credit to audit, drop a class and receive tuition refund
September 30 . . . . No classes, faculty research day
October 27 . . . . Last day to withdraw from class without academic penalty
November 7 . . . . Advanced registration for spring begins
November 23 . . . . No classes, faculty research day
November 24, 25 . . . . College closed-thanksgiving holidays
December 12 . . . . Last day of classes
December 13, 14, 15, 16 . . . . Final exams for day classes
December 13, 14, 15, 19 . . . . Final exams for night classes
December 19 . . . . Faculty work day
December 20 . . . . Final grades due/faculty work day
December 21 . . . . Faculty work day

SPRING SEMESTER 2012

January 3 . . . . Faculty research day
January 4 . . . . Faculty/staff in-service day
January 5, 6 . . . . Student registration and orientation
January 9 . . . . First day of classes
January 16 . . . . Last day to add day and evening on-campus classes/video/web
January 20 . . . . Last day to register for off-campus classes
January 26 . . . . Last day to change from credit to audit, drop a class and receive tuition refund
March 12, 13, 14, 15, 16 . . . . no classes-faculty/student spring break
March 19 . . . . Advanced registration for summer begins
March 22-23 . . . . No classes-faculty research days
March 23 . . . . Last day to withdraw from class without academic penalty
April 2 . . . . Preregistration for fall semester begins
May 3 . . . . Last day of classes
May 4, 7, 8, 9 . . . . Final exams for day classes
May 7, 8, 9, 10 . . . . Final exams for night classes
May 10 . . . . Faculty work day/graduation
May 11 . . . . Final grades due/faculty work day
May 14, 15 . . . . Faculty work days

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SUMMER SESSION 2012

June 8 . . . . Student registration
June 11 . . . . First day of classes [regular session and term 1]
June 15 . . . . . Last day to register for off campus/evening/video/web class, add a class, change from credit to audit,
. . . . drop a class and to receive tuition refund [term 1]
June 19 . . . . . Last day to register for off campus/evening/video/web class, add a class, change from credit to audit,
. . . . drop a class and receive tuition refund [regular session]
June 25 . . . . Last day to withdraw from class without academic penalty [term 1]
July 4 . . . . College closed-observance of independence day
July 10 . . . . Last day of classes [term 1] and student registration [term 2]
July 11 . . . . First day of classes [term 2]
July 11-13 . . . . Fall semester early registration for new and returning students
July 13 . . . . Last day to register, add a class, change from credit to audit, and to receive tuition refund [term 2]
July 16 . . . . Last day to withdraw from class without academic penalty [regular session]
July 30 . . . . Last day to withdraw from class without academic penalty [term 2]
August 8 . . . . Last day of classes

FALL SEMESTER 2012

August 16 . . . . Faculty/staff in-service day
August 17 . . . . Student orientation
August 20, 21 . . . . Student registration
August 22 . . . . First day of classes
August 29 . . . . Last day to add day and evening on-campus/video/web classes
September 3 . . . . College closed-labor day holiday
September 5 . . . . Last day to register for off-campus classes
September 10 . . . . Last day to change from credit to audit, drop a class and receive tuition refund
October 5 . . . . No classes-faculty research day
October 26 . . . . Last day to withdraw from class without academic penalty
November 5 . . . . Advanced registration for spring begins
November 21 . . . . No classes-faculty research day
November 22, 23 . . . . College closed-thanksgiving holidays
December 11 . . . . Last day of classes
December 12, 13, 14, 17 . . . . Final exams for day classes
December 12, 13, 17, 18 . . . . Final exams for night classes
December 18 . . . . Faculty work day
December19 . . . . Final grades due/faculty work day
December 20 . . . . Faculty work day

SPRING SEMESTER 2013

January 2 . . . . Faculty research day
January 3 . . . . Faculty staff in-service day
January 4, 7, 8 . . . . Student registration
January 9 . . . . First day of classes
January 16 . . . . Last day to add day and evening on-campus/video/web classes
January 22 . . . . Last day to add register for off campus classes
January 28 . . . . Last day to change from credit to audit, drop a class and receive tuition refund
March 11, 12, 13, 14, 15 . . . . No classes-faculty/student spring break
March 18 . . . . Advanced registration for summer begins
March 22 . . . . Last day to withdraw from class without academic penalty
April 1 . . . . Preregistration for fall semester begins
April 11, 12 . . . . No classes-faculty research days
May 7 . . . . Last day of classes
May 8, 9, 10, 13 . . . . Final exams for day classes
May 7, 8, 9, 13 . . . . Final exams for night classes
May 14 . . . . Faculty work day
May 15 . . . . Faculty work day/graduation

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Dr. Barbara Fuller .... Vice-President of Instruction
Dr. Leonard V. Kogut...................Vice-President of Financial and Administrative Services
Roderick B. Moore.................. Associate Vice President of Student Development Services
Phyllis Roberts... Vice-President of Institutional Advancement
Teresa Alley .... Coordinator of Library Services
Peggy R. Barber... Director of Special Projects and Initiatives
James Dye ....Interim Dean, Division of Business and Engineering
Joyce Kinder ....Director, Small Business Development Center
Dr. Tony Lotito.. Coordinator of Evening Offerings
Kathy Mitchell ....Dean of Virginia Appalachian Tricollege Nursing Program
Sharon Peery .... Interim Dean of Workforce, Community & Economic Development
Cathy Smith-Cox ....Dean, Division of Health Care Technology, Humanities,
Mathematics, Natural Science, and Social Science

ACADEMIC SUPPORT PROGRAMS

Patsy G. Bussard ....Public Relations Coordinator
Dr. Natalie Chambers-Ramsey... Counselor/Financial Aid
Stephanie Davis ....Disabilities Service/Project ACCESS Director/Counselor
Dr. Amanda Ellis-O'Quinn .... Coordinator of Student Affairs, Recruitment & Retention
James E. Farris.. Director of Admissions and Counseling
Dr. Michael J. Henry... Student Support Services Project Director
Mary Lawson ....Foundation Executive Director
Denise Miller ....Veterans Upward Bound Advisor
Dr. Susie Mullins ....Student Support Services Counselor
Diane Phillips...Librarian
Gwendalyn Slone...Veterans Upward Bound Director
Martha Strouth ....Veterans Upward Bound Advisor
Dr. Edmond Smith .... Institutional Research Officer
Mary Margaret Thompson ....Student Support Services Tutorial Coordinator/Counselor

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Teresa Alley,...Coordinator of Library Services
    A. A. S., Southwest Virginia Community College, 1979; B. A., University of
    Virginia–Wise, 1981; M. S., University of Tennessee-Knoxville, 2000.

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    University, 2006.

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    B. S., Radford College, 1972; M. S., Radford College, 1974.

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    2011.

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    1979; Ed. S., Virginia Polytechnic and State University, 2003.

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    A. G. S., Parkland College, 1969; B. A., University of Illinois, 1971; M. A.,
    University of Illinois, 1976;   Ed. D., East Tennessee State University, 1996.

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    University, 1974.

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    A. A. S., Southwest Virginia Community College, 1992; B. S., East Tennessee State
    University, 1994; M. S., East Tennessee State University, 1999.

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    1986.

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    B. A., Radford University, 1990; M. B. A., Radford University, 1993; Ed. D.,
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    B. S., Bluefield State College, 1972; M. A., West Virginia College of Graduate
    Studies, 1988.

Judy Combs..Respiratory Care Program Clinical Director
    B.S., Independence University, 2007.

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    University, 1987; M. S. N., Bellarmine College, 1991.

Stephanie Davis ....Disabilities Service/Project ACCESS Director/Counselor
    B. S., East Tennessee State University, 1982; M. A., Virginia Commonwealth
    University, 1991.

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    A. A. S., Southwest Virginia Community College, 1988; B. B. A., Radford
    University, 1990; M. B. A., Radford University, 1998.

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    B. S., Berea College, 1977; M. S., Murray State University, 1978; Ph. D.,
    University of Missouri, 1981.
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    B. A., Berea College, 1968; M. S., Radford College, 1972.
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    B. S., Wheaton College, 1964; M. A., Pennsylvania State University, 1967.
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    University, 1978; C. A. G. S. E., Virginia Polytechnic Institute and State University,
    1992.
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    B. S., East Tennessee State University, 1974; M. S. Ed., Virginia Polytechnic
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    Institute and State University, 1998.
Patsy S. Hankins .... Administrative Support Technology
    A. A. S., Southwest Virginia Community College, 1971;   B. S., Virginia
    Polytechnic Institute and State University, 1976; M. S., Virginia Polytechnic
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    B. S., Longwood College, 1975; M. S., East Tennessee State University, 1977.
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    A. A. S., Southwest Virginia Community College, 1988;   A. A. S., Southwest
    Virginia Community College, 1989; B. S., Bluefield State College, 1993.
Dr. Robert Jones .... Environmental Management
    B. S., Towson University, 1987; M. S. John Hopkins, 2000; Ph. D., Rhodes ....
    University, 2010.

Joyce Kinder .... Director, Small Business Development Center
    B. A., Virginia Intermont College, 1998.
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    B.S., Ferris State University, 1973; M.B.A, Central Michigan University, 1976;
    P.H.D., Michigan State University, 1995.
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    A. B., Queens College, 1961.
Christina Lee...Radiologic Technology
    A.A.S., Southwest Virginia Community College, 1997; B.S., Mars Hill College,
    1998.
Annette Lockhart .... Chemistry
    B.S., Virginia Polytechnic Institute and State University, 1988; M.S., East Tennessee
    State University, 1999
Annette Looney...Occupational Therapy Assistant
    B. S., University of Tennesssee-Martin, 1989; B. S., University of Tennessee- ..
    Memphis, 1992, MS Ed, St. Joseph's College of Maine, 2009.
Dr. Tony Lotito...Coordinator of Evening Offerings
    B. S., Concord College, 1968; M. A., East Tennessee State University, 1971;
    Ed. D., Virginia Polytechnic Institute and State University, 1990.
Donald B. Lowe...Radiologic Technology Program Head
    A. A. S., Virginia Western Community College, 1988; B. S., Mars Hill College,
    1976; M. Ed., East Tennessee State University, 2003.
Denise Miller ....Veterans Upward Bound Advisor
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    University, 2001.
Roderick B. Moore..................Associate Vice President of Student Development Services
    B. A., St. Andrews College, 1970; M. A., Appalachian State University, 1972;
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    Institute and State University, 1980.
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    Virginia Polytechnic Institute and State University, 1997.
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Sharon Peery ....Interim Dean of Workforce, Community & Economic Development
    B. A., Columbia College, 1972; M. Ed., University of South Carolina, 1973.
Diane R. Phillips .... Librarian
    A. A. S., Southwest Virginia Community College, 1988; B. S., Bluefield State
    College, 1990; M. S. L. S., University of Tennessee, 1992.
Sherrie Phillips...Practical Nursing Program Head
    A.D.N., Virginia Highlands Community College, 2002; B.S.N., King College, 2005;
    M.S.N. Old Dominion University, 2008.
Phyllis Roberts... Vice-President of Institutional Advancement
    A. A. S., Southwest Virginia Community College, 1989; B. S., Virginia Intermont
    College, 1994; M. A., Liberty University, 1999.
Janet Rowell.......... Information Systems Technology/Administrative Support Technology
    B. S., Southern Illinois University-Carbondale, 1984; M. S. Ed., Southern Illinois
    University-Carbondale, 1987.

Orpha Woods..Nursing
　　A.A.S., Southwest Virginia Community College, 1988; B.S.N., Virginia
　　Commonwealth University, 1995.
Robert Wright..History
　　A.A.S., Southwest Virginia Community College, 1990; B.A., Radford University,
　　1992; M.A., Virginia Polytechnic and State University, 1999.

VIRGINIA APPALACHIAN TRICOLLEGE NURSING FACULTY

Kathy J. Mitchell .... Dean, Virginia Appalachian Tricollege Nursing Program
B. S. N., East Tennessee State University, 1976; M. S. N., University of Virginia, 1981.

Melinda Barber...Instructor of Nursing
A.A.S., Southwest Virginia Community College, 1998; B.S.N., Medical College of Virginia at Virginia Commonwealth University, 1999; M.S.N., King College, 2007.

Neyia Beavers...Instructor of Nursing
A.A.S., Southwest Virginia Community College, 1999; B.S.N., Virginia Commonwealth University, 2005; M.S.N., Old Dominion University, 2007.

Cathy C. Canody ....Associate Professor of Nursing
A. A. S., Virginia Highlands Community College, 1975; B. S. N., Radford University, 1981; M. S. N., University of Virginia, 1989.

Deborah S. Clarkston ....Assistant Professor of Nursing
B.S. N., University of Michigan, 1979; M. S. N., University of Virginia, 1990.

Donna H. Cluesman ....Associate Professor of Nursing
B. S. N., Radford University, 1985; M.S.N., Waldon University, 2008.

Barbara K. Gilbert ....Associate Professor of Nursing
A. A. S., Southwest Virginia Community College, 1985; B. S. N., Bluefield State College, 1993; M. S. N., Radford University, 1998; F. N. P., Radford University, 1998.

Gloria Hobbs ....Associate Professor of Nursing
A. A. S., Southwest Virginia Community College, 1982, 1991; B. S.N., Old Dominion University, 1998; M.S.N., St. Joseph's College of Maine, 2008.

Beverly Lester ....Assistant Professor of Nursing
Nursing Diploma, Roanoke Memorial Hospital School of Professional Nursing, 1978; B.S.N., Old Dominion University, 1998; M.S.N., King College, 2008.

Brandy M. McCarroll...Assistant Professor of Nursing
A.A.S., Jefferson College of Health Sciences, 2000; B.S.N., University of Virginia/Wise, 2006; M.S.N., King College, 2008.

Lynn G. Moretz ....Associate Professor of Nursing
B. S. N., East Tennessee State University, 1970; M. S. N., University of Virginia, 1981.

Tammy Pennington..Instructor of Nursing
A.A.S., Virginia Highlands Community College, 1998; B.S.N., King College, 2006; M.S.N., Waldon University, 2009.

JoAnn Price ....Assistant Proffessor of Nursing
A.A.S., Virginia Highlands Community College, 1996; B.S.N., King College, 2004; M.S.N., King College, 2008.

Connie P. Sherwood .... Professor of Nursing
B. S. N., Berea College, 1971; M. S. N., Medical College of Virginia at Virginia Commonwealth University, 1977.

Kim Smith ....Associate Professor of Nursing
A.A.S., Southwest Virginia Community College, 1984; B. S. N., Medical College of Virginia at Virginia Commonwealth University, 1991; M. S. N., East Tennessee State University, 1997.

Faith Sturgill...Assistant Professor of Nursing
Diploma, Respiratory Therapy, Mountain Empire Community College, A.A.S.; Nursing, East Tennessee State University, 1999; B.S.N.; Old Dominion University, 2002; M.S.N., Walden University, 2009.

Barbara K. Williams ....Assistant Professor of Nursing
Nursing Diploma, Johnston Memorial Hospital, 1970; B. S., St. Joseph's College, 1981; B. S. N., East Tennessee State University, 1986; M. S. N., University of Virginia, 1991.

Deborah Wright ....Associate Professor of Nursing
B. A., University of Virginia, 1987; A. A. S., Mountain Empire Community College, 1994; B. S. N., University of Virginia at Wise, 1997; M.S.N., Old Dominion University, 2006.

Elizabeth Wright..Associate Professor of Nursing
B.S.N., East Tennessee State University, 1982; M.S.N., Bellarmine College, 1991.

STAFF

Norma Lee Ann Addison ....Administrative & Office Specialist III, Business Office
Linda Adkins...Housekeeping Worker II, Facilities
Carolyn Alley .... Administrative & Office Specialist III, Economic Development
Tammy Austin .... Administrative & Office Specialist III, Humanities/Health Technologies
Sandra Baisden.......................................Administrative & Office Specialist II, Admissions
Michael Bales ....Fiscal Services Manager I, Business Office
Greg Bandy ....General Admin Manager I, Facilities
James Barrett..Trades Technician III, Facilities
Jennifer Boyd ....Administrative & Office Specialist III,
....Vice President of Institutional Advancement
Mark Burnette ....Housekeeping Worker I, Facilities
Myra Gail Burton..Food Service Technician I, Food Services
Patsy G. Bussard ....Public Relations & Marketing Specialist IV, Public Relations
Sandra Canter.............................Administrative & Office Specialist II, Admissions Office
Phyllis Christian........ Administrative & Office Specialist III, Vice President of Instruction
Dionne Cook .... Administrative & Office Specialist III, Admissions
Margaret Dye ...Administration and Office Specialist II, Business & Engineering Division
Sylvia Dye...Administrative & Office Specialist III
.... Distance Learning and Instructional Technology
Donna Edwards..Housekeeping Worker I, Facilities
Wayne Edwards...Trades Technician III, Facilities
Barbara Elswick .... Administrative & Office Specialist III, Upward Bound
Eva Estep .... IT Specialist II, Information Services
Angela Fuller ....Administrative & Office Specialist III,
....Vice President of Financial & Administrative Services
Guy E. Glover, Jr..IT Specialist II, Information Services
Cheryl Greer .... Administrative & Office Specialist III, Business Office
Rebecca Guess .... Education Support Specialist II, Student Development Services
Laura Hagy.. Administrative and Office Specialist II
.... Distance Learning and Instructional Technology
Jennifer Hale ....Education Support Specialist II, Admissions Office
B. Eddie Hannah ....Education Support Specialist III, Booth Center
Jerry Harris...Trades Technician III, Facilities
Peggy Horne..Housekeeping Worker I, Facilities
Scott Jordan......................................Law Enforcement Officer I, Administrative Services
Ron Kiser .... Law Enforcement Officer II, Administrative Services
Terri Kiser .... Library Specialist II, Library
Dyan Lester.. Education Support Specialist III
.... Distance Learning and Instructional Technology
Mildred Lowe...........................Administrative and Office Specialist II, Evening Offerings
Laura Lynch .... Administrative & Office Specialist III, Facilities
Joe Magee ....Electronic Technician II, Distance Learning and Instructional Technology
Tony McGhee...Trades Technician III, Facilities
Debra McGlothlin .... Administrative & Office Specialist II
.... Distance Learning and Instructional Technology
Phillip Miller...Housekeeping Worker I, Facilities
Aretha Mitchell ....Administrative & Office Specialist III, Business Office
Betty Mitchell ....Administrative & Office Specialist III, Business Office

Donna Morrow.. Procurement Officer I, Business Office
Charles Musick .... IT Specialist I, Information Services
Donna Musick ....Administrative & Office Specialist II, Admissions Office
Shelly Musick .... Administrative & Office Specialist III,
....Vice President of Institutional Advancement
Beth Newberry .... Administrative & Office Specialist II, Veterans Upward Bound
Amanda Osborne .... Administrative Office Specialist III, Upward Bound
Michael Owens .... Financial Services Specialist I, Business Office
Paula Owens.. IT Specialist I, Information Services
Teresa Pruett.. IT Specialist I, Information Services
Martha Rasnake ....Human Resources Manager I, Human Resources
Matthew Rasnick .... Trades Technician II, Facilities
Regina Richardson ....Housekeeping Worker I, Facilities
Teresa D. Richardson ....Administrative & Office Specialist III,
.... Division of Health Care Technology, Humanities,
Mathematics, Natural Science, and Social Science
Judy Rife .... Administrative & Office Specialist III, Payroll
Christina Rimmer.................. Education Support Specialist II, LPN & Health Technology
Ginger Robinette ....Administrative & Office Specialist II, Continuing Education
Brenda Robinson .... Administrative & Office Specialist II, Continuing Education
Richard Shelton...Trainer & Instructor I, Veterans Upward Bound
Virginia Shortridge.............................Administrative & Office Specialist II, Financial Aid
Edna Sizemore .... Administrative & Office Specialist II, Continuing Education
Michelle Smith...Housekeeping Worker I, Facilities
Patrick Smith...Housekeeping Worker I, Facilities
Virginia Stevens .... Administrative & Office Specialist III, Financial Aid
Michael Stiltner..................................Law Enforcement Officer I, Administrative Services
Betsy Summerfield... Compliance Manager I, Risk Management
Alta Talbert .... Education Administrator I, Admissions Office
V. Pauline Taylor .... Administrative & Office Specialist II, Community Center
Teresa Thompson ....Administrative & Office Specialist II, Admissions Office
Windell L. Turner...IT Manager I, Information Services
Rhonda Vandyke ....General Adminstration Coordinator I, President's Office
Jason Vencill ....Financial Services Specialist I, Business Office
Brian Warren ....Law Enforcement Officer I, Administrative Services
Larry Whitt.. Trades Technician IV, Facilities
Rowena Winfrey .... Administrative & Office Support Specialist III,
.... Student Support Services

GENERAL INFORMATION

Southwest Virginia Community College is a two-year institution of higher education established as a part of a state-wide system of community colleges serving primarily the residents of the counties of Buchanan, Dickenson (partial), Russell, and Tazewell. The College operates under policies established by the State Board for Community Colleges and a Local College Board. The institution is financed primarily by state taxes and is supplemented by contributions from the participating localities.

The College operates on the semester system and is open on a year-round basis. Classes normally are held from 8:00 am through 9:50 pm. The availability of college credit courses in the evening allows the student who must work while going to college the opportunity to coordinate college activities with employment.

HISTORY

The 1966 General Assembly of Virginia authorized the establishment of a state-wide system of comprehensive community colleges and appointed a separate State Board to develop a Master Plan for a state-wide system of community college education in Virginia. The Master Plan designated a community college to be established in the area serving the counties of Buchanan, Dickenson (partial), Russell, and Tazewell.

A delegation of local citizens met with State officials to determine the feasibility of immediate development of a community college for the region. A local College Board was appointed in the summer of 1967, the Local Board recommended that the college be named Southwest Virginia Community College and that Dr. Charles R. King be appointed as president.

The College opened to students in the fall of 1968 with an initial enrollment of 710 students. Fall 2010 credit enrollment was 3,758 unduplicated headcount students.

VISION

Southwest Virginia Community College transforms lives, strengthens communities and inspires excellence.

MISSION

Southwest Virginia Community College, a comprehensive two-year institution, provides quality educational and cultural enrichment opportunities for lifelong learners, workforce and community.

CORE VALUES

SWCC is guided by steadfast core values. As a community of educators we value:
- Student Centered Learning – SWCC believes that students are the primary reason we exist and our purpose is to help them achieve their goals and aspirations.
- Student Success – SWCC recognizes the potential in individuals and assists them in obtaining their highest level of attainment.

- Excellence – SWCC strives for excellence in instruction and service through rigorous academic and professional standards.
- Inclusiveness & Collaboration – SWCC reaches out to the communities and partners it serves, supporting and assisting them in achieving their goals.

ACCREDITATION

Southwest Virginia Community College, a part of the Virginia Community College System, is approved by the State Board for Community Colleges and by the Virginia Community College System. The associate degree curricula of the College have also been approved by the State Council of Higher Education for Virginia. Southwest Virginia Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4501 for questions about the status of Southwest Virginia Community College.

TUITION AND FEES

Tuition and related costs are set by the State Board for Community Colleges and are subject to change.

Virginia Residents	$120.50 per credit hour
Out-of-State Residents	$312.10 per credit hour
Out-of-State/Contract Rate	$195.50 per credit hour
30 Mile Radius Rate	$135.50 per credit hour

The applicant will be required to complete a Domicile Determination form (included as a portion of the Admission Application Packet) to determine state residency eligibility for tuition purposes.

Student Comprehensive Fee
A comprehensive fee will be charged at the rate of $1.50 per credit hour for credit classes and for non-credit courses. The purpose of the comprehensive fee revenue is to provide support for College student government activities and events and parking auxiliary. Fifty percent ($0.75) of the revenue generated shall be earmarked for student activities and events, and 50% ($0.75) shall be budgeted for the parking auxiliary fund.

The College President may waive the comprehensive fee for special classes designed for business and industry and for any other justifiable special circumstance.

Technology Fee
A technology fee will be charged at the rate of $7.50 per credit hour that will be used to finance major improvements in information technology at the College.

Special 30 Mile Radius Rate
Residents of Pike County, Kentucky, and residents of Mercer, Mingo, and McDowell Counties in West Virginia will be assessed the Virginia 30 mile radius rate of tuition if they are eligible to pay in-state tuition rates at state supported institutions in their respective states.

Although individuals enrolled from these counties are classified as out-of-state students, because of special Virginia Legislation, these individuals are eligible to pay the 30 mile radius tuition rate. In addition to the comprehensive fee ($1.50) and the technology fee ($7.50), a $15.00 capital fee per credit hour will be added.

Dishonored Check Fee
    The College will assess a $35.00 service charge for checks returned for any reason.

Waived Tuition
    The Code of Virginia, Section 23-7.1, provides that free tuition and required fees to state-supported institutions shall be granted to children of deceased or permanently disabled veterans of the armed forces of the United States provided disability or death was the result of service-related injury. Also, children of prisoners of war or individuals missing in action are eligible for tuition waiver.

    Students who are eligible for the tuition waiver under this law must provide documentation from the State Division of War Veterans Claims to the Veterans Affairs Officer.

    Tuition and required fees are also waived for children of law enforcement officers, firefighters, and rescue squad members killed in the line of duty.

Waived Tuition for Students in Certain Dual Enrollment Courses
    Tuition shall be charged at in-state rates for any high school or magnet school student not otherwise qualified for in-state tuition, pursuant to Section 23-7.4 of the Code of Virginia, who is enrolled in courses specifically designed as part of the high school or magnet school curriculum in a community college for which he/she may, upon successful completion, receive high school and community college credit pursuant to a dual enrollment agreement between the high school or magnet school and the community college.

Senior Citizens' Tuition and Fees Waiver
    Under provisions of the Virginia Senior Citizens Higher Education Act, a person who is sixty years of age with legal domicile in Virginia for one year before the beginning of a semester may enroll in a state institution of higher learning at no cost (tuition and required fees) provided all tuition-paying students are given first priority for class spaces. Senior citizens who have completed 75% or more of their degree requirements may be allowed to enroll in courses at the same time as tuition-paying students. If the senior citizen had a federal taxable income of not more than $15,000 in the preceding year, the individual may take a course for academic credit without paying tuition. If the person's taxable income exceeded $15,000, the individual may only audit the course for free. All audits must be approved by the appropriate division dean. A senior citizen, regardless of income level, may take a noncredit course at no charge.

    No limit is placed on the number of semesters in which a senior citizen may register for tuition-free courses. The law places no restriction on the number of courses that may be taken for credit in any semester. Credit courses, audit of credit courses or noncredit courses cannot exceed three courses per semester.

    To apply for waiver of tuition and fees, senior citizens must be admitted to the college and complete waiver forms each semester in which classes are taken. Waivers must be

approved by the Director of Admissions and Counseling and forms are available in the Admissions Office.

Other Fees, Charges, and Fines

Continued enrollment at the College is dependent upon proper settlement of all debts owed the Institution. Should the student fail to satisfy all due and payable amounts for tuition and fees, college loans, college fines, or other debts owed the College, he or she may be suspended and will not be allowed to register in any succeeding semester until all current debts owed to the College have been satisfied.

A student who damages or loses school property (laboratory or shop equipment, library materials, etc.) must pay charges for such losses. In addition, a student must pay fines for improper parking, or other such infractions as determined by the College administration with the approval of the Virginia Community College System.

Transcripts, certificates, or degrees will not be issued, nor will a student be permitted to register, until all the student's accounts have been paid in full.

TUITION REFUNDS

Students shall normally be eligible for tuition refund for credits dropped during the add/drop period of each term. The official add/drop periods for academic semesters of normal length are published in the Schedule of Classes and the College Catalog. Refund deadlines for shorter terms, such as some summer terms, will vary. Students are advised to check with the Office of Admissions and Records for specific refund deadlines prior to making the decision to withdraw.

Electronic or written notification of the student's intent to drop or withdraw from courses must reach the Admissions and Records Office by the last day of the add/drop period in order for the student to be eligible for a refund. Full refunds are made when the College cancels a course. (Courses may be dropped without academic penalty through the tenth week of the fall and spring semester. However, students will not be eligible for refunds.)

To be eligible for refund under any of the circumstances set forth in the foregoing paragraph, a student must execute an official electronic or written notification to the Office of Admissions and Records. Official withdrawal for a student shall become effective on the date that the electronic or written notification of intent to resign is received by the Office of Admissions and Records and not the date of the last class attended unless the two dates coincide. Course withdrawal notifications should be presented in person, or by the student's authorized representative. The College cannot undertake to accomplish contact with the student's instructors except for the most serious of reasons.

All services shall be withheld from a student who owes money to the College for any reason or who has books or materials outstanding from the College.

STUDENT RECORDS

Southwest Virginia Community College complies with the requirements of the Family Education Rights and Privacy Act of 1974 regarding confidentiality and student's access to student records.

Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974, as amended, is a federal law which allows students access to their educational records and prohibits the release of information from students' educational records by the institution without the written consent of the student, with certain specified exceptions.

SWCC accords all rights under the law to students who are declared independent. No one outside the institution will have access to, nor will the institution disclose, any information from students' educational records without the written consent of students, except to personnel within the institution, to officials of other institutions in which students seek to enroll, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation functions, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of students or other persons. All these exceptions are permitted under the Act.

The Act allows the College to report substance abuse violations to parents of students under 21, to disclose the results of College disciplinary proceedings in cases of violent crimes, and to release student records to the courts in the case of a parent/student lawsuit against the College.

In accordance with the provision of the Act, the college may provide directory information. Directory information will be withheld for students who notify the Admissions and Records Office in writing within two weeks of the first day of class.
Directory information shall include:

1. Student's name
2. Participation in officially recognized activities and sports
3. Address
4. Telephone listing
5. Weight and height of members of athletic teams
6. Electronic mail address
7. Degrees, honors, and awards received
8. Date and place of birth
9. Major field of study
10. Dates of attendance
11. Grade level
12. The most recent educational agency or institution attended

Request for nondisclosure will be honored by the institution for only one academic year; therefore, authorization to withhold directory information must be filed annually in the Admissions and Records Office. Copies of the law and SWCC's policy for implementing it are available in the Admissions and Records Office and are on reserve in the SWCC library along with a copy of the SWCC policy on retention and disposal of records.

HOURS FOR COLLEGE OFFICES AND FACILITIES

Administrative Offices .... 7:45 am to 4:30 pm. Monday - Friday
Counseling .... 7:45 am to 4:30 pm. Monday - Friday
Library..7:45 am to 9:00 pm. Monday - Thursday
7:45 am to 4:30 pm. Friday
Weekend Hours (during regular semester) Sunday, 1:00 to 5:00 pm.
Holiday Hours as Announced
Instructors .... Posted Office Hours and by Appointment

REVISIONS TO PUBLISHED INFORMATION

Southwest Virginia Community College must reserve the right to make any necessary but previously unannounced revisions, additions, or deletions in services, program offerings, program requirements, course content, scheduled course offerings, instructors, meeting times, dates, and locations as may be required without notice.

ADMINISTRATIVE INFORMATION

ADMISSION REQUIREMENTS
General Admission to the College

Any person who has a high school diploma or the equivalent, or who is 18 years of age and, in any case, is able to benefit from a program at SWCC may be admitted as a regular or special student.

The College does not discriminate in the evaluation of any person's application on the basis of race, color, national origin, sex, or religion. The College, however, reserves the right to refuse admission to any applicant when, in the College's opinion, the applicant's presence in the College community will pose a serious threat to the continued safety or welfare of the campus and community, or when the College is of the opinion that the applicant will receive no significant educational benefit by attending the College. Such a determination will be based upon objective criteria such as prior record of criminal activity, prior academic record at other institutions, or the applicant's ability to benefit. These criteria are set forth as examples and not for purposes of limitation.

The following items must be received by the Office of Admissions of the College before final action is taken on the application.

Regular students:
1. A completed "Application for Admission as a Regular Student" (no fee required).
2. Official transcripts from all high schools, colleges, and universities attended.
3. Registration for any examinations used as admission counseling tools by the College.

Special students (those students not enrolled in a certificate, diploma, or degree program at the College):
1. A completed official application for admission (no fee required).
2. If anticipated enrollment will be in more than one course and/or for more than one term, special students are requested to provide transcripts from all high schools, colleges, and universities attended.

Special students desiring to enroll in a course with certain academic prerequisites should submit official transcripts for all high schools, colleges, and universities attended.

Anyone wishing to apply for noncredit community service programs should contact the College for additional information.

Applicants for admission to the College as a regular student are scheduled with one of the College counselors (a) to discuss the applicant's educational interest, (b) to determine if additional tests are needed; and (c) to plan an application for admission to a specific curriculum or program at the College.

Admission to Specific Curricula

In addition to the general admission requirements listed above, specific requirements are usually prescribed for each curriculum of the College. Among the items generally considered in determining eligibility for admission to curricula in the College are educational and

occupational experiences and other reasonable standards to ensure that the student possesses the potential to meet program requirements.

The specific requirements for each curriculum in the College are listed in the curriculum offerings section of this catalog. A person who does not meet the requirements for a specific curriculum or course may be eligible to enter the curriculum with the agreement that he or she will enroll in prescribed developmental or preparatory courses.

A student entering the College, or planning to take English or Mathematics courses, will be required to take the ASSET or COMPASS examination. SAT or ACT scores may be substituted for the ASSET or COMPASS examination unless the applicant is seeking entry to one of the College's health care programs. Test scores below specified levels indicate students are not ready for some kinds of college courses. In such cases, students will be required to complete certain developmental courses that are prerequisites for courses in their program of study. Dual enrollment/high school students taking college courses may be exempt from this requirement.

The individual applying for admission to an associate degree (Associate of Arts and Sciences or Associate of Applied Science) program must be a high school graduate or the equivalent or have completed approved developmental or preparatory programs.

Admission Priority
When enrollments must be limited for any curriculum, priority shall be given to all qualified applicants who are residents of the political subdivisions (Buchanan, Dickenson (partial), Russell, or Tazewell counties), supporting the College and to Virginia residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the College. In addition, residents of localities with which the College has clinical-site or other agreements may receive equal consideration for admission.

Admission Requirements for International Students
In addition to the general admission requirements of the College, the international student must demonstrate proficiency in both written and oral English. Normally, a minimum score of 500 is required on the Test of English as a Foreign Language (TOEFL).

The international applicant is also required to submit with the application a signed statement (form provided by the College) verifying that he or she has adequate resources to meet all financial needs for the duration of enrollment at the College. The international student desiring admission to the College should direct requests to the College Admissions Office.

Admission of Student Transferring from Other Colleges
Usually, a student transferring from another institution is eligible for admission to the College if the student is eligible for immediate re-enrollment at the most recent college attended. If academically ineligible to return to a previous college, a transfer student generally will not be allowed to enroll in the College until one semester elapses or until completion of an approved developmental or preparatory program at the College. The Admissions Appeal Committee will decide on each case and usually impose special conditions (including placement and probation) for the admission of such a student.

Each student transferring from another college should consult with the Director of Admissions/Counseling at the College for an assessment of credits in order to determine academic standing before registering for classes. Official transcripts must be sent directly to the Admissions Office. Generally, no credit will be given for courses with grades lower than "C" or for courses from colleges and universities not accredited by a regional accrediting association.

Applying for Credit or Waiver of Requirements

The student who has reason to believe that previous educational studies, training programs, or work experience may entitle him or her to an adjustment in the course requirements for a particular curriculum should contact the Director of Admissions/Counseling to determine procedures before registering for classes.

CLASSIFICATION OF STUDENTS

All students are classified according to the following categories:

1. A regular student is one whose file in the Admissions Office contains all the information required for general admission to the College as a regular student and who has been admitted to a curriculum of the College. A regular student is:
   a. A full-time or part-time student working toward completion of an associate degree, diploma, certificate, or developmental studies program;
   b. A full-time or part-time student taking credit courses for transfer to another college or university.

2. A special student is one who is permitted to register under special conditions. A special student is:
   a. A part-time student taking course(s) as audit for no credit;
   b. A high school student who, with the written permission of his or her high school principal, is concurrently enrolled in a college course;
   c. A student assigned to one of the College's "unclassified student" categories;
   d. A part-time student not enrolled in an associate degree, diploma, or certificate program who may be taking a course(s) for credit (such a student may later apply to the College for admission to a program as a regular student);
   e. A student who has not yet fulfilled all of the requirements as a regular student but who is admitted under special consideration by the Admissions Committee of the College. Such a student must fulfill all requirements prior to the midterm of the semester of admission or face dismissal from the College.

A **full-time student** must carry 12 or more course credits per semester.

A **part-time student** carries fewer than 12 course credits per semester.

Freshman. A student is classified as a freshman until completion of 30 course credits in a designated area.

Sophomore. A student is classified as a sophomore after completing 30 or more course credits in a designated associate degree or diploma curriculum. Transferred credits are included, providing they apply toward the requirements of the student's curriculum.

CREDITS

A credit is equivalent to one collegiate semester hour credit or one and one-half of a collegiate quarter hour credit. Usually, the student receives one credit for a course of approximately three hours of study weekly as follows:

1. One hour of lecture plus an average of two hours of out-of-class study, or
2. Two hours of laboratory or shop study plus an average of one hour of out-of-class study, or
3. Three hours of laboratory or shop study with no regular out-of-class assignments.

Variable credit (1-5 credits), variable hours, and behavioral objectives are assigned to each developmental course (number 01-09). Also, variable credit (1-5 credits) is assigned to all supervised study, seminar and project, and coordinated internship courses.

DEGREES, DIPLOMAS AND CERTIFICATES

Southwest Virginia Community College offers the following degrees, diplomas and certificates for students who successfully complete approved curricula at the College.

1. The Associate of Arts and Sciences Degree (AA & S) is awarded to the graduating student majoring in liberal arts, business administration, engineering, education, general studies, science and other pre-professional programs, and who may plan to transfer to a four-year college or university after completion of the community college program.

2. The Associate of Applied Science Degree (AAS) is awarded to the graduating student majoring in one of the occupational-technical curricula and who plans to obtain full-time employment immediately upon graduation from the College.

3. A Diploma or Certificate is awarded to the graduating student who completes one of the approved non-degree curricula which are usually less than two years in length.

GRADING SYSTEM

A	Excellent	4 grade points per credit
B	Good	3 grade points per credit
C	Average	2 grade points per credit
D	Poor	1 grade point per credit
F	Failure	0 grade point per credit
P	Pass	No grade point credit; applies only to non-developmental studies courses.
S	Satisfactory	No grade point credit; used only for satisfactory completion of a developmental studies course.
U	Unsatisfactory	No grade point credit (applies to specialized courses and seminars, primarily Developmental Studies).

I	Incomplete	No credit. Used for verifiable, unavoidable reason. Since the "incomplete" extends enrollment in the course, requirements for satisfactory completion will be established through student/faculty consultation. Courses for which the grade of "I" (incomplete) has been awarded must be completed by the end of the subsequent semester or another grade (A, B, C, D, F, P, R, S, U, or W) may be awarded by the instructor based upon course work which has been completed. In the case of "I" grades earned at the end of Spring Semester, students shall have through the end of the Summer Semester to complete the requirements. In exceptional cases, extensions of time needed to complete course work for "I" grades may be granted beyond the subsequent semester, with the written approval of the chief academic officer. A "W" grade should only be awarded under mitigating circumstances which must be approved by the chief academic officer and documented. A copy of this documentation must be placed in the student's academic file.
W	Withdrawal	No grade point credit. A grade of "W" is awarded to students who withdraw or are withdrawn from a course after the add/drop period but prior to the completion of 60% of the session. After that time the students will receive a grade of "F," except under mitigating circumstances, which must be documented and a copy of this documentation must be placed in the student's academic file.
R	Re-enroll	No grade point credit. The "R" grade may be used as a grade option, interim in nature, in those courses which employ a mode of instruction characterized by explicit terminal objectives covering the various content areas in such a way that specific determination of student progress toward total course completion can be made. Examples of this mode are as follows: a. Individualized, self-paced instruction; or b. Modularized, group-paced instruction. The "R" grade may be given only in courses which will be offered in any semester and which will employ a mode of instruction described in a. and/or b. above. The courses in which this methodology shall be used shall be designated by their applicability to the established procedures for the "R" grade and shall be identified by the Division Dean and approved by the Vice President of Instruction.
X	Audit	No credit.

The grade point average (GPA) is determined by dividing the total number of grade points earned in courses by the total number of credits attempted.

Developmental course credits are not included in credits attempted when computing GPA.

Grading—Developmental Studies Courses

A grade of "S" (Satisfactory) is assigned for satisfactory completion of each developmental course (courses numbered 01-09). "S" grades are not included in grade point average calculations.

A student making satisfactory progress but not completing all of the behavioral objectives for a developmental studies course (courses numbered 01-09) shall be graded with an "R" (Re-enroll) and must re-enroll to complete the course objective.

A student not making satisfactory progress in a developmental studies course (courses numbered 01-09) shall be graded "U" (Unsatisfactory), and counselors will recommend consultation between the student and the instructor to determine the subsequent sequence of courses the student should take.

GRADUATION HONORS

A student who has fulfilled the requirements for graduation is eligible for graduation honors. Honors are based on overall scholastic achievements and are recorded on the student's transcript as follows:

Cumulative Grade Point Average	Honor
3.2	Cum laude (with honor)
3.5	Magna cum laude (with high honor)
3.8	Summa cum laude (with highest honor)

GRADUATION REQUIREMENTS

Associate Degree Requirements

To be awarded an associate degree from the College, a student must:

1. Have fulfilled all of the course requirements of his or her curriculum as outlined in the College Catalog. The student continuously enrolled in credit courses at SWCC (excluding summer terms) may have the option of fulfilling course requirements of the catalog in effect at the time of initial enrollment, or requirements outlined in the current catalog, should specific requirements differ;
2. Have been recommended for graduation by the appropriate instructional authority;
3. Have fulfilled all of the course and credit-hour requirements of the degree curriculum with 25 percent of the credit hours acquired at the College;
4. Have completed the general education requirements for an associate degree;
5. Have earned a grade point average of at least 2.0 on all courses attempted which are applicable toward graduation in the student's curriculum;
6. Have filed an application for graduation in the Office of Admissions and Records;
7. Have resolved all financial obligations to the College and returned all library and other College materials;

Diploma and Certificate Requirements

A student who successfully completes a program of instruction which does not lead to an associate degree program or who is unable to complete the degree requirements may, upon the recommendation of the appropriate instructional division and the Vice President of Instruction, be issued a diploma or certificate, provided the portion of study successfully completed is equivalent to an approved diploma or certificate program offered at the College.

In order to graduate from a diploma or certificate program, the student must complete the general education requirements applicable to his or her respective programs in addition to other specified courses, with a minimum overall grade point average of 2.0 on all work attempted at Southwest Virginia Community College and applicable toward graduation from a particular curriculum.

A diploma or certificate candidate must also comply with items 1, 2, 5, 6, and 7 of the above requirements for associate degrees. A minimum of 25 percent of the credits required for a diploma or certificate must be earned at SWCC.

VCCS COMPUTER ETHICS GUIDELINE

Thousands of users share VCCNet computing resources. Everyone must use these resources responsibly since misuse by even a few individuals has the potential to disrupt VCCS business or the works of others. Therefore, you must exercise ethical behavior when using VCCNet resources.

State Law (Article 7.1 of Title 18.2 of the Code of Virginia) classifies damage to computer hardware or software (18.2-152.4), unauthorized examination (18.2-152.5), or unauthorized use (18.2-152.6) of computer systems as (misdemeanor) crimes. Computer fraud (18.2-152.3) and use of a computer as an instrument of forgery (18.2-152.14) can be felonies. The VCCS's internal procedures for enforcement of its policy are independent of possible prosecution under the law.

The complete VCCS Computer Ethics Guideline, including definition, guidelines, and enforcement procedure, is located in each College Vice President's office, the offices of the Division Deans, the College Library, and at the SWCC Information Technology website at http://www.sw.edu/itservices/itstandards/itstandards.htm.

INQUIRIES:

Inquiries and requests for information pertaining to admission to the College should be addressed to:

> Office of Admissions
> Southwest Virginia Community College
> Post Office Box SVCC
> Richlands, Virginia 24641-1101

Office Hours: Monday through Thursday - 7:45 am to 6:30 pm during registration/add period; otherwise, Monday - Friday - 7:45 am to 4:30 pm. Telephone: (276) 964.2555, (276) 880.3230, (800) 822.7822 (Toll-Free), (276) 964.7235 V/TDD.

INSTRUCTIONAL PROGRAMS AND SERVICES

CENTER FOR COMMUNITY, WORKFORCE, AND ECONOMIC DEVELOPMENT

Mission
To align priorities, strategies, and resources with those of workforce and economic development partners in response to regional labor market and community needs.

Goals
- To provide workforce solutions, lifelong learning, and entrepreneurship services to businesses, governmental agencies, educational entities, and individuals.
- To offer a wide array of technical services to business and industry such as job analysis and skills upgrades.
- To provide specialized services to meet the cultural and educational needs of the region.
- To offer "rapid response services" to the businesses as necessary.
- To offer evening programs and courses to enhance the professional and personal development of the citizens of our region.
- To coordinate Career Pathways development with school divisions, community colleges, and local industry.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

The College Level Examination Program, as sponsored by the College Entrance Examination Board, is a nationwide testing program through which an individual can validate learning and receive college credit. Southwest Virginia Coomunity College does award credit for appropriate CLEP scores.

CREDIT BY ADVANCED PLACEMENT, EXAMINATION, OR EXPERIENCE

The College offers opportunities for award of credit or advanced standing to students who demonstrate competency in specific subject areas. Included are arrangements for credit based upon successful completion of Advanced Placement courses/examinations in high school and for successful completion of structured testing programs such as the CLEP (previously described). It is also possible for students to receive credit for educational and work experiences which are applicable to SWCC courses and programs.

Persons desiring to explore the receipt of credit through such means are invited to contact the appropriate instructional division, the Admissions Office, or the Vice President of Instruction.

ADVANCED PLACEMENT GUIDELINES
AP CLASSES AND CLEP EXAMINATION

Subject	Ap Score Needed	CLEP Score Needed	College Credit
Accounting	x	50	ACC 211/213
Biology	3	50	BIO 101/102
Business Law	x	50	BUS 241
Chemistry	3	50	CHM 111/112
English	x	50	ENG 111
English	3	x	ENG111/112
French	3	50	FRE 101/102
Government	3	x	PLS 211/212
U. S. History	3	50	HIS 121/122
Literature	3	50	ENG 241/242
Management	x	50	BUS 200
Math	3	50	MTH 151
Math	3	x	MTH 151/152
Math	3	x	MTH 240
Prin. of Marcoeconomics	x	50	ECO 201
Prin. of Microeconomics	x	50	ECO 202
Principles of Marketing	x	50	MKT 100
Psychology	3	x	PSY 201/202
Sociology	x	50	SOC 200
Spanish	3	50	SPA 101/102

Students seeking advanced placement in college level courses using AP credit or CLEP examination must follow procedure outlined below:

AP scores are sent to the Admissions Office by the College Board to be evaluated by the Director or Admissions according to the accepted College policy. The Admissions Office will forward to Division Deans, as required, copies of AP scores of those students receiving credit and/or those needing further assistance. The Admissions Office will award the credit and arrange placement on the students college transcript.

Students seeking credit by *CLEP EXAMINATION* should contact the Director of Admissions who will arrange the appropriate subject area examination. Students achieving the exam score required will have credit placed on their college transcript. No grade will be awarded.

Students seeking *NON-TRADITIONAL CREDIT BY EXAMINATION or CREDIT BY EXPERIENCE* must contact the appropriate Division Dean for assistance and to complete the appropriate forms required for documentation of credit.
*Writing sample required by English Department
X = Non-Applicable

DEVELOPMENTAL EDUCATION

The Academic Success Program provides assistance for students needing improvement of basic skills required for credit courses. Research on student success indicates students who strengthen basic skills needed for credit courses before enrolling in them are more likely to remain in college and to perform with success.

Student advisors review students' scores on placement instruments - either the ASSET or the COMPASS. When students' scores fall below those required for enrollment in credit courses, advisors help students register for the developmental courses needed. After successfully completing the developmental courses, students may enroll in the credit courses required in their programs.

Courses available include Preparation for College Writing I and II, Reading Improvement I and II, Basic Arithmetic, Basic Algebra I and II, Biology 20, and Chemistry 05. Courses that provide additional support for students include Study Skills and College Survival Skills. Further support is available in the Learning Assistance Center (Dellinger Hall), and Student Support Services (Buchanan Hall).

DIRECTED INDEPENDENT STUDY

A student wishing to take approved college courses by independent study must gain approval of one of the full-time instructors of the course and must complete a written contract prior to registration. A copy of the contract will be forwarded to the appropriate division dean for final approval. The contract will specify the requirements to be completed by the student, including tests, periodic class attendance, and term papers. The student must successfully complete all requirements of the contract to obtain credit for the course. Any student in any program may take advantage of independent study with approval.

Certain conditions, such as the student's grade point average, number of previously completed credits, maximum allowable independent study courses, etc., apply.

EVENING PROGRAM INFORMATION

Southwest Virginia Community College offers a variety of evening courses for individuals who desire to continue their education during the evening hours.

A full-time coordinator of the evening program is on duty for conferring with students and answering questions that might arise concerning the various programs offered. Anyone in the four-county area interested in self-improvement, general upgrading, or personal development may enroll in a degree, diploma, or certificate program during the evening hours. Several curricula are offered during evening hours and continuing effort is being made to offer additional programs as needs are demonstrated.

GENERAL EDUCATION PROGRAM

Southwest Virginia Community College requires a broad general education for all degree, certificate and diploma seeking students. General education is referred to as those phases of non-specialized and non-vocational education which represent one's accumulated knowledge and which should be the common possession of all educated citizens.

A comprehensive general education program is designed to prepare the student for effective participation in his/her community regardless of his/her role in the community. Therefore, a course of study should include appropriate academic subjects and supplementary activities whereby the student achieves competency not only for a vocation, but with a better understanding of himself/herself and a higher regard for others.

The stated goals of the General Education Program at SWCC are:

To promote life-long learning.
To broaden skills in communication.
To develop problem solving skills.
To stimulate critical and creative thought.
To introduce students to ethical and socio-technological values.
To encourage responsible and active citizenship.
To introduce students to a diversity of cultures.
To expand student awareness of the creative and performing arts.
To promote mental and physical well-being.

INTERNATIONAL/INTERCULTURAL EDUCATION

Recognizing the geographical barriers that limit cultural diversity, the College is committed to providing international/intercultural education activities as an integral part of the student's academic and social development. Lectures, cultural presentations, faculty and student exchange programs, and other activities of an international/intercultural nature are necessary for a fundamental understanding of the interdependent world in which we live.

LEARNING RESOURCES CENTER

The Learning Resources Center (LRC) is the information communication service of the College. Its primary mission is to provide material and technical support for the instructional programs at the College. The LRC supports various community organizations and programs within the College's service region.

Library Services
The mission of SWCC Library is to serve as a focal point for research and study; to provide students, academic personnel, and community users access to informational resources; and to provide an up-to-date collection of library materials which support and enhance the educational programs of the College, as well as the personal aspirations of individuals using the Library. Specific goals to meet this mission are:

- To provide facilities, services, and learning/information resources in an educational atmosphere that promote student learning and enhance student development.

- To provide adequate library collections as well as other learning/information resources, which are current and representative of the curriculum and the needs of the community of library users.

- To provide regular and timely individual and group instruction for library literacy, information literacy, and technology for information access.

- To provide for the continued effectiveness of the Library by regularly assessing the needs of and services provided to students, faculty, and community, resulting in continuing improvement, and demonstrating that the Library is effectively accomplishing its mission, goals, and objectives.

- To provide a sufficient number of qualified staff with appropriate education or experience in the library and/or other learning resources.

The Library is a fully automated, modern research facility. VCCS Linc, the online catalog for the Aleph library management system, provides public access to the collections of all the college libraries in the Virginia Community College System and an automated circulation system. Other locally developed networks provide bibliographic and full-text databases along with the capacity to print, email, and store information.

VIVA, The Virtual Library of Virginia, is available on thirty-one public-access computers and eleven wireless laptops. This state-wide academic project provides electronic access to vast amounts of information through the cooperation of all the academic libraries and special funding initiatives. Students and faculty have free access to First Search, literature full-text databases, full-text encyclopedias, and full-text periodicals. The interlibrary loan component of the VIVA project provides document delivery services between and among the academic libraries, and electronic delivery of interlibrary loan is a component.

The Internet and its wealth of information and services are freely available to students, faculty, and the community.

Other services and materials available are listed below:

- reference and information services available 65 hours per week
- 44,597 monographs
- 137 periodical subscriptions
- bibliographic and full-text databases with access to more than 10,500 full-text journals and reports provided solely or jointly by SWCC Library, Virginia Community College System (VCCS), and the Virtual Library of Virginia (VIVA) 46,172 netLibrary electronic full-text books
- growing collection of audiobooks (full length books on cassette and CD)
- growing collection of videos and DVDs; primarily academic support, informational, and classics
- printed and online user instructions along with personal assistance
- scheduled classes for bibliographic instruction and library research skills

Learning Assistance Center (LAC)
The Learning Assistance Center functions as a comprehensive learning center for students, instructors, staff members, and community residents.

The LAC provides opportunities for specialized instruction to assist clients in meeting their educational goals. Supplemental instruction is also available through computer software and instructional modules through audio and videos. Services of the LAC are

offered on a demand basis; however, many faculty members require their students to utilize a variety of instructional concepts available in the LAC as part of their course requirements. Individualized assistance can be obtained from specialized computer programs as well as student tutors. LAC personnel diligently assist users with locating the appropriate material and equipment to meet their ongoing academic needs.

Distance Learning and Instructional Technology

The Distance Learning and Instructional Technology department performs primarily five services—Instructional Design, Development, and Support; Instructional Server Management; Certification and Testing Services; Systems Development and Integration; and Learning Assistants Center.

The distance learning program is designed to offer courses to students who find it necessary or more convenient to study outside the regular classroom environment.

Teleconferencing provides local, state, national and international teleconference opportunities for the College's service area. The institution has downlinked everything from law enforcement to health to staff development.

The Learning Management System (Blackboard) and the instructional network servers allow students and faculty in traditional and DDL classes to access their courses providing media streaming and other services. On-going training and support for the management system is provided for faculty and students.

The fiber optic electronic classroom transmits video with natural motion and wide spectrum served over a high speed digital network. Teacher and learners simultaneously are heard and seen at each site.

The compressed video electronic classroom allows classes to be offered from various learning centers across the state of Virginia. Like the fiber optic classes, the compressed video classes allow for two-way video and two-way audio from a local site and one or more remote sites.

Video production of telecourses, teleweb, or other educational or training can be met with the department's highly trained staff and fully equipped production facility.

The planning and consulting services are designed to help any faculty member or student with classroom presentations. These may include advice on technical matters concerning equipment and production, and on techniques and the effectiveness of various procedures in instruction.

The equipment loan and maintenance service includes both electronic delivery of classroom support materials and the delivery of equipment to the classroom. Maintenance includes cleaning and repair of the College's media equipment.

In addition to these services, the Distance Learning and Instructional Technology staff also helps the faculty and administration to plan, develop, and produce audio-visual materials for college public relation exhibits and publications.

NEW INDUSTRY PROGRAMS

Southwest Virginia Community College, in cooperation with the Virginia Economic Development Partnership, provides instruction for new and expanding industries.

The program incorporates job analysis, instructor recruiting and/or training, possible financial support for job instruction, and adaptation for continuous training. Such training aids in more efficient plant production for industry and greater opportunity for advancement of employees. New industries considering locating in the area, or existing industries considering expansion are invited to contact the College's Center for Workforce, Community, and Economic Development for more information.

OFF-CAMPUS OFFERINGS

In order to meet the needs of business, industry, and other community groups, some courses may be offered at off-campus locations. College training centers are conveniently located throughout the service region. It may be necessary to offer such courses on a time-schedule different from the beginning and ending dates of the regular semesters as stated in the College Calendar. Such courses will in no way be reduced in number of hours required for quality of instruction.

OUTCOMES ASSESSMENT REQUIREMENT

Students may be required to take one or more tests designed to measure general education achievement and/or achievement in selected major areas prior to graduation for the purpose of evaluation of academic programs. No minimum score or level of achievement is required for graduation. Test results will remain confidential and will be used for the sole purpose of improvement of the college.

SWCC HONORS PROGRAM

The SWCC Honors Program is designed to provide the strong academic student the opportunity to participate in a challenging and demanding course of study in Humanities and Social Sciences which will complement any college transfer program* in which the student is participating. The Honors Program offers:

1. The opportunity to work closely with faculty members in interdisciplinary seminars and independent research.

2. The opportunity to graduate in the Honors Program with appropriate recognition and transcript notations marking courses as Honors courses.

3. The opportunity to have recommendations to Honors Programs in senior colleges and universities.

Eligibility for the Honors Program:

Any student who is enrolled in a college transfer program* at SWCC and meets the guidelines listed below is eligible to apply for the Honors Program. Final selection of participants will be made by the Honors Program Committee.

1. Recent High School Graduates
    a. Be in the top 10% of the high school graduating class in a college preparatory program or score 1100 or above on the SAT.
    b. Submit recommendations from at least two high school teachers in senior level college preparatory classes.
2. Students Currently Enrolled at SWCC
    a. Have a GPA of 3.35.
    b. Submit recommendations from two SWCC faculty members.

Format for the Honors Program:

A. The program consists of two components:
    1. *Honors Contract Courses*. The student should take a minimum of three courses (9 semester hours) but no more than two Honors Contract courses per semester. These courses should be worked out in consultation with the Honors Program Committee.
    2. *Interdisciplinary Honors Seminars*. The student should take a minimum of two one-hour seminars, and should plan to take a seminar each semester he/she is enrolled in the Honors Program.
B. Grades:
    1. The minimum grade expectation for Honors courses is "B."
    2. The minimum GPA expectation per semester in Honors classes is 3.25.
    3. The minimum GPA to graduate in the Honors Program is 3.5 in Honors courses, as well as in the student's regular course of study.

* College transfer programs: Science, Business Administration, Engineering, Education, General Studies, and Liberal Arts

STUDENT DEVELOPMENT SERVICES

Student Development Services encompasses many areas of service to students from initial contact through graduation. Student Development Services acts as the student advocate in the areas of admissions, records, counseling, activities, assessment, veterans' affairs, financial aid, career selection, job referral assistance, support services, and student disability services. These services assist the student in the exploration and development of values, personal and interpersonal skills, and college transfer or job-seeking opportunities.

Student Development Services works with students, through scheduled courses, special seminars and workshops, and counseling, to carry out the objectives listed above.

ACADEMIC ADVISEMENT

Southwest Virginia Community College believes in the importance and uniqueness of each student. One college service which promotes this belief is the academic advisement system which provides for an advisor (a faculty member or counselor) to assist each student. Working together, the advisor and student will select and schedule classes; follow educational plans; discuss academic concerns; explore career goals on an on-going basis; clarify life goals; and plan transfer, graduation, or job selection activities. This advising relationship offers the student encouragement for personal growth and development; promotes persistence toward educational or vocational goals; and maintains one-on-one contact.

Virtual Advising

Virtual advising at SWCC is designed to assist students to receive personalized attention and information to make informed decisions with limited face-to-face contact. Students may obtain information to assist with educational plan, register for classes, and obtain student support services. This advising model is designed to help students obtain their educational and vocational goals.

ASSESSMENT

SWCC's Assessment Center (Dellinger Hall) serves area citizens and prospective students by offering comprehensive testing programs to enable individuals to know their abilities, aptitudes and interests.

Either the ASSET or COMPASS is required of all new students planning to enroll in a degree, certificate, or diploma program of study. However, applicants other than those seeking entry to the College's health care programs may submit Scholastic Aptitude Test (SAT) or American College Testing Program (ACT) scores. The results of the tests are used for placement rather than admission purposes. The ASSET or COMPASS is administered on the College campus and, as requested, in local high schools during the fall and spring.

The student who completes the ASSET or COMPASS is provided the results during the intake counseling interview. Anyone who does not receive the official report before enrolling is encouraged to check with Student Development Services for a review of test results. Careful and appropriate interpretations of test results are provided for each student.

CAREER PLANNING AND EMPLOYMENT SERVICES

The Career Resource Center (CRC) offers SWCC students, alumni, and area citizens assistance in career planning, job search strategies, and job connections. Services are available through individual counseling sessions, workshops, classes, and on-line (www. sw.edu/career). Career Events are a popular means for students to prepare for job search success prior to graduation.

Career planning services include assessment of skills and interests, investigation of career options, as well as matching skills and interests with career goals. Work Keys assessment of skill proficiency is used to assist employers and employees in determining skill levels for employment and for advancement within a career. CRC staff also provides guidance and documentation for the acquisition of work skills through experiential learning opportunities within and concurrent with students' academic programs.

Job search training complements the instructional program by developing student skills in understanding the workplace culture, marketing oneself to prospective employers, and building strong resume and interview skills. The CRC staff helps students develop the "soft skills" that employers seek, including the ability to work as a team member, a strong work ethic, and awareness of how to fit into the company culture. Job Search Clinics are held during the spring term to enhance students' readiness for the job search process and for employment.

Job connections services include assistance with researching the job market, developing a personal career network, completing applications, and developing a job search plan. Staff assists students in learning to use the Internet to research target companies and to conduct job searches as well as helping to identify traditional sources of job connections, such as employment services and job listing services. The staff maintains an E-Job Board on its web page to give students unlimited access to jobs listed with the CRC. Students have the opportunity to make networking and employment connections at four annual career fairs: SWCC's Career Connection, an on-campus career fair held annually in April—the Interstate Career Fair, a regional career event co-sponsored with colleges and community colleges from southwest Virginia, southern West Virginia, western North Carolina, and eastern Tennessee—Bluefield State Job Fair, a cooperative effort between Bluefield State College, Bluefield College, Concord College, Southwest Virginia Community College, and Wytheville Community College---Community College Career Connections, co-sponsored by SWCC, VHCC, and WCC. The Career Resource Center is located in Tazewell Hall, Room 125 or online at www.sw.edu/career.

COUNSELING

As a service to students and to the community, the College maintains a staff of professional counselors. The counseling staff assists students in making career, educational, personal, and social decisions. As part of this assistance, appropriate tests, inventories, occupational, and educational information items are used. Information regarding financial assistance and/or employment is also available to the student.

FINANCIAL AID

It is the desire of the College that no qualified student be denied the privilege of attendance because of financial need. Determination of need is based upon the student's

financial resources and allowances for tuition, fees, books, supplies, meals, room, transportation, and other expenses. In order to be eligible to receive aid, a student must be enrolled in a curriculum which is at least six months long and has a specified completion date. The student must maintain satisfactory academic progress, as determined by the College, in order to continue to be eligible to receive aid.   Students must sign a statement of educational purpose agreeing to only use federal student aid funds for expenses related to college attendance. Students wishing to apply for financial aid should contact the Financial Aid Office in Tazewell Hall. The "Student Financial Aid" booklet is available for all financial aid programs.

Financial aid applications must be filed each year. The summer term is the beginning of a new financial aid year so new applications should be filed two months prior to summer term. A student can receive financial aid from only one college per semester. A percentage of applications are marked for verification by the federal government.

Financial aid consists of several different programs, but is, generally, divided into three major categories: grants, scholarships, and work programs. A listing of the various programs offered is listed below.

FEDERAL AND STATE AID PROGRAMS

Pell Grant
Students may apply for this federally funded aid program by completing the Application for Federal Student Aid. This non-repayable grant is available to eligible students enrolled in a regular program. Awards depend on expected family contribution, the cost of education, full- or part-time status, and the length of enrollment in the academic year.

Supplemental Educational Opportunity Grants (SEOG)
SEOG, a non-repayable grant, is awarded to students having the greatest financial need; priority is given to Pell Grant recipients. Students who are eligible for SEOG funds may be awarded up to $1,000 a year based on need, the availability of funds, and other aid received.

College Scholarship Assistance Program (CSAP)
The Virginia State Council of Higher Education provides grants under this program to students who will be enrolled at least half-time in participating Virginia institutions, who have been Virginia residents for at least one year, and who demonstrate sufficient financial need. This State grant program does not have to be repaid. The grant ranges from $400 - $1000 and has a priority filing date of April 15.

Commonwealth Grants (COMMA)
Commonwealth Grants are awarded to in-state students who are enrolled at least half time (six (6) credits or more) and who have extreme financial need. The grant will pay tuition for 14 credits.

Part-Time Tuition Assistance Program (PTAP)
The Part-Time Tuition Assistance Program is a state-funded grant provided for students who are enrolled between one and six (1-6) credits per semster in a curriculum leading to the completion of a degree or certificate program.

Federal Loans

SWCC does not participate in Federal Family Student Loan Program.

Short Term Loans (STL)

Short-term loans, offered by the College, may meet the emergency needs of a student with regard to the payment of tuition and the purchase of books. The short-term loan must be repaid within 60 days at no interest and requires a co-signer who is 21 years of age or older. Apply in person at the Office of Financial Aid.

Work Study Program

College Work Study is a federally funded program that permits the College to create jobs for students who are eligible for financial aid. These part-time jobs, awarded to full-time students only, generally will not exceed eight (8) hours per week with pay equal to the minimum wage. Most college work study jobs are located on campus, but in some instances, a student may be placed off-campus working for a public or private non-profit agency. Students must maintain a 2.0 (+) GPA to be eligible for workstudy.

Mary Marshall Nursing Scholarship was established by the General Assembly for Virginia residents in the nursing program who have financial need. Sophomore nursing students must apply by March 15. The application deadline for freshmen nursing students is June 15.

SCHOLARSHIPS - LOCAL

The following is a list of all general SWCC Foundation & Institutional Scholarships followed by the criteria necessary to apply. You may apply for all scholarships for which you qualify. Unless otherwise indicated, applicants must have a minimum of a 3.0 GPA (B) and enroll as a full-time student (min.12 credit hours). Deadlines vary and are advertised on our website. Apply for these and other SWCC scholarships online at http://www.sw.edu/scholarships.

FOUNDATION AND INSTITUTIONAL SCHOLARSHIPS

Ted W. Abolin Memorial Scholarship (2 one-year $1000 scholarships)
 Awarded to a graduate of a Russell County High School

Adair Scholarships (one year $1000 scholarships)

• **Jane Venture Adair, Elizabeth Adair Townsend and Anne Adair Smith**
  Awarded to a first or second year student
• **Jane Venture Adair Nursing Scholarship**
  Awarded to a first or second year nursing student.
• **Milton Hunt, Alice Harman and Charlie T. Adair Scholarship**
  Awarded to a first or second year student.

Joseph Allen Addison Memorial Scholarship (one year $500 scholarship)
Awarded to a Richlands High School graduate
Student must be enrolled in the Information Systems Technology program

Mark Armstrong Memorial Scholarship (one year $500 scholarship)
Awarded to second year student
Student must be in the Business Curriculum

Art & Soul Scholarship (one year $250 scholarship)
Awarded to an Art Student

George F. Barnes Family Scholarship (one year $3000 scholarship)
Awarded to a Tazewell High School graduate

Dr. Robert F. Baxter Memorial Scholarship (3 two-year $1000 per year scholarships)
Awarded to residents of Buchanan County and/or graduates of Buchanan county high schools
Must have been accepted into the Nursing or Allied Health Program at SWCC
Must have applied for Federal Assistance to determine level of need
Recipients will be eligible for a second year scholarship if they maintain a 2.5 GPA

BB&T Scholarship (one year $1000 scholarship)
Awarded to a graduating high school senior enrolled in a Business curriculum

Bobby L. Beaver Welding Scholarship (one year $250 scholarship)
Awarded to a student in the Welding Program
Given only in the Spring semester, based on Fall semester grades

Jeffery Michael Beinhorn Memorial Scholarships (3 one-year $1500 scholarships)
Awarded to first or second year student
Awarded to graduate of Buchanan County High School

Sam and Ruth M. Beinhorn Memorial Scholarships (3 one-year $1000 scholarships)
Awarded to a first or second year student
Priority given to a graduate of a Buchanan County high school

Robert L. Branch Scholarship in Radiography (one $1000 scholarship)
Awarded to a student in the radiography program

Doug and Ginger Branton Family Scholarship (one year $500 scholarship)
Awarded to a first or second year student

Jack and Juanita Britts Scholarship (one year $1000 scholarship)
Awarded to a graduate of Richlands High School

Jenny Owen Brooks Memorial Scholarship (one year $200 scholarship)
Awarded to a first year student from Lebanon High School

Omer and Sadie Bunn Scholarship (2 one year $1000 scholarship)
Awarded to a Buchanan County resident

Georgia I. Busic Scholarship (one year $1500 scholarship)
Awarded to a currently graduating Honaker High School senior

H. Paul Buskell Memorial Scholarships (2 one-year $1000 scholarships)
Awarded to a first or second year student

Cora Ennis Russell Buskill Memorial Scholarship (one-year $1000 scholarship)
Awarded to a graduate of Richlands High School

Dr. W. Gregory Capps Pre-Chiropractic Scholarship (one year $1000 tuition scholarship)
Awarded to first year student committed to a Chiropractic career
Based on High School grades, community service and school activities

Katrina J. Cartmell Scholarship (one year $1500 scholarship)
Awarded to a currently graduating Honaker High School senior

Nancy del Castillo Scholarships (4 one-year $1000 scholarships)
Awarded to first year students

Grey Chaney Nursing Book Scholarship (one year $250 scholarship)
Awarded to a student in the Nursing program

Clinch Valley Medical Center Memorial Scholarship (2 one-year $1000 scholarships)
Awarded to student in a Nursing or Allied Health Program (Radiology, Respiratory Care, Occupational Therapy Assistant)

CNX Gas Engineering Scholarships (one year $3,000 scholarship)
Student must be enrolled in engineering program
Recipients may be eligible for a second year scholarship only if they maintain a 3.0 GPA

Mike Cochran Radiography Scholarship (one $500 scholarship)
Awarded to a student enrolled in the SWCC Radiography program

The Commonwealth Legacy William B. "Bill" Jackson Family Scholarship
(one year $3000 scholarship)
- Awarded to a student attending college for the first time at a Virginia Community College
- Selection based on merit
- Student must have a history of academic excellence
- Student must be willing to promote the community college education and the Commonwealth Legacy Scholarship Program
- Student must be willing to mentor future scholars
- Student must have a commitment to developing leadership potential
- Student must be full-time, associate's degree seeking, student with plans to graduate from a Virginia Community College
- Student must make a time commitment to represent the Virginia Community College at designated activities/events to be determined

CONSOL Energy Engineering Scholarships (5 one-year $1000 scholarships)
Student must be enrolled in the engineering or engineering technologies programs
Awarded to first or second year student

Stelio and Betty Corte Scholarships:

- **Stelio and Betty Corte Scholarships** (4 one-year $1000 scholarships)
  Awarded to a first or second year student
- **Stelio and Betty Corte Construction Trades Scholarships**
  (numbers & amounts to be determined)
  Awarded to students in the Construction Trades Academy

Frank S. Crawford Scholarship (one year $1000 scholarship)
Awarded to a student enrolled in either the Nursing program, an Allied Health program or Music program
Student must be a graduate of Richlands High School

Kenneth Cross Scholarship (one $500 scholarship)
Awarded to a first or second year student

Nancy Chaffin Cyphers Memorial Scholarship (one year $500 scholarship)
Awarded to a first or second year student
Student must be in a Humanities Curriculum
Student's goal must be to become a teacher in Communications, English, Speech, or Theater

Credit Bureau of The Virginias Foundation Scholarships (4 one-year $1000 scholarships)
Awarded to a first or second year student
Student must be a resident of one of the following counties in VA: Bland, Giles, or Tazewell or one of the following WV
counties: Greenbrier, McDowell, Mercer, Monroe, Summers, or Wyoming
Student must have GPA between 2.0(C) & 3.0(B)

Stuart Damron Memorial Scholarships (2 one-year $1000 scholarships)
Awarded to a student in the Automotive Technology or Diesel Program
Priority given to Dickenson County residents

Ralph B. and Carol R. Davis Scholarships (2 one-year $1000 scholarships)
Awarded to first or second year students

Earl E. and Dorothy Jackson Dellinger Scholarships (5 one-year $1000 scholarships)
Awarded to first or second year students
Priority given to Buchanan County residents

Percy V. and Eula B. Dennis Scholarship (one year $1000 scholarship)
Awarded to a student from Tazewell County
Recipient must demonstrate financial need

Dominion Resources Scholarships (5 one- year $1,000 scholarship)
Awarded to any student in any program of study

Doris McGee Duncan Scholarships (2 one-year $1500 scholarships)
Awarded to a first or second year student
Student must be graduate of Richlands High School
Student must be seeking a degree in elementary education

Don and Nancy Dunford Scholarship (one-year $1000 scholarship)
Awarded to a currently graduating Tazewell High School senior

Howard D. "Sonny" Elswick Art Scholarship (one year $500 scholarship)
Awarded to a first or second year student majoring in art

Richard and Sue Foil Scholarship (one year $750 scholarship)
Awarded to a second year student
Student must have shown achievement in their chosen major

Sue Gilmer Memorial Scholarship (one year $1000 scholarship)
Awarded to a first year student
Student must be from Russell County
Student must be entering a Nursing or Allied Health program (Radiology, Respiratory Care, Occupational Therapy Assistant)

Grundy Rotary Club Scholarships (2 one- year $1000 scholarships)
Awarded to a first year student
Student must be from Buchanan County

Grundy Woman's Club Scholarship (one year $1000 scholarship)
Awarded to a first year student
Student must be from Buchanan County

Phyllis Harrison Scholarship (one year $500 scholarship)
Awarded to a second year student in the Respiratory Care Program

Harrison-Wyatt Scholarships (4 one-year $1500 scholarships)
Awarded to students from Buchanan County

Eugene Hamilton and Billie Sue McConnell Hurst Business Scholarship
(one year $1000 scholarship)
Awarded to a graduate of Richlands High School
Student must be enrolled in the Business Administration program

Bill and Shirley Keene Scholarship (one year $1000 scholarship)
Preference given to a second year student planning on pursuing a career in the ministry of a Christian denomination

Edward Joseph and State Keene Family Scholarship (one year $250 scholarship)
Priority given to SWCC student working for the SWCC tutoring program
Awarded in the Spring Semester

Dr. Charles R. and Mary L. King Endowed Scholarships (5 one-year $1000 scholarships)
Awarded to a first or second year student

John and Edna Lester Family Scholarships (4 one-year $1000 scholarships)
Awarded to a resident of Buchanan County

Harry V. Lindsey Business Development Scholarships
(3 two-year $1000 per year scholarships)
Awarded to a first or second year student
Student must be enrolled in a Business curriculum
Priority given to Richlands High School, then to any Tazewell County High School graduate, and then to other counties

James R. Lindsey Business Development Scholarship (one-year $1000 scholarship)
Awarded to a first or second year student
Student must be enrolled in a Business curriculum
Priority given to Richlands High School, then to any Tazewell County High School graduate, and then to other counties

J. Franklin and Vernon C. Long Scholarships (2 one-year $1200 scholarships)
Awarded to first year student

John Patterson Mast Scholarship (one $500 scholarship)
Awarded to a first or second year student

Lorraine Compton McGee Scholarships (2 one-year $1500 scholarships)
Awarded to graduates of Richlands High School
Student must be seeking a degree in Business Education

Marine Corps League-Southwest Virginia Detachment 980 Scholarship
In Memory of I.H. "Hank" Shrader (one year $500 scholarship)
Awarded to a first or second year student
Student must have a GPA between 2.0(C) & 3.0 (B)

Sam G. McCall Jr. Family Scholarships (20 one-year $1000 scholarships)
Awarded to first or second year students
Students must be from Buchanan or Tazewell County

Meridian Management Co., Inc. Scholarship (one year $2000 scholarship)
Awarded to a first or second year student
Priority given to Meridian Management employees and/or family members

Donald C. Moore Memorial Scholarship (one year $300 scholarship)
Awarded to a first year student
Student must be from Russell County

Mountain Mission Scholarship (one year $500 scholarship)
Awarded to a graduate of Mountain Mission School

Irma Berger Munsey Nursing Scholarship (one $1000 scholarship)
Awarded to a student accepted into the Nursing Program
Must have minimum 3.0 GPA

Music Program Scholarships (to be awarded in consultation with Dr. Joseph Trivette; Numbers and amounts of scholarships will vary based on funding):

- **Jane Vanture Adair Music Scholarship**
  Awarded to a Student in the Music Program
- **W.B. "Bill" Adams Jazz Scholarship**
  Awarded to a Student in the Music Program
- **Shirley B. Beaver Music Scholarship**
  Awarded to a Student in the Music Program
- **Thomas F. Blackwell Memorial Music Scholarship**
  Awarded to a student in the Music Program
- **Harry and Mayola Cole Scholarship** (one year $500 scholarship)
  Awarded to a Student in the Music Program
  Awarded to Buchanan County student
  Priority given to Whitewood residents
- **Pavlina Dokovska Music Scholarship**
  Awarded to a student in the Music Program
- **Wrenda Fuller Music Scholarship**
  Awarded to a music student who graduated from Lebanon High School
- **Organ Scholarship**
  Awarded to a student in the Music Program.
- **Betty Patteson Jackson Music Scholarships**
  Awarded to a student in the Music Program.
- **Bea Leist Music Scholarship**
  Awarded to a music student who graduated from Tazewell High School
- **Dr. Sam B. Schulken Music Scholarship**
  Awarded to a student in the Music Program
- **Joseph P. and Joyce M. Trivette Music Scholarship**
  Awarded to a student in the Music Program

B.J. (Bob) and Nona Nassif Scholarship (one year $300 scholarship)
Awarded to a currently graduating Richlands High School senior

National Science Foundation Scholarships (one year tuition and books scholarships with yearly incentives, number varies, availability contingent on funding)
Awarded to first and second year students
Students must be enrolled in one of the following programs: Computer Electronics Technology, Electrical/Electronics Technology, Engineering, or Science
Students must be financial aid eligible, as determined by the current FAFSA form
Contact Peggy Barber at SWCC, DA-227 or call her at 964-7556 for more information
Apply online at http://www.sw.edu/nsf

North Carolina Coal Institute Scholarship (one year $3500 scholarship)
Awarded to a first or second year student
Must be enrolled in one of the following programs: engineering, mining engineering, or a technical program related to Mining

Armand and Peggy Opitz Book Scholarship (2 one year $350 book scholarship)
Priority given to single parents and non-traditional age students
Student must have 2.5 GPA

Pharmacy and Allied Health Scholarships (5 one year $1000 scholarships)
Priority given to pre-pharmacy education student
Second priority given to students accepted into an allied health program
Student must have a GPA of 2.0 or better
Given to first or second year student

Brady Surles Phi Theta Kappa Scholarship (2 one -year $250 scholarships to be awarded in consultation with PTK advisor)
Awarded to a returning PTK member taking a minimum of 12 credit hours

Leona Ratliff Scholarship (one year $1000 scholarship)
Awarded to Buchanan County High School graduate
Student must have a 2.5 GPA or greater

Red Ash School Scholarship (one year $250 scholarship)
Awarded to a first or second year student
Priority given to Tazewell County residents

Daisey B. Reynolds Memorial Scholarship (one year $1000 scholarship)
Awarded to a first or second year student

Ginger P. Robertson Scholarships (2 one-year $1000 scholarships)
Awarded to first or second year students
Students must be from Buchanan County

The Rocket Boys Math & Science Scholarship (Established by Homer and Linda Hickam) (one year $500 scholarship)
Awarded to a student enrolled in the Science Program with plans of a career in math or science

John Powell Royall, Jr. Memorial Scholarship (one year $1000 scholarship)
Awarded to a first or second year student

Mary Bell Hyatt Royall Memorial Scholarship (one year $1000 scholarship)
Awarded to a first or second year student

Harold W. and Charlotte Short Scholarship (one year $500 scholarship)
Awarded to a first or second year student

I.H. "Hank" and Faye Shrader Scholarships (2 one-year $1000 scholarships)
Awarded to a first or second year student

Michele's Gift-The Michele B. Sluss Scholarship (one year $250 scholarship)
Awarded to a currently graduating Tazewell High School senior
Student must be entering the Respiratory Therapy Program

Harold W. and Nell R. Smith Scholarships (10 two-year $1000 per year scholarships)
Priority given to first or second year students from Buchanan County

Dr. Roy and Catherine Smith Memorial Scholarship (one year $1000 scholarship)
Awarded to a Russell County student
Priority given to a student pursing a career in veterinary medicine

Joyce Sproles Memorial Scholarship (one year $500 scholarship)
Awarded to a second year student
Student must be from Buchanan County
Student must be a Buchanan County Nursing Student
Selection based on college grades and dedication to the Nursing field

Emory L. Stallard Memorial Scholarship (full tuition scholarship for one year)
Awarded to non-traditional age students
Student must be in the Education or Human Services Curriculum
Interview with donor may be required

J. A. Street and Associates Scholarships (4 one year $500 scholarships)
Awarded to a student enrolled in a program related to Construction Trades

Mark Lynn Sutherland Memorial Scholarship (one year $1500 scholarship)
Awarded to a currently graduating Honaker High School senior
Priority given to applicants seeking a degree /career in teaching

SWCC Bookstore / Validis Resources Scholarship (2 one year $1000 scholarships)
Awarded to a first or second year student

SWCC Business Contest Scholarships (maximum of $250 for tuition)
A previously determined scholarship; student must be a winner of the SWCC Business
Contest competed in during high school
Awarded to a first year student
Students must be from Buchanan, Dickenson, Russell, or Tazewell County
Contest winner must present certificate to Scholarship Counselor in order to activate

SWCC College Board Scholarships (4 one year $1000 scholarships)
Awarded to first year students
One each from Buchanan, Dickenson, Russell, and Tazewell Counties

SWCC Golf Classic Scholarships (5 one year $1500 scholarships)
Awarded to a first or second year student

Tazewell Rotary Club Scholarships (2 one year $1000 scholarships)
Awarded to graduates of Tazewell High School

Martha W. Thompson Scholarship (one year $1000 scholarship)
Awarded to a first or second year student

TruPoint Bank Scholarships (2 one year $1000 scholarships)
Awarded to students in the Business Curriculum

United Company Endowed Scholarships (2 one year $1500 scholarships)
Awarded to residents of Buchanan County

Dr. Harold and Dr. Carol Ann Van Hook Book Scholarships
(2 one year $500 book scholarships)
Awarded to first generation college students

Ann Walls Memorial Scholarships (2 one year $1000 scholarships)
Awarded to residents of Tazewell County

Harlan and Ann Walls Scholarships (2 one year $1000 scholarships)
Awarded to first year students
Students must be graduates of Richlands High School

Harlan and Vera Walls Scholarships (one year $1000 scholarship)
Awarded to graduates of Buchanan County High Schools

Benny Wampler Scholarship for Business Management (one year $500 scholarship)
Awarded to a student in a business management program of study

Gene "Greek" Watson Book Scholarship (one year $250 Book scholarship)
Awarded to a first or second year student

Joseph and Eula Whitt and Mabel L. Smith Scholarships (2 one year $2500 scholarships)
Awarded to a first or second year student

Dr. and Mrs. W.R. Williams Memorial Scholarship (one year $1500 scholarship)
Awarded to a first or second year student

COMMUNITY BASED AWARDS

Since other community based groups may award scholarships, interested students should contact their high school counselor or the College Financial Aid Office. Some community based scholarships include:

Coca-Cola Foundation
Columbus-Phipps Foundation
Cruise Foundation
E. Dillon Company
Dewey Duncan Trust
Ervinton High School
Grundy High School
Haysi High School
Honaker High School
Honaker Women's Club
Hurley High School
Sandra and Bill Johnson
 Scholarship Fund
Jeffersonville Women's Club
Kwik Kafe

K-VA-T
Lebanon High School
Lewis Gale Foundation
North Tazewell Lions Club
NY Community Trust
Pocahontas High School
Ratcliffe Foundation
Redbud Festival of Honaker
Richlands High School
Richlands Rotary Club
Tazewell Baseball Boosters
Tazewell High School
Tazewell Lions Club
Twin Valley High School
UMWA/PCG Training Fund
Mark VanMeter Memorial Scholarship

SATISFACTORY PROGRESS REQUIRED FOR RECEIPT OF ALL FINANCIAL AID

Ability to Benefit

To be eligible for any Title IV student assistance, students without a high school diploma or GED must be admitted to a curriculum on the basis of the ability to benefit from the

education or training offered. Students admitted on this basis must, prior to enrollment, pass an independently administered examination approved by the U. S. Department of Education. Students must also meet and maintain satisfactory academic standing and make satisfactory progress in accordance with the College's established policy for all financial aid recipients in order to remain eligible for any financial aid benefits during a subsequent academic year. If the student does not maintain satisfactory standing, he/she will not be eligible for future financial aid benefits until the completion of a remedial program prescribed by the advisor or until the student's academic progress meets the minimum standard.

VCCS Satisfactory Academic Progress (SAP) Policy
   I.   **Purpose:** To reinforce responsible student behavior and describe the satisfactory academic progress standards to which students that receive financial aid must adhere in order to maintain their financial aid eligibility. This policy is designed to satisfy the requirements set forth in 34 CFR (Compilation of Federal Regulations), Part 668, Section 668.16 (e) and Section 668.34. The law requires that SwVCC establish qualitative standards (grade point average) and quantitative standards (completion rate and maximum timeframe) to ensure students are making progress toward their educational goals.

   II. **Definitions:** Documentation – As it relates to appeals, documentation includes, but is not limited to, letters from physicians, licensed counselors, clergy, or other professionals not related to the student. Documentation should be legible and reference a time period that corresponds with semesters when the student had academic problems.

   III. **Policy:** Financial aid recipients at Southwest Virginia Community College have the responsibility to complete the courses they attempt with a satisfactory grade. In order to continue financial aid eligibility, federal law requires a student to maintain satisfactory academic progress in the program he/she is pursuing. Satisfactory academic progress means that a student is maintaining a cumulative grade point average at the minimum standard or higher and is completing the minimum number of semester credit hours or courses required in order to finish program requirements within the maximum allowable time frame. The standards used to judge satisfactory academic progress are cumulative and include all periods of a student's enrollment, even periods in which the student did not receive financial aid.

Federal regulations require that a student receiving federal financial aid make satisfactory academic progress in accordance with the standards set by the College and the federal government. These limitations include all terms of enrollment, whether or not aid was awarded or received. Satisfactory Academic Progress (SAP) standards also apply to state aid as well as institutional and foundation scholarships. Progress is measured throughout the academic program by the student's cumulative grade point average (Qualitative) and by credits earned as a percentage of those attempted (Quantitative or Pace of Completion). In addition, students must complete their programs of study before attempting 150% of the credits required to complete the program. The College Financial Aid Office will evaluate satisfactory academic progress before aid is awarded and after grades are posted for every term, starting with their first term of enrollment. Some career studies certificate programs (i.e., shorter than 24 credits in total length) are ineligible for student financial aid, but those credits will be counted toward all SAP requirements (GPA, Completion Rate, Maximum Timeframe, and Developmental Maximum) if the student later enrolls in an eligible program.

I. STUDENT FINANCIAL AID STATUS

    A. Financial Aid Good Standing (GS) – Students who are meeting all aspects of the satisfactory progress policy or successfully following a designated academic progress plan.

    B. Financial Aid Warning Status (WS) – Students who fail to meet satisfactory academic progress for the first time (excluding students who have already attempted 150% of the credits required for their programs of study) will be automatically placed in a Warning Status for one (1) term and are expected to meet SAP requirements be the end of that term. Students who fail to meet satisfactory academic progress requirements at the end of the warning status term will be placed on financial aid suspension. However, with a successful SAP appeal, those students will be placed on financial aid probation and will retain financial aid eligibility.

    C. Financial Aid Probation Status (PS) – Students who have successfully appealed financial aid suspension are placed in Probation Status (PS). Students in Probation Status (PS) are eligible to receive financial aid for one (1) semester, after which they MUST be in Good Standing (GS) or meeting the requirements of an academic progress plan that was pre-approved by the College Financial Aid Office.

    D. Financial Aid Suspension Status (SS) – Students who do not meet the credit progression schedule and/or the cumulative grade point average standard, or who fail to meet the requirements of their pre-approved academic progress plan, will be placed in Suspension Status (SS). Students in Suspension Status (SS) are not eligible to receive financial aid.

II. Evaluating Progress

    A. Quantitative Standards or Pace of Completion

        Completion Rate (67% Rule): Students must, at a minimum, receive satisfactory grades in 67% of cumulative credits attempted. This calculation is performed by dividing the cumulative total number of successfully completed credits by the cumulative total number of credits attempted. All credits attempted at the College (except audits, which must be entered as such by the class census date) are included. All credits accepted in transfer count as both attempted and successfully completed credits. This evaluation will be made prior to aid being awarded and after grades are posted at the end of each semester a student a student is enrolled at the College. Credits with satisfactory grades at the College are those for which a grade of A, B, C, D, S, or P is earned.

        Maximum Hours (150% Rule): In order to continue receiving financial aid, a student must complete his/her program of study before attempting 150% of the credits required for that program. Developmental and ESL course work are excluded in this calculation. Attempted credits from all enrollment periods at the College plus all accepted transfer credits are counted; whether or not the student received financial aid for those terms is of no consequence.

        Transfer Students: In order to properly calculate satisfactory academic progress, transfer students who apply for financial aid must request official transcripts from

all other colleges attended. Transcripts must be submitted to the College Registrar. Credits officially accepted in transfer will be counted in determining the maximum number of allowable semester credit hours for financial aid eligibility. College has the option on an individual student basis to put a transfer student in Financial Aid Warning Status immediately upon evaluation for financial aid if academic history at previous colleges indicates a pattern of unsuccessful academic.

Second Degree Students: Credits earned from a first degree or certificate must be counted if the student changes programs or attempts a second degree or certificate. Depending on the circumstances, an appeal might be warranted.

ESL and Developmental Studies: Students may receive financial aid for a maximum of 30 semester hours of Developmental Studies courses as long as the courses are required as a result of placement testing, the student is in an eligible program of study, and SAP requirements continue to be met. ESL credit are unlimited in number as long as they are taken as part of an eligible program and SAP requirements continue to be met.

Additional Considerations for Quantitative or Pace of Completion Standards

- Withdrawals (W grades) that are recorded on the student's permanent academic transcript will be included as credits attempted and will have an adverse effect on the student's ability to meet the requirements of the completion rate for financial aid.
- Incomplete Grades: Courses that are assigned an incomplete grade are included in cumulative credits attempted. These cannot be used as credits earned in the progress standard until a successful grade is assigned.
- Repeated courses enable that student to achieve a higher cumulative grade point average. Students can repeat courses with financial aid until successfully completed but repeating courses adversely affects the student's ability to meet completion rate requirements. Financial aid can be considered for successfully completed classes that are repeated to achieve a higher grade but for only additional attempt. Only the latest attempt will count toward the cumulative grade point average.

B.   Qualitative Standards

Cumulative GPA Requirements (GPA Rule): In order to remain eligible for financial aid consideration, students must meet minimum cumulative grade point average requirements based on a progressive scale. Only non-remedial courses with grades of A, B, C, D, and F are included in this calculation. Transfer credits are excluded. In order to graduate, a minimum cumulative grade point average of 2.0 is required.

Total Number of Credits Attempted	GPA Requirement
1-15	1.5
16-30	1.75
31+	2.0

III. REGAINING ELIGIBILITY FOR FINANCIAL AID

Students who do not meet the credit progression requirements (Quantitative or Pace of Completion) and/or cumulative grade point average requirements (Qualitative) will be immediately ineligible for financial aid. Removal from financial aid does not prevent students from enrolling without financial aid if they are otherwise eligible to continue their enrollment.

REPAYMENT OF TITLE IV AID WHEN A STUDENT WITHDRAWS

When a recipient of Title IV grant (Pell or FSEOG) assistance withdraws from the College during a semester in which the recipient began attendance, the College must determine the amount of Title IV grant assistance that the student earned as of the student's withdrawal date in accordance with federal regulations (34 CFR, Part 668, Section 668.22, November 1, 1999). If the student never begins attendance, a full refund of all charges assessed (tuition, fees, bookstore charges) against the Pell Grant or FSEOG programs will be returned by the College.

If the total amount of Title IV grant assistance that the student earned is less than the amount of Title IV grant assistance that was disbursed to the student as of the date of the institution's determination that the student withdrew, the difference between these amounts must be returned to the Title IV programs.

If the total amount of Title IV grant assistance that the student earned is greater than the total amount disbursed to the student, the difference between these amounts must be treated as post-withdrawal disbursement.

If outstanding charges exist on the student's account, the College may credit the student's account with all or a portion of the post-withdrawal disbursement, up to the amount of the outstanding charges.

The College must offer any amount of a post-withdrawal disbursement that is not credited to the student's account to the student within 30 days of the date of the college's determination that the student withdrew. The College must provide written notification to the student identifying the type and amount of the Title IV funds that make up the post-withdrawal disbursement. The written notice must explain that the student may accept or decline some or all of the post-withdrawal disbursement and that no post-withdrawal disbursement will be made to the student if the student does not respond within 14 days of the date that the institution sent the notification. If no response is received from the student, no portion of the post-withdrawal disbursement may be disbursed to the student.

Withdrawal Date for a Student Receiving Title IV Aid

For a student who ceases attendance the withdrawal date is:

(1)   The date that the student began the withdrawal process by submitting a completed withdrawal form to Office of Admissions and Records.

(2)   The date, as determined by the College, that the student otherwise provided official notification to Office of Admissions and Records, in writing or orally, of his or her intent to withdraw.

(3)   If the student ceases attendance without providing official notification to Office of Admissions and Records of his or her withdrawal, the mid-point of the semester or period of enrollment.

(4)   If the College determines that a student did not begin the College's withdrawal process or otherwise provides official notification because of illness, accident, grievous personal loss, or other such circumstances beyond the student's control, the date that the College determines is related to that circumstance.

(5)   The student's last date of attendance at an academically-related activity, provided that the College documents that the activity is academically related and documents the student's attendance at the activity. An academically-related activity includes, but is not limited to, an exam, a tutorial, computer-assisted instruction, academic counseling, academic advisement, turning in a class assignment, or attending a study group that is assigned by the College.

     The College must document a student's withdrawal date and maintain the documentation as of the date of the College's determination that the student withdrew. "Official notification to the College" is a notice of intent to withdraw that a student provides to Office of Admissions and Records.

Calculation of Amount of Title IV Aid Earned by the Student

The amount of Title IV grant assistance that is earned by the student is calculated by:

(1)   Determining the percentage of payment period completed. The percentage of the payment period completed is determined by dividing the total number of calendar days in the payment period into the number of calendar days completed in that period as of the student's withdrawal date. The total number of calendar days in a payment period includes all days within the period, except that scheduled breaks of at least five consecutive days are excluded from the total number of calendar days in the calculation.

(2)   Determining the percentage of assistance earned by the student. The percentage of the Title IV assistance that has been earned by the student is equal to the percentage of the payment period that the student completed as of the student's withdrawal date, if this date occurs on or before completion of 60 percent (60%) of the payment period. The amount of aid earned is considered to be 100 percent (100%) if the student's withdrawal date occurs after completion of 60 percent (60%) of the payment period.

(3)   Determining the percentage of assistance unearned by the student. The percentage of Title IV grant assistance that has not been earned by the student is calculated by determining the complement of the percentage of Title IV grant assistance earned by the student.

(4)   Determining the percentage of unearned Title IV assistance to be returned. The unearned amount of Title IV assistance to be returned is calculated by subtracting the amount of Title IV assistance earned by the student from the amount of Title IV aid that was disbursed to the student as of the date of the College's determination that the student withdrew.

Return of Unearned Title IV Aid by the College

The College must return the lesser of:

(1)   The total amount of unearned Title IV assistance to be returned as calculated above; or

(2)   An amount equal to the total charges by the College incurred by the student for the payment period multiplied by the percentage of Title IV grant assistance that has not been earned by the student as calculated in (3) above. Charges by the College are tuition, fees, and bookstore charges assessed by the College.

Return of Unearned Title IV Aid by the Student

After the College has allocated the unearned funds for which it is responsible, the student must return assistance for which the student is responsible. The amount of assistance that the student is responsible for returning is calculated by subtracting the amount of unearned aid that the College is required to return from the total amount of unearned Title IV assistance to be returned. However, a student is not required to return 50 percent (50%) of the grant assistance that is the responsibility of the student to repay.

A student who owes an overpayment of Title IV assistance remains eligible for Title IV program funds through and beyond the earlier of 45 days from the date the College sends a notification to the student of the overpayment, or 45 days from the date the College was required to notify the student of the overpayment if, during those 45 days, the student:

(1)   Repays the overpayment in full to the College or

(2)   Signs a repayment agreement with the U.S. Secretary of Education.

The College must send the student a notice within 30 days of the date of determination of withdrawal, if the student owes a Title IV overpayment. If the student does not repay the overpayment in full, the College must refer the student overpayment to the Secretary of Education for collection. A student wishing to enter into a repayment arrangement with the U.S. Secretary of Education should call 1.800.621.3155. Referral to the Secretary must take place within the earlier of 45 days from the date the College sends a notification to the student of the overpayment, or 45 days from the date the College was required to notify the student of the overpayment. A student who owes an overpayment is ineligible for Title IV program funds.

Order of Return of Title IV Aid

Unearned funds returned by the College or the student must be credited to any amount awarded for the payment period for which a return of funds is required in the following order: Federal Pell Grants and Federal SEOG Program aid.

Timeframe for Return of Title IV Aid

The College must return the amount of Title IV funds for which it is responsible as soon as possible, but not later than 30 days after the date of the College's determination that the student withdrew. The College must determine the withdrawal date for a student who withdraws without providing notification to the College no later than 30 days after the end of the payment period.

Appeal Process

Students or parents who believe that individual circumstances warrant exceptions from the published refund and repayment policies may appeal in writing to the Director of Admissions and Counseling.

Examples of Repayment

Student I is enrolled for 18 credits in the fall semester and withdraws on September 13. Student II withdraws on October 31. There are 115 calendar days in the semester. Both students charged $500 at the College Bookstore and $749 tuition against their financial aid account. Financial aid disbursed of $1,650 Pell and $50 FSEOG.

Student I
Withdrawal Date: September 13

Days attended: 22 out of 115 = **19% Completed**

Total aid of $1,700 X 19% completed = $323 **Earned Aid**

Total aid of $1,700 - $323 earned aid = $1,377 **Unearned Aid to be Returned**

100% - 19% completed = 81% **Unearned**

81% unearned X $1,249 tuition and bookstore charges = $1,011.69 **Unrecoverable Charges**

Lesser of unearned aid to be returned or unrecoverable charges: $1,011.69 **Institution's Share of Unearned Aid**

$1,377 unearned aid - $1,011.69 institution's share = $365.31 **Student's Share of Unearned Aid**

$1,011.69 returned to Pell: **Institution's Share of Unearned Aid Returned**

$365.31 X 50% = $182.66 to Pell: **Student's Share of Unearned Aid Returned**

Student II
Withdrawal Date: October 31 (After the last day to withdraw without academic penalty)

Days attended 70 out of 115 = **61% Completed**

(If calculated percentage exceeds 60%, enter 100% instead): **100% Completed**

Total aid of $1,700 X 100% completed = $1,700 **Earned Aid**

Total aid of $1,700 - $1,700 earned aid =$0 **Unearned aid to be Returned**

100% - 100% completed = 0% **Unearned**

0% unearned X $1,249 tuition and bookstore charges = $0 **Unrecoverable Charges**

Lesser of unearned aid to be returned or unrecoverable charges: $0 **Institution's Share of Unearned Aid**

$0 unearned aid - $0 institution's share = $0 **Student's Share of Unearned Aid**

$0 returned to Pell: **Institution's Share of Unearned Aid Returned**

$0 X 50% = $0 to Pell: **Student's Share of Unearned Aid Returned**

PROJECT ACCESS

Project ACCESS creates and expands employment opportunities for individuals with disabilities. Services offered by the program include transition, academic, and tutoring services. Project ACCESS also provides employment placement services, outreach, and follow-up services. The program is funded by the US Department of Education.

STUDENT SUPPORT SERVICES (PROJECT ACHIEVE)

Project ACHIEVE is made possible by a Student Support Services grant from the U. S. Office of Education, TRIO Programs. The project offers counseling, tutoring, cultural, and educational activities for eligible students. Eligibility for Project ACHIEVE is determined according to federal low-income criteria, first generation college students' status, and academic need. All veterans and handicapped students are eligible to participate in Project ACHIEVE.

Project ACHIEVE is equipped to provide computer-assisted learning for visually impaired students. In addition, students with learning disabilities can receive confidential assistance both in and outside the classroom through Project ACHIEVE.

ORIENTATION

SWCC offers a general orientation program to acquaint new students with the purpose and programs of the College. This process begins shortly after the student officially applies for admission. Each new student is advised to meet with a college counselor to explore career options, to discuss his/her educational interests, entry-level assessment report, possible special testing and to choose a curriculum. The student also has the option of taking tours and visiting specific instructors. It is the desire of Student Development Services to clarify and deal with any concerns or problems that the prospective student might have.

UPWARD BOUND

Buchanan and Dickenson County Upward Bound Programs - The SWCC Upward Bound Programs are funded by the U. S. Department of Education. Both projects are designed to generate in program participants the skills and motivation necessary to graduate from high school and to enter and complete the college of their choice. Fifty (50) students from each county in grades 9-12 participate in Upward Bound. Students enrolled in Upward Bound must meet specific income guidelines and be from homes where neither parent has completed a four-year college degree.

The SWCC Upward Bound Math/Science Program serves fifty (50) students from Honaker and Richlands High Schools. Funded by the U. S. Department of Education, this program encourages high school students to pursue higher level math and science courses in high school and to enter college in the fields of mathematics, science, or engineering. Students selected for participation are from homes where neither parent has completed a four-year college degree and the family income meets specific federal guidelines.

STUDENT HANDBOOK

This section provides information to help students meet the requirements of college enrollment.

ATTENDANCE

Students are expected to prepare for and attend each class. When absence becomes necessary, the student is responsible for making up all missed work. Faculty normally include their classroom attendance policy in the course syllabus.

REGISTRATION

Regular Registration

Students may register for courses only during the official registration period. Usually, students may not enter new classes after the first fourteen (14) calendar days of a semester. Requests for entry after that time must be approved by the instructor of the class and the Vice President of Instruction. Registration dates will be announced in local newspapers and on radio stations and will be posted on College bulletin boards. In the event that a class is closed, the student must see the division dean to determine whether additional class seats are available.

Web Registration

Students now have the capability to register online via the Internet using a new student information system – MYSouthwest.

MYSouthwest allows students to search for classes, plan schedules, register, add, drop or swap classes, print class schedules, view grades, print an unofficial transcript, track degree progress, access financial aid information, pay tuition and fees, and much more. Instructions for registration online are available on the SWCC web site at www.sw.edu/sis or contact the Office of Admissions and Records at at 276.964.7545.

All students are encouraged to meet with their academic advisor for assistance in course selection to assure progress toward graduation and transferability of course work.

Change of Registration (Add/Drop)

Students should follow established procedure for making any change in their schedules. Add/Drops may be processed online, via the Internet using MYSouthwest, prior to the end of the registration/add period. If not processed online via MYSouthwest, all changes in a student's schedule must be submitted on an add/drop form to the Office of Admissions and Records.

If a student drops a class prior to the end of the registration/add period for the semester or term, the student's name is removed from the class roll and no grade is awarded. Withdrawal from a course without academic penalty must be made within the first ten (10) weeks of a semester in order for the student to receive a grade of "W." After that time, the student will receive a grade of "F" except in mitigating circumstances. Withdrawals are not permitted under any circumstances following the last scheduled class day of each semester.

Addition and Late Registration for a Course

The add period and late registration period for day, video, or web classes in the fifteen-week session ends at the close of the sixth (6) calendar day of the academic semester. The last day to register for off-campus or evening classes is the fourteenth (14) day of class. The first day of classes, as published in the semester schedule, shall be the first day of the add and late registration period.

The add/drop period for classes in non-standard terms and summer sessions begins on the first day of classes and ends on the day which represents the completion of fifteen percent (15%) of the non-standard term.

Withdrawal From the College

A student who wishes to withdraw from the College should meet with a counselor for an exit interview, and complete a withdrawal form. If a student fails to withdraw from a course, he or she will receive a grade of "F" for that course. The student's official date of withdrawal is considered to be the date upon which the student's electronic or written notification of withdrawal is received by the Office of Admissions and Records.

Audit

Students who wish to audit a course should register in the usual manner and indicate audit status on the registration form. Full tuition and fees must be paid to audit a course. Audited courses do not count as a part of the student's course load. A change from credit to audit must be completed within the drop/add period at the beginning of the semester.

Pre-Registration for Classes

Students are encouraged to take advantage of advanced registration for the upcoming semester. Registering during advanced registration permits early selection of courses for the desired schedule and prevents delays in the registration process.

Change of Program

A student desiring to change programs after acceptance or enrollment in a specific program of the College is encouraged to contact a counselor for assistance. A Program Change Request form must be completed and signed by the student and submitted to the Office of Admissions and Records.

ACADEMIC ASSISTANCE CENTERS

A student in need of academic assistance may contact the Student Support Services in Buchanan Hall, Room 152, the Writing Lab in Buchanan Hall, Room 106, the Learning Assistance Center in Dellinger Hall, Room 215, or Student Development Services in Tazewell Hall, Room 104.

ACADEMIC STANDING

Good Standing

A student is considered to be "in good academic standing" if he or she maintains a semester minimum GPA of 2.00, is eligible to enroll again at the College, and is not on academic suspension or dismissal status.

Academic Warning

Students who fail to attain a minimum GPA of 2.00 for any semester shall be placed on academic warning. Students on academic warning are encouraged to consult with their advisor/counselor and take advantage of academic support services provided by the college.

Academic Probation

Students who fail to maintain a cumulative grade point average of 1.50 will be placed on academic probation until such time as the cumulative average is 1.75 or better. The statement "Academic Probation" will be reflected on the permanent record. Students on probation are ineligible for appointed or elected office in any student organization unless special permission is granted by the Associate Vice President of Student Development Services. Students may be required to carry less than a normal course load the following semester and will be required to consult with their advisor/counselor. Students shall be placed on probation only after they have attempted 12 semester credits.

Academic Suspension

Students on academic probation who fail to attain a semester GPA of 1.50 will be placed on suspension only after they have attempted 24 semester credits. Academic suspension shall be for one semester. The statement "Academic Suspension" will be reflected on the student's permanent record. Students who are placed on academic suspension and wish to appeal should follow the appeal process established by the college. Suspended students may be reinstated at the conclusion of the suspension period by following the process established by the college.

Students who have been reinstated from academic suspension must achieve a 2.00 GPA for the semester of their reinstatement and must earn at least a 1.75 GPA in each subsequent semester of attendance. The statement "Subject to Dismissal" shall be placed on the students' permanent records. Students who have been reinstated from academic suspension will remain subject to dismissal until the cumulative GPA is raised to a minimum of 1.75. Reinstated students may be required to carry less than a normal course load the following semester and are required to consult with their advisor/counselor. Colleges are encouraged to make additional academic support available to students who have been reinstated following academic suspension.

Academic Dismissal

Students who do not attain at least a 2.00 GPA for the semester of reinstatement following academic suspension shall be academically dismissed. Students who achieve at least a 2.00 GPA for the semester of their reinstatement following academic suspension must earn at least a 1.75 GPA in each subsequent semester of enrollment. Failure to attain a 1.75 GPA in each subsequent semester until the cumulative GPA reaches 1.75 shall result in academic dismissal. The statement "Academic Dismissal" will be reflected on the student's permanent records. Academic dismissal is normally permanent. In exceptional circumstances, students may appeal and be reinstated by following the process established by the college. Students who have been reinstated after academic dismissal will remain subject to dismissal until their cumulative GPA is raised to a minimum of 1.75. Reinstated students may be required to carry less than a normal course load the following semester and are required to consult with their advisor/counselor. Colleges are encouraged to make additional academic support available to students who have been reinstated following academic dismissal.

Academic Renewal

Students who return to the College after a separation of five (5) years or more may petition for academic renewal. If a student is determined to be eligible for academic renewal, "D" and "F" grades earned prior to reenrollment will not be used in the cumulative and curriculum grade point average (G. P. A.), subject to certain conditions. The request must be in writing and submitted to the Office of Admissions and Records. Once granted by the College, academic renewal cannot be revoked.

Dean's List and Honor's List

The Dean's List and the Honor's List are compiled at the end of each term. To earn Dean's List status, a student must have completed twelve (12) or more credits and earned a grade point average of 3.20. To earn Honor's List status, a student must be enrolled for at least six (6) credit hours and attain a grade point average of at least 3.50. Developmental course work will not be included in fulfillment of the twelve hours requirement for the Dean's List and the six hours requirement for the Honor's List.

ADVISOR/COUNSELOR

Students should meet with their advisor for assistance in the registration process and in the proper course selection for their program of study. Admissions' personnel will assign a faculty member or other college personnel who is knowledgeable in the student's field of specialization as the student's advisor. Students should see a counselor if help is needed in career selection or if assistance is needed with a personal problem.

GRADING

College students may receive the following grade marks:

GRADE	MEANING	QUALITY POINTS
A	Excellent	4
B	Good	3
C	Average	2
D	Below average	1
F	Failing	0
I	Incomplete	0
P	Pass	0
R	Re-enroll	0
S	Satisfactory	0
U	Unsatisfactory	0
W	Withdrawal	0
X	Audit (no credit)	0

Classes have assigned credit hours and each grade has set quality points with the exception of developmental courses. To determine the grade point average, divide the number of grade points earned by the number of credits taken. For example:

	Grade	Quality Points		Credits		Total Quality Points
Welding 21	A	4	x	3	=	12
Welding 51	B	3	x	3	=	9
Welding 14	B	3	x	2	=	6
Mech 46	C	2	x	2	=	4
English 01	S	0	x	0	=	0
SDV 108	B	3	x	1	=	3
Drafting 76	F	0	x	2	=	0
				13		34

34 divided by 13 = Semester GPA of 2.615

Grades are available, via the Internet, using MySouthwest (student information system) at the end of each semester.

Incomplete Grades

An "I" grade means incomplete course work. The student must complete the course requirements for removal of the "I" grade prior to the end of the following semester.   The "I" grade will change to a "F" grade if the course work is not completed by the stated date.

Applying for Graduation

Students should apply for graduation during the Fall semester for the Spring semester graduation date. Students should register for their final semester and consult with their advisor prior to submitting the graduation application to the Office of Admissions and Records. Graduation applications may be obtained from the Office of Admissions and Records, online at www.sw.edu, and from file racks on the ground floor of Tazewell Hall. No fees are required for the graduation apparel or diplomas.

Graduation Eligibility

In order to determine eligiblity for graduation or the specific courses needed to meet graduation requirements, students should consult with their advisor or check with the graduation consultant in the Office of Admissions and Records.

Commencement Exercises

Commencement exercies are conducted only at the end of spring semester. Students completing degree requirements during spring semester are urged to attend commencement unless extenuating circumstances justify their absence. Diplomas will be mailed to students after confirmation that their degree requirements have been completed.

Participation in Commencement

Southwest Virginia Community College restricts participation in commencement to those students who will complete their degree requirements by the spring semester commencement date or who can complete the requirements during the immediately following summer term. Those who wish to participate in commencement ceremonies who will not have met all requirements at the time of commencement must submit a letter of intent to participate along with the application for graduation.

SATISFACTORY ACADEMIC PROGRESS POLICY

Enrollment Status

The Associate of Arts & Sciences (AA & S) degree and the Associate of Applied Science (AAS) degree require the completion of 60-69 credits with a minimum grade point average of 2.00. A student will be considered full time if he or she enrolls in 12 or more credits, three-quarter time if enrolled in 9-11 credits, and half-time if enrolled in 6-8 credits.

Canceled Classes

A student who has a class canceled and who is on financial aid may owe a refund to the College due to a change in the total number of credits. Change of enrollment status, full- to three-quarter time or to half-time status or below half-time status, reduces the amount of financial aid for which the student is eligible.

STUDENT COURSE LOAD

The normal academic course load is 15-17 credit hours. The minimum full-time load is 12 credit hours and the normal maximum full-time load is 18 credit hours, excluding College Survival Skills (SDV108). Additional credit hours may be achieved through credit by experience, examination, or taken as an overload if appropriate and approved. Students placed on academic warning or academic probation may be required to take less than the normal course load.

Summer Course Overload

A student requesting to enroll in more than 12 (13 with SDV class) semester credits Regular Term or for Summer Regular Term, Terms I and/or II, combined, and more than 6 (7 with SDV class) semester credits Terms I or II, must have the approval of the appropriate division dean.

A student requesting to take more than 16 (17 with SDV class) semester credits Regular Term or Regular and Terms I and/or II, combined, and more than eight (nine with SDV class) semester credits per term (I and II) must write a statement to the appropriate vice president or division dean justifying the request.

MAXIMUM ATTEMPTS PER COURSE

A student may repeat courses previously taken in an attempt to earn a higher grade. However, repeats in most courses shall be limited to one, unless approved by the Vice President of Student Support Services, academic deans, or Director of Admissions. When students repeat a course, all/any previous grades are averaged together for the cumulative grade point average and for satisfying curricular requirements. However, all courses taken and the grades received will be reflected on the student's permanent record. It should be noted that some senior institutions count all hours attempted and all quality points earned. Also, some types of financial aid do not cover repeat course attempts; the student should check with the Office of Financial Aid to determine his/her status.

STUDY SKILLS

Success in college depends on factors such as scholastic aptitude, motivation, application of ability, and good study habits. Good study habits are important for all students to protect investments of time and money and to achieve educational goals.

Every student, regardless of ability, can develop good study habits and can devote adequate time to study. The amount of time which must be devoted to out-of-class study varies according to the ability and preparation of the student, class load, and the difficulty of the subject. A minimum of two hours of study and preparation is normally needed for each hour of regular classroom work. The College Survival Skills course (SDV 108), the Study Skills course (SDV 104), and tutoring are provided to help students.

BUS TRANSPORTATION

As a service to students, bus transportation to the College is provided by Four County Transit. Inquiries regarding bus transportation should be directed to the Office of Student Development Services in Tazewell Hall, Room 104, or directly to Four-County. Transit at 276.963.1486 or 1.888.656.2272

EXAMINATIONS

The student are expected to take final examinations at the regularly scheduled times. No exceptions will be made without the permission of the instructor of the course and the Vice President of Instruction.

FOOD SERVICES AND STUDENT LOUNGE

Students and staff can purchase hot food from Food Services located in Buchanan Hall. The hours of operation are 7:30 a.m. to 1:30 p.m., Monday through Friday. A reduced rate meal plan is available and may be deducted from the student's financial aid by contacting Food Services' personnel. Vending services are also available.

HEAD START CENTER

Through a regional partnership, Clinch Valley Community Action, Inc., operates a regional Head Start Center on campus. On a limited basis, this Center is available to eligible children of students and staff of the College's service region. For a list of area certified child care providers or for more information, contact the Office of the Associate Vice President of Student Development Services in Tazewell Hall, Room 104.

PARKING AND TRAFFIC REGULATIONS

Students may use all student designated parking areas. Students may not park in handicapped, reserved, or visitor parking unless authorized.

Campus Police issue tickets for traffic violations such as speeding, reckless driving, and illegal parking. A fine of $30 will be assessed for a parking violation. If the fine is not

paid within ten (10) working days, the fine will double. Unpaid fines will be submitted to a collection agency.

Parking for Individuals with Disabilities

Parking spaces are reserved for persons with state-issued handicapped permits obtained from the Department of Motor Vehicles. Offenders of parking for persons with disabilities are in violation of state law.

Special Parking Permits

Special permits may be obtained from the Office of Campus Police to allow access to the student parking areas at the top of the hill. Requests for this permit must be accompanied by a physician's statement regarding the nature and extent of the disability.

CO-CURRICULAR ACTIVITIES AND STUDENT GOVERNMENT ASSOCIATION

Student Government Association Statement of Purpose

The Student Government Association represents the College's commitment to active participation by students in regard to policies, programs, committees, and other issues that directly affect students. The College is dedicated to student involvement in these matters. SGA serves as the students' voice.

The student activities program plays a key role in the total development of students. The activities program provides students the means to supplement their educational experience by providing opportunities to develop culturally, socially, physically, and emotionally.

The activities program is supported by the student comprehensive fee. The Student Government Association is directly involved in the planning to ensure quality and meaningful programming.

Student Development Services and the Student Government Association encourage student participation in extracurricular activities. Faculty members serve as advisors for all chartered organizations. Two activity periods are provided weekly as part of the regular schedule.

The College provides an opportunity for students to participate in the Student Government Association. Elected officers and the Senate provide representative leadership.

STUDENT CLUBS AND ORGANIZATIONS

Art Club	Nursing Club
American Sign Language Club	Phi Beta Lambda
Black Student Union	Phi Theta Kappa
Campus Crusade for Christ	Photography Club
Helping Minds	Project ACHIEVE
International Friends	Student Occupational Therapy Association
InterVoice Club	Student Association for Respiratory Care
Lambda Alpha Epsilon	Student Government Association
Latent Image Club	Young Democrats
Multimedia Club	Young Republicans

A procedure check list and model constitution are available as a guide to start a new club and may be obtained from the Tazewell Hall, Room 124.

Club Solicitation

Club fund-raising activities require the approval of the Student Activities Coordinator. College facilities or equipment shall not be used for profit-making activities without the prior approval of the President or his designee. Sale of commercial items by staff or students not affiliated with a recognized campus club shall not be permitted on SWCC's property unless authorized by the President.

Scheduling Facilities

The King Community Center/Indoor Director schedules the use of outdoor facilities and recreational equipment.

PLAGIARISM

A student must complete his or her own work. Tutors are available to assist when help is needed, but no one should do an assignment for someone else. Brief sections of others' writing may be copied if quotation marks are placed around it and a source is given. Brief portions of someone else's writing may be reworded if the source is listed. To use someone else's words and/or not give proper credit is called plagiarism which is against the law and could bring dismissal from college.

STUDENT IDENTIFICATION CARDS

SWCC campus ID cards are prepared in the Library. The ID cards are full color and contain a photograph. All students and staff should obtain an ID card. During the regular academic semester, the Library is open from 7:45 am until 9:00 pm Monday through Thursday, from 7:45 am till 4:30 pm on Friday, and 1:00 pm until 5:00 pm on Sunday. As soon as the registration process is complete, take your registration form and other identification to the Library to obtain your ID card. There is no charge for the first card, but there is a $5 replacement charge for lost ID cards. Any registered student is eligible for a free ID card.

The Library prepares ID cards for other purposes, as follows:
- Faculty
- Staff
- Adjunct faculty
- Part-time staff
- Community Center membership
- Library use (high school students or area residents)
- Nursing students or other clinical ID badges
- Summer youth program
- Grant programs or other special ID cards

STUDENT RIGHTS AND RESPONSIBILITIES

An application for admission to the College represents a voluntary decision by the student to participate in the programs offered by the institution pursuant to the policies, rules,

and regulations of the State Board for Community Colleges. Approval of that application represents the extension of a privilege to join the College community and to remain a part of it as long as the student meets the required academic and behavioral standards.

Each individual student is guaranteed the privilege of exercising his rights without fear or prejudice. Such rights include the following:

1. Students are free to pursue educational goals; appropriate opportunities for learning in the classroom and on the campus shall be provided by the College.

2. No disciplinary sanctions may be imposed upon any student without due process.

3. Free inquiry, expressions, and assembly are guaranteed to all students provided their actions do not interfere with the rights of others or the effective operation of the institution.

4. Academic evaluation of student performance shall be neither arbitrary nor capricious.

5. The College and members of the College community have the right to expect safety, protection, and the continuity of the educational process.

CODE OF CLASSROOM COURTESY

In an adult teaching/learning environment, there are behavioral expectations and performance standards. The members of the SWCC faculty are eager to foster an atmosphere of scholarly inquiry and sharing, trust, acceptance, mutual respect, and safety. The faculty believes that providing quality instruction under these conditions is foremost among SWCC's many missions and that the classroom is the primary focus for that instruction. The faculty also believes that the classroom environment can positively or negatively affect the learning process. The following code is an effort to ensure that every student has a positive learning experience.

Class Time
Every class at SWCC has a designated beginning time and ending time. While there are always legitimate institutional reasons for class to end early (snow, for example), the College will make that decision. There are also legitimate personal reasons for a student to leave class early (a doctor's appointment, for instance). Prior to the beginning of class, a student should inform the instructor if he or she needs to leave early and then should do so in a discreet manner.

Missing Class
Students missing designated class times have a number of responsibilities. They should check with the instructor and find out what they have missed during the absence. Generally, students are responsible for participating in a class's activities the first day back from any period of absence.

Class Interruptions

SWCC requires a number of administrative responsibilities of both instructors and students, such as signing drop forms, attendance sheets, and so on. Students should ask instructors to attend to these tasks during their office hours, not during class.

The instructor is the designated spokesperson in each classroom. He or she may design in-class activities that require student response or even student conversation, but continual unsolicited talking in the classroom disrupts classroom quality and deprives all students of their right to a quality educational environment.

Some activities, such as bringing children to class, typing on the computer instead of listening to the instructor, chewing gum, sleeping, listening to headphones, doing homework for other classes, or refusal to carry out assignments, generally disrupt classroom continuity. The instructor may ask students to stop such activities should they occur during class. For repetitive disruptions, the teacher may elect to take further action to stop the behavior., such as ask the student to leave the classroom or in extreme cases drop the course altogether.

Peer Respect

Students share a classroom with many peers. These peers deserve not only a quality learning environment but an environment free from fear and intimidation.

Open Labs and the Library

Open Labs and the Library offer unstructured learning opportunities for students. These facilities offer both academic and social experiences, but the academic experience is primary. In order to maximize this experience, students should avoid creating a noisy environment. In an open lab, students engaged in recreational computer use should be willing to surrender their spaces to students completing required class work. Students sending email should employ the came courtesy required by face-to-face communications, including abstaining from using offensive language or making personal attacks.

Electronic Devices

Any electronic devices, with headphones or not, are not allowed in class unless specified by the instructor.

STUDENT CODE OF CONDUCT

Generally, College punitive action shall be limited to conduct which adversely affects the College community's pursuit of its educational objectives or behavior that disrupts the teaching/learning process. The following misconduct is subject to disciplinary action:

- Possession or use of alcoholic beverages on college property or at any function sponsored or supervised by the College, except by state permit, is a violation of the Student Code of Conduct. State Law forbids providing alcohol to persons under 21 years of age.

- Assault, battery, or physical abuse of a student or college personnel. Physical and/or psychological abuse or threat of such abuse toward any person on college premises or at college activities. Sexual harassment, sexual assault, and rape will

be dealt with on criminal charges through the civil court system for disciplinary action and judicial board review.

- Participating in or inciting a riot or an unauthorized or disorderly assembly.

- All forms of sexual harassment or racial discrimination other than such forms as constitute protected speech.

- Possessing on College property or at any College activity any dangerous chemical, explosive element, or component parts thereof, not used for lawful College studies.

- Lewd, indecent, or obscene conduct.

- Possessing a rifle, shot gun, pistol, revolver, or other firearm weapon on College property without authorization of the President of the College.

- Gambling, holding a raffle, or lottery on the campus or at any College function.

- Littering, defacing, destroying, or damaging property of the College or property under its jurisdiction or removing or using such property without authorization.

- Computer and lab abuse in violation of College policy.

- Unlawful possession, use, sale, or distribution of any type of controlled drug or substance.

- Seizing, holding, commandeering, or damaging any property or facility of the College or a threat to do so, or refusing to depart from any property or facility of the College upon direction by College officials or other persons authorized within the regulations of the College.

- Disruption or obstruction of teaching, research, administration, disciplinary proceedings, or other College activities.

- All forms of dishonesty, cheating, plagiarism, knowingly furnishing false information to the College, forgery, and alteration or the use of altered College documents.

- Persistent or gross acts of willful disobedience or defiance toward College personnel.

- Failure to identify oneself on College property or at a College event when asked to do so by College personnel acting in the performance of his or her duties.

- Intrusive use of personal sound amplification equipment.

- The use of personal electronic devices in classrooms, including but not limited to, cell phones, MP3 players, gaming devices, radios, CD players, computer laptops with sound, etc.

- Failure to maintain reasonable hygiene.

- Sleeping in class.

- Animals are not allowed on campus except in the case of seeing-eye dogs or as part of class presentations.

- Use of the College mail by students is not allowed.

- Illegal acts, such as copyright violation, fraud, forgery, pornography, etc.

In cases where there is definite and imminent risk of physical harm or fear for safety, the student will be reported to Campus Police and the Associate Vice President of Student Development Services. At off-campus locations, students should call the local law enforcement agency and notify the site coordinator for the College, who contact College administration.

Penalties for Misconduct

The following sanctions may be imposed for misconduct.

1. Admonition: An oral or written statement to a student that he or she is violating or has violated College rules and may be subject to more severe disciplinary action unless the violation ceases, or is not repeated. An admonition is an immediate action which may be administered by the Associate Vice President of Student Development Services without further review.

2. Disciplinary Probation: A contract governing student behavior is required stating conditions of probation. Exclusion from participation in the extracurricular activities of the College, including the holding of a student office, for a period of time not to exceed one school year.

3. Restitution: Required reimbursement for damage to or misappropriation of property.

4. Suspension: Exclusion from attending the College as a student for a definite period of time not to exceed one year.

5. Dismissal: Termination of student status for an indefinite period. The conditions of re-admission, if any, will be stated in the offer of dismissal.

6. Interim Suspension: If in the opinion of the President, the presence of a student poses a serious threat of harm to person or property, the President may immediately suspend the student.

* Faculty and Staff: Procedure for Enforcing the Student Code of Conduct

Any student and/or visitor impeding classroom instruction or disrupting any college activity may be removed from the premises using the following procedure:

1. The determination of disruptive behavior is at the discretion of the college employee (teacher, administrator, or staff).

2. Ask the student/individual to leave the instructional site, campus or activity area. Specify criteria for his/her return.

3. Inform the student/individual that he/she has the right to appeal to your supervisor.

4. If the student refuses to leave, dismiss the class or adjourn the activity, and call security.

5. Report the incident to your supervisor immediately who will follow-up with a report to the Associate Vice President of Student Development Services.

Suspended Student Restriction: No student who has been suspended for disciplinary reasons from the college will be permitted on the campus of the college during the suspension period without prior written approval of the Associate Vice President of Student Development Services.

The Associate Vice President of Student Development Services is responsible for disciplinary procedures. All cases involving disciplinary probation, restitution, suspension, or dismissal of students may be referred by the Associate Vice President to the committee of review or other appropriate board, unless the student has waived his right to a hearing.

GRIEVANCE PROCEDURE FOR STUDENTS

Students are encouraged to maintain open, direct contact with faculty, counselors, and others who work with them in achieving educational goals. Concerns or questions are best resolved by direct, positive contact with the individual(s) concerned. The student must discuss his or her concern directly with the other party; however, if the student remains dissatisfied with the results of the discussion, the following procedure should be followed:

1. The student will meet with the Associate Vice President of Student Development Services in an attempt to reach resolution of the issue.

2. The student will meet with the other party's immediate supervisor in a personal conference. If satisfactory resolution of the concern does not result from the conference, the student may file a written grievance within ten (10) days with the immediate supervisor.

3. Copies of the grievance will be provided to all parties of the grievance and to the appropriate vice president. The student will be scheduled to meet with the other parties to the grievance. If the grievance is not resolved within ten (10) days, the other parties may file a written statement with distribution as above.

4. An unresolved grievance will be referred by the Vice President of Student Development Services, together with all supporting statements and the aggrieved student's written request, to the College Judicial Board.

5. The College Judicial Board shall hold a hearing within thirty (30) days after the Associate Vice President's referral for hearing. Judicial Board hearings will be conducted as specified in the Judicial Board procedures which may be obtained from the Office of Student Development Services.

6. In reaching its decision, the Judicial Board shall consider only the evidence presented at the hearing and such oral or written arguments as the Judicial Board may consider relevant. The Board shall make recommendations and submit

such to the President who shall take action on the recommendation as he deems appropriate.

7. The decision of the President is final.

The Student Grievance Procedure is designed to provide students a due process voice when they believe college policy has compromised. Grievable issues must be related to interpretation or application of college policy. Personal opinions, matters of taste or preference, and circumstances covered by external rules, laws, or guidelines are not typically grievable under the Student Grievance Procedure.

Additional information about the "Grievance Procedure for Students" may be obtained from the Office of the Associate Vice President of Student Development Services.

JUDICIAL BOARD

The College Judicial Board is comprised of five (5) students and four (4) faculty members and provides for due process review of student grievances and appeals of decisions regarding disciplinary matters. The Judicial Board also supervises student elections.

CAMPUS CRIME POLICY

Southwest Virginia Community College complies with state and federal regulations and fully cooperates with civil authorities in assuring that the campus is a safe place to learn and work. Annually, a report on campus security and completion rates is made available to all current students and employees. Paper copies of the report are available from the Associate Vice President of Student Development Services.

EMERGENCY CONTACTS

Emergency contacts can be made by calling Campus Police at ext. 7221 in the Maintenance Building or the Associate Vice President of Student Development Services at ext. 7286 and 7287 in Tazewell Hall, Room 104. You may also dial 4357 (HELP), which provides direct radio contact with a campus Police officer. HELP phones are located at the outside entrances to Buchanan Hall, Tazewell Hall, Davis Hall, Dickenson Hall, Russell Hall, and the Community Center. Additional HELP phones are located at the Physical Plant and at Pavilion #4 near the football field.

Personal emergencies regarding counseling or referral, other than immediate police action, should be directed to the Office of the Associate Vice President of Student Development Services.

STUDENT DRESS CODE

Student dress will be a matter of individual taste, except for restrictions as needed for safety, physical fitness classes, and laboratory settings. Students should show respect and awareness for what others may find lewd, profane, or obscene.

NAME AND/OR ADDRESS CHANGE

Report name and/or address changes to the Office of Admissions and Records in order to receive correspondence from the College.

ALCOHOL AND DRUG POLICY

The College accepts responsiblity for creating a responsible environment for its student body in reference to drugs and alcohol on campus. The College has the right to notify parents of students who are under the age 21 when alcohol or drug policies are violated. The policy on substance abuse has these basic premises:

1. All federal, state, and local statutes and laws in reference to the use of legal and illegal substances in public areas will be enforced in their entirety.

2. A Substance Abuse Awareness program will be offered on campus so that students may fully understand the dangers of substance abuse.

3. An ongoing network with local mental health agencies is in place so that students in need of assistance may be assured of prompt referral.

FIRE

In case of fire, the alarm will sound. If this happens, leave the building in an orderly manner by the diagrams posted in classrooms and labs. Exit signs are posted in the halls.

MEDICAL

Dial HELP (4357) or ext. 7221 for assistance. First-aid kits are available in all labs and shops, the Business Office, and the Office of the Associate Vice President of Student Development Services.

STUDENTS WITH DISABILITIES

The College works with students with disabilities to assist them in meeting their educational goals, either at SWCC or through referral to other agencies. On request, the College will provide reasonable accommodations to students with disabilities as necessary to achieve their career and educational goals. Director of Career and Disability Services located in Tazewell Hall will receive requests for student accommodation under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA). The Director will verify that the student is a person with a disability as defined by law from documentation provided by the student, and will render a decision as to whether the accommodation(s) will be recommended to the faculty member for implementation.

All students with disabilities are encouraged to identify themselves and provide documentation to the Director, whether or not they have immediate need for accommodation. With respect to student privacy, information regarding the student's disability will be held confidentially and only shared on a need-to-know basis with appropriate college personnel. Contact the Director at 276.964.7314.

1. It is the responsibility of the student with a disability to contact the Project Access Director and request services. Requests for accommodations/consideration should be made three to six weeks prior to the date service is to begin.

2. Students must provide documentation of the disability for which they seek accommodation. The documentation should be current (usually within the last three years) and from a qualified professional in the field.

3. It is the responsibility of the student to notify the faculty member(s) of approved accommodations needed for each class.

4. Where course substitutions or curriculum changes are requested as accommodations by students with disabilities, the approval of the appropriate division dean will be sought by the Associate Vice President of Student Development Services.

5. Students with a complaint should file it in writing to the Associate Vice President of Student Development Services. A description of the alleged violation and the name and address of the person filing the complaint should be included. Persons should file within the semester the alleged violation occurred. Should the complain be about the decisions or actions of the Associate Vice President of Student Development Services, the complaint should be filed with the Vice President of Instruction.

6. Students with disabilities will be expected to abide by the same College rules, policies, and due process procedures that apply to all other students.

    The College maintains compliance with both ADA and the Rehabilitation Act of 1973.

General services provided to students with disabilities include priority registration, academic referral services, and general information related to the disability. Individuals needing additional information can contact the Associate Vice President of Student Development Services at 964-7286, the Director of Admissions and Counseling at 964-7300, or Student Support Services counselors at 964-7231.

INCLEMENT WEATHER POLICY

Decisions concerning late opening or closing of the College due to inclement weather will be made early each day. Students, faculty, and staff are urged to listen to local radio and/ or television stations for information concerning late schedule or closing. In addition, the college telephone number, the toll-free telephone number, and the college website will have information regarding late schedule or college closing. Persons should not be influenced by announcements concerning the public school system since the College is not a part of that system. If the College is to be closed, the announcement will state that fact. A complete list of radio and television stations scheduled to make announcements is available from the Office of Admissions and Records or Division Offices.

NON-LOITERING POLICY

Non-students who wish to visit the campus are welcome. Repeated visits without a specific purpose will be discouraged. Prospective students coming to campus for the first time should report to the Office of Admissions and Records for information and assistance.

LIBRARY

Damage and Fines

Students who damage or lose school property (laboratory or shop equipment, supplies, library materials, audio visual equipment, etc.) are expected to pay for such losses. Students are also expected to pay fines for overdue books.

Lost Books

A lost book should be reported immediately since fines are charged up to the time the loss is reported. Lost books are billed at the current replacement value.

Unpaid Fines and Bills

The Office of Admissions and Records is provided the names of students who owe money to the College at the end of each semester. Students owing fines at the end of the semester will not receive grades and will not be permitted to register in any succeeding term until all financial obligations are met. Grade transcripts will not be released until all financial obligations are paid.

STUDENT INSURANCE

The College does not offer a health insurance plan. The College encourages student insurance and has information on student accident insurance plans used by many students as well as a list of providers. Students who are enrolled in certain programs, classes, or clubs will be required to show proof of insurance for injury and accident coverage. Industrial/vocational students, health technologies students, club sports athletes, and students in high-risk activities are examples of those who will need such insurance. Application forms may be obtained from the Office of Student Development Services in Tazewell Hall, Room 104.

LOCKERS

Student lockers are provided as a convenience to students on a limited basis. Lockers are of two types, combination lockers and padlock lockers, and are available to provide students a secure storage unit while at SWCC. Only current students or community center club users may maintain a locker. Misuse of college lockers can result in sanctions against the student, including suspension or expulsion.

Policy and Procedure

1. Lockers are available on a first come, first served basis at no charge.

2. Each building with lockers has a contact location where students can reserve lockers as listed:

    •   Buchanan Hall   Student Support Services Office (B-152)
    •   King Community Center Student Activities Office (C-111)
    •   Davis Hall   Davis Hall (DA-226)
    •   Russell Hall   Russell Hall (R-102)
    •   Dellinger Hall   Dellinger Hall (DE-107)
    •   No lockers available in Dickenson Hall or Tazewell Hall

3. Once a student selects an available locker, he/she must report the locker number to the designated contact location in the building. A student will receive a lock combination; if the locker does not have a built-in lock, the student is responsible for providing a lock. Locks are available from the College Bookstore.

4. A student may keep the locker for the academic year, provided he/she remains enrolled.

5. Instructions for occupying and maintaining the locker will be posted inside each locker.

6. Students are to vacate the locker if they are not returning the following semester. Students who withdraw during the semester must vacate the locker and notify the appropriate office contact location. Notices will be posted each semester regarding college locker policy and procedures.

7. At the end of the academic year (May), all lockers are to be vacated, except for those of King Community Center users. Notices will be posted two (2) weeks prior to the end of the academic year. If lockers are not vacated, locks will be removed and contents will be discarded. (Students who are enrolled for the summer term may retain the locker by notifying the appropriate contact person for the locker location.)

MILITARY DUTY

Students who are called up for military assignment will receive a withdrawal ('W') or an extended Incomplete ("I") grade if they have not completed sufficient work to be awarded a grade. Upon return from active duty, students will be permitted to resume work or start over again without additional costs.

TOBACCO-FREE WORK PLACE POLICY

The College prohibits the use of tobacco (smoking, chewing, dipping) in all College owned or leased buildings and vehicles. Notices to this effect are posted in all buildings. Employees may use tobacco outside the buildings and proper disposal of used tobacco products is required. Notification of the Tobacco-Free Work Place Policy can be found in the *SWCC Faculty Handbook*, *SWCC Classified Staff Handbook*, the Personnel Office, and the Office of Student Development Services.

TELEPHONE USAGE

The telephones in the College are only for use by faculty and staff for official College business.

Incoming emergency telephone calls are received by the Office of Student Development Services. Students will be notified of emergency calls as quickly as possible.

VETERAN'S INFORMATION

The College has been approved by the Department of Veteran Affairs for payment of veteran benefits. Any veteran eligible for educational benefits under the various public laws may receive these benefits at the College. Training time for degree programs is computed as follows:

12 or more semester hours	Full-time benefits
9 to 11 semester hours	Three-quarter time benefits
6 to 8 semester hours	One-half time benefits

Information and assistance regarding veterans' benefits may be obtained from the Office of Veterans Affairs in Tazewell Hall, Room 104. Veterans will be required to furnish documents such as discharge records, family status legal records (divorce, marriage, birth, and health certificates), or other Veterans Administration (VA) eligibility forms to be certified for VA educational benefits. Some forms must be acquired through the VA, but the Veterans Affairs Certifying Official of the College has many of the necessary forms.

College policy concerning veteran certification is: Veterans will be certified only for courses which apply directly to the educational objective (certificate, diploma, or degree); acceptable elective courses must meet the division chairperson's approval; students cannot be certified for courses not in the curriculum. The Veterans Affairs Certifying Official will verify that each veteran is only certified for approved courses each semester.

Developmental classes must precede required courses (e. g., ENG 01 before ENG 101 or ENG 111; MTH 03 before MTH 115, etc.). Developmental courses may be repeated one time.

Absences
Veterans who are eligible for the Montgomery GI Bill, Chapter 30, must verify their attendance on the last calendar day of each month. Verification may be submitted online at https://www.gibill.va.gov/wave/default.cfm or by calling 1.877.823.2378 and following the instructions. Excessive absences may jeopardize continued receipt of VA benefits.

Repeating Courses
There is no limit on the number of times an eligible veteran may repeat a course for which a failing grade (or a grade which does not meet the minimum requirements for graduation) was received.

Veterans Responsibility
It is the veteran's responsibility to notify the Veterans Affairs Officer of any changes which might affect the enrollment status, e. g., changes in course load, drop/add, withdrawal, termination, re-enrollment, changes in dependent status, address, etc.

BOOKSTORE

The College's Bookstore is located in Buchanan Hall adjacent to the Student Lounge. It is open from 7:45 a. m. to 4:30 p.m., Monday through Friday, and sells required textbooks, supplies, and SWCC insignia clothing. Extended hours are kept during rush periods.

Students are encouraged to attend classes prior to purchasing books to avoid unnecessary returns. A schedule with course number and course name helps to simplify finding the correct text. The bookstore will accept checks (with the student's social security number and driver's license number) for the amount of purchase only. MasterCard, VISA, American Express cards, and financial aid are accepted, also. Returns must be made within ten (10) days from the first day of class and be accompanied by a receipt. Do not write in textbooks in the event they may have to be returned.

The Bookstore has an extensive book buy-back program to buy and sell used textbooks. The Bookstore will buy back (based on demand) textbooks for the current wholesale value during exam week in May and December.

STUDENT ADVOCATE

The Associate Vice President of Student Development Services is the chief student advocate for student-related concerns or problems. The Vice President of Instruction has primary responsibility for instructional matters; this is the person to see regarding classroom or teaching/learning issues. The Vice President of Administrative Services is responsible for the physical plant and administrative procedures of the College. The Vice President of Institutional Advancement is responsible for oversight of grant development, public relations, and marketing programs and services, alumni affairs, and the Educational Foundation.

TRANSCRIPTS

Transcript requests may be made in writing and forwarded to the Office of Admissions and Records or students active in the SIS system may request transcripts online. The student's signature and social security number must be included on the request. Telephone requests for transcripts cannot be accepted. Normal processing time for transcript requests is five (5) working days, except at peak registration and grade-recording periods. There is no charge for a transcript, but the student's transcript will not be released until all financial obligations to the College are met.

Obligations — Hold on Student Records

Obligations to the College usually prevent a student from registering for courses, receiving their degree, diploma, or certificate (if graduating), and/or receiving a copy of grades or transcripts (VCCS Policy Manual, Sec. 4.3.2.2.). Notices are sent to the Admissions Office from the Business Office, Library, Campus Police, Financial Aid Office, and other areas where students may owe a debt or hold College materials or property. The Business Office currently enters the appropriate obligation code for students obtaining short-term loans, returned checks, and other student debt to the College. Student loan co-signers and recipients are not obligated until the loan is due.

Letters of notification of obligation are sent to the students from the office of origin. Student debts to clubs are not treated as obligations to the College.

Follow-up

The personnel in the office of origin shall be responsible for a follow-up contact with the student (or co-signer) if the obligation is still owed one month after the initial notification to the student concerning the obligation. Co-signers for short-term loans are also considered to be obligated to the College when the debt is due, until such time when the debt is paid. Correspondence concerning any follow-up contact should be forwarded to the appropriate office, i. e., the Admissions or Business Office, for inclusion with the Notice of Obligation.

Set-Off Debt Collection

The Business Office forwards a listing of persons with obligations to the College to the State Tax System Office for collection through the STARS System set-off debt collection process which captures any tax refunds or lottery winnings for persons who owe debts to state institutions.

DIRECT TRANSFER AGREEMENTS* - specific institutions

Alice Lloyd College (KY)
Bluefield College (VA)
Bluefield State College (WV)
Concord University (WV)
Emory & Henry College (VA)
King College (TN)
Lincoln Memorial University (TN)
Montreat Anderson College (NC)
Old Dominion University (VA)
UVA-Wise (VA)
Virginia Intermont College (VA)
Virginia Union University (VA)

DIRECT TRANSFER AGREEMENTS* - specific majors

East Tennessee State University (TN) – Business Administration
Eastern Kentucky University (KY) – Administration of Justice
Lindsey Wilson College (KY) – Counseling
Radford University (VA) – Nursing
University of Appalachia School of Pharmacy (VA) – Pharmacy
Virginia Intermont College (VA) – Administration of Justice
Virginia Intermont College (VA) – Equine Facilities Management
VPI & SU (VA) – Engineering
VPI & SU (VA) – Agriculture & Life Sciences
Kanawha Valley Community & Technical College (WV) – Power Plant Technology
West Virginia Tech (WV) – Electronics Tech

DIRECT TRANSFER AGREEMENTS* - VCCS Agreements

Christopher Newport University (VA)
College of William and Mary (VA)
Ferrum College (VA)
James Madison University (VA)
Longwood University (VA)
Mary Baldwin College (VA)
Norfolk State University (VA)
Old Dominion University (VA)
Regis University (VA)
St. Paul's College (VA)
Sweet Briar College (VA)
University of Mary Washington (VA)
University of Phoenix (AZ)
University of Virginia (VA)
Virginia Commonwealth University (VA)
Virginia State University (VA)
Virginia Union (VA)

***DTA students completing a SWCC transfer degree should have junior
standing at the senior institution.**

COLLEGE TRANSFER PROGRAMS

The rapid growth of population in the United States and the demand for education beyond the high school have resulted in ever-increasing numbers of students seeking admission to colleges and universities throughout the nation. To help meet the needs of these students, community colleges, which offer the first two years of college work, have been established in all sections of the country. Southwest Virginia Community College, one of the community colleges in the Virginia system, is dedicated to the task of assisting students toward their goal of achieving a college education.

During the first two years of college at Southwest, students secure a broad education in the area of English, Humanities, Social Science, Laboratory Science and Mathematics, and Health or Physical Education; in addition, they begin specialized work in their own particular fields of interests. It is the aim of SWCC to provide quality instruction for transfer credit to senior institutions.

Minimum Requirements for Associate Degrees in the VCCS

— —

Minimum Number of Semester Hour Credits

General Education:

	(1) AA	(2) AS	(3) AA&S	(4) AAA/AAS
Communication[a]	6	6	6	3
Humanities/Fine Arts	6	6	6	3
Foreign Language (Intermediate Level)	6	0	0	0
Social/Behavioral Sciences	9	9[b]	9	3[c]
Natural Sciences/	7	7	7	0
Mathematics	6	6[d]	6[d]	0
Personal Development[e]	2	2	2	2

}3[c]

Other Requirements for Associate Degrees:

	(1) AA	(2) AS	(3) AA&S	(4) AAA/AAS
Major field courses and electives (columns 1-3)	18-21	24-27	24-27	49-53[f]
Career/technical courses (column 4)	—	—	—	—
Total for Degree [g]=	60-63	60-63[h]	60-63[h]	65-69[h]

— —

Notes: The <u>VCCS Policy Manual</u>, Section 2-IV-C, defines general education within the VCCS. Sections 2.7.3, 3.4.10, and 3.5.1 of the Southern Association of Colleges and Schools (SACS) Principles of Accreditation specify general education requirements. Colleges must address all SACS requirements, the SCHEV Core Competencies, and the general education goal areas listed in the VCCS Policy Manual.

(a)   Must include at least one course in English composition.

(b)   Only 6 semester hours of social/behavioral sciences are required for engineering majors who plan to transfer to a baccalaureate degree engineering program that requires 6 or fewer hours in this category, provided that the ollege/university publishes such requirements in its transfer guide.

(c)   While general education courses other than those designed for transfer may be used to meet portions of these requirements, SACS principles require that general education courses be general in nature and must not "...narrowly focused on those skills, techniques, and procedures peculiar to a particular occupation or profession."

(d)   Only 3 semester hours of mathematics are required for the General Studies major.

(e)   Personal development includes health, physical education, or recreation courses that promote physical and emotional well being and student development courses. Must include at least one student development course.

(f)   AAA/AAS degrees must contain a minimum of 15 semester hours of general education. Students should plan to take at least 30 hours in the major; the remaining hours will be appropriate to the major.

(g)   All college-level course prerequisites must be included in the total credits required for each program.

(h)   Credit range for engineering programs is 60-72 semester hours credits. Credit range for AAA/AAS programs is 65-69, including nursing. For other programs in the Health Technologies, the range is 65-72 semester hour credits.

PROGRAMS OF STUDY

The various College Transfer Programs offered at Southwest Virginia Community College are listed on the following pages. These programs, leading to the Associate in Arts and Sciences Degree, are merely guides for students. These outlines suggest a sequence in which the various courses may be taken. Students may select their own courses and sequences, but should adhere to the requirements for graduation. Courses are generally scheduled each semester based on the sequence in the suggested guide.

Students planning to transfer should obtain a catalog from the four-year college of their choice in order to determine early in their college careers the entrance and degree requirements of the institution in which their four-year degree will be completed. This recommendation also applies to students who may be interested in a baccalaureate degree in nursing.

ASSOCIATE OF ARTS AND SCIENCES DEGREE

Major: Business Administration

Length: Two year Program - Four semesters

Purpose: The Associate of Arts and Sciences degree program in Business Administration is designed for individuals who plan to transfer to a four-year college or university to complete a baccalaureate degree.

Admission Requirements: In addition to the general admission requirements to the College, as stated earlier in this catalog, entry into the Associate of Science degree program in Business Administration requires as a minimum the satisfactory completion of the following high school units or equivalents:

1 unit of laboratory science
1 unit social studies
4 units of English
3 units of mathematics (including algebra or geometry)

Students who do not meet these requirements may need to correct such deficiencies in the developmental studies program, described later in this catalog.

Program Requirements: Achievement in the business world requires competency with other areas of knowledge such as the humanities, natural sciences, and social sciences in addition to those courses directly pertinent to business. Upon satisfactory completion of the program, the student is eligible to receive the Associate of Arts and Sciences degree with a major in Business Administration. Each student is urged to become familiar with the requirements of the major department of the four-year institution being considered for transfer. The student should also consult with his/her faculty advisor at SWCC concerning the selection of electives in order to facilitate the transfer of credits.

ARTS AND SCIENCES DEGREE PROGRAM
Associate of Arts and Sciences Degree
Major: Business Administration

Course Number		Course Title	Lecture Hours	Lab Hour	Course Credits
		First Semester			
		Science I* with lab	3	3	4
BUS	100	Intro. to Business OR	3	0	3
Elective		Elective			
ENG	111	College Composition I	3	0	3
MTH	271	Applied Calculus I** OR	3	0	3
MTH	163	Pre-Calculus I			
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	3	17
		Second Semester			
CST	100	Prin. of Public Speaking	3	0	3
		Science II* with lab	3	3	4
ENG	112	College Composition II	3	0	3
MTH	272	Applied Calculus II** OR	3	0	3
MTH	164	Precalculus II			
PED		Physical Education Elective	0	2	1
		TOTAL	12	5	14
		Third Semester			
ACC	211	Principles of Accounting I	4	0	4
BUS	241	Business Law l	3	0	3
ECO	201	Principles of Economics I	3	0	3
ENG		Literature Elective	3	0	3
HIS	101	History of Western Civilization I OR			
HIS	121	United States History I	3	0	3
		TOTAL	16	0	16
		Fourth Semester			
ACC	212	Principles of Accounting II	4	0	4
ECO	202	Principles of Economics II	3	0	3
HIS	102	History of Western Civilization II OR	3	0	3
HIS	122	U.S. History II			
ENG		Literature Elective	3	0	3
PED		Physical Education Elective	0	2	1
		TOTAL	13	2	14

Total Minimum Credits for the Business Administration Major............................61

*   Biology 101-102, Chemistry 111-112, Geology 105-106, or Physics 201-202. Check with your advisor.
**   Mathematics requirements may vary greatly from one transfer institution to another, check with your advisor.

ASSOCIATE OF ARTS AND SCIENCES DEGREE

Major: Education

Length: Two-year Program - Four semesters

Purpose: The Associate of Arts and Sciences degree program in Education is designed to transfer to a four-year college or university toward a baccalaureate degree in teacher education.

Admission Requirements: In addition to the admission requirements established for the college, entry into the Education program requires the satisfactory completion of the following high school units or equivalents: 4 units of English; 2 units of college preparatory mathematics; 1 unit of laboratory science; and 1 unit of social science. Students with deficiencies will require developmental studies.

Program Requirements: The world of modern education demands that its teachers be knowledgeable both in their teaching field and in general education. Thus, this curriculum requires courses in the arts and humanities, written and oral communication skills, natural sciences, mathematics, history, social sciences, computer sciences, health and physical education, and general psychology usually required in the first two years of a baccalaureate teacher education curriculum. In planning a program and selecting electives, each student is urged to become acquainted with SWCC's *Transfer Guide*, the assigned advisor, and the catalog of the institution to which the student plans to transfer. In order to prepare for junior class standing at a senior institution, a student usually must complete a program at the community college which is comparable in length and course content to the first two years at the four-year institution. All courses completed for this degree area must be transferable to the education program at the senior institution the student plans to attend; therefore, SWCC reserves the right to restrict specific or elective courses for use in the Education Major. Upon satisfactory completion of SWCC's four-semester program, the graduate will be awarded the Associate of Arts and Sciences degree with a major in Education.

ARTS AND SCIENCES DEGREE PROGRAM
Associate of Arts & Sciences Degree
Major: Education *

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to Education	1	0	1
HIS 121	U. S. History I	3	0	3
MTH	Mathematics (MTH 151 or 163)**	3	0	3
	Natural Science with Lab**	3	3	4
ITE 115	Intro. to Computer Applications and Concepts	3	0	3
	TOTAL	16	3	17
	Second Semester			
ENG 112	College Composition II	3	0	3
HIS 122	U. S. History II (or HIS 101 or 102)	3	0	3
MTH	Math (MTH 152, 164, or 240)**	3	0	3
	Natural Science with Lab**	3	3	4
EDU 200	Introduction to Teaching	3	0	3
	TOTAL	15	3	16
	Third Semester			
ENG	Literature (ENG 241, 243 or 251)**	3	0	3
HLT 110	Concepts of Per. & Com. Hlt.	3	0	3
Elective	Social Science Elective**	3	0	3
Elective	Arts & Humanities Electives**	6	0	6
	TOTAL	15	0	15
	Fourth Semester			
ENG	Literature (ENG 242, 244 or 252)**	3	0	3
Elective	Arts & Humanities Elective**	3	0	3
CST 100	Principles of Public Speaking	3	0	3
Elective	Social Science Elective**	3	0	3
Elective	Elective**	3	0	3
	TOTAL	15	0	15

Total Minimum Credits for Education Major 63

* All education majors should take PRAXIS I during their freshman year.

** Electives: Determine transfer instituion's requirements prior to selection.
   Arts & Humanities: PHI 101-102; ART101-102; MUS 121-122; ENG 241-242; ENG 243-244; ENG 251-252, ENG 257,
       ENG 279; REL 100, REL 200, REL 210, REL 230, REL 246; SPA 101-102, 201-202; FRE 101-102, 201-202.
   Natural Science: BIO 101-102; CHM 111-112; PHY 201-202; GOL 105-106, NAS 131-132.
   Social Science: ECO 201-202; HIS 101-102, HIS 266, HIS 269, HIS 277; PLS 211-212; PSY 200, PSY 231-232,
       PSY 255, PSY 266; SOC 200, SOC 235, SOC 268; GEO 200, GEO 210.

VCCS Teacher Education Preparation Curriculum for
Early Childhood PK-3, Elementary PK-6, Middle Education 6-8, Special Education*
Associate of Arts & Sciences Degree

*NOTE: Students interested in the above endorsements and transferring to a Virginia college should follow this curriculum.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
ENG	111	College Composition I	3	0	3
MTH		Mathematics (MTH 151 or MTH 163)	3	0	3
HIS	121	U.S. History I	3	0	3
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
SDV	101	Orientation to Education	1	0	1
HLT		Health/Wellness	2	0	2
		TOTAL	15	0	15
Second Semester					
ENG	112	College Composition II	3	0	3
MTH		Mathematics (MTH 152, 240)	3	0	3
HIS	122	U.S. History II	3	0	3
PLS	135	American National Politics	3	0	3
Elective		Humanities Elective	3	0	3
		TOTAL	15	0	15
TAKE THE PRAXIS I EXAM					
Third Semester					
CST	110	Introd. To Speech Comm.	3	0	3
HIS		History of Western Civ. I or II (HIS 101 or 102)	3	0	3
EDU	200	Introduction to Teaching	3	0	3
ECO		Principles of Economics I or II (ECO 201 or 202)	3	0	3
BIO	101	General Biology I	3	3	4
		TOTAL	15	3	16
Fourth Semester					
GEO	210	People and the Land: An Intro. to Cultural Geography	3	0	3
BIO	102	General Biology II	3	3	4
Elective		Humanities Elective	3	0	3
Elective		Elective	3	0	3
ENG		Literature Elective	3	0	3
		TOTAL	15	3	16

Total Minimum Credits for the Pre-Teacher Education Curriculum...........................62

Students must take the PRAXIS I Exam during the Freshman Year.

·"C" in all English Courses   ·Pass Praxis I Exam   · 2.5 Cumulative GPA

For
TEACHERS IN VIRGINIA: IMPLICATIONS
FOR COURSE PLANNING

The College's education curriculum is designed to aid prospective majors in meeting the general education requirements for certification as a teacher.

I.   Applicant must possess a baccalaureate degree with a background of 46 semester hours in general education, including a minimum of

    A.   Arts & Humanities—9 semester hours
    (art, music, philosophy, and foreign language)

    B.   Written and Oral Communication Skills—6 semester hours
    (including but not limited to English grammar and composition)

    C.   Literature—3 semester hours

    D.   Mathematics (algebra or calculus equivalent)—6 semester hours

    E.   History (must include American History)—6 semester hours

    F.   Social Sciences—6 semester hours

    G.   Sciences (one course must include laboratory)—6 semester hours

    H.   Health and Physical Education—3 semester hours
    (may include course work designated as health, physical education, wellness, recreation, physical fitness, and related descriptors)

    I.   Computer Science—1 semester hour

II. Education courses and upper level requirements are pursued at senior colleges or universities.

III. Individuals desiring elementary certification need to choose senior institutions by the end of the first year to make appropriate course selections for the second year.

ASSOCIATE OF ARTS AND SCIENCES DEGREE

Major: Engineering

Length:
NORMAL: Two-year Program - Four semesters
DECELERATED: Three-year Program - Six semesters

Purpose: The curriculum in engineering is designed to educate students and to help them begin a career in a field that continues to challenge the imagination in a multitude of societal, environmental, and technological areas.

Opportunities are virtually unlimited for both women and men in engineering and they may consult, work in industry or, work for local, state, or federal governments. Engineering work varies over a broad spectrum. A mining engineer, for example, may work in a local industry in the design of new mining machinery, a civil engineer may manage research in new highway surfacing materials for the federal government. An electronics engineer may design circuitry for computer applications. Within the last two decades, engineers have teamed up with biologists, lawyers, medical doctors, architects, and businessmen to contribute in yet other nontraditional fields: from the recycling of waste products to management information systems; from artificial limbs to improved communication systems; and, to alternate forms of energy.

The curriculum in engineering leads to an Associate of Arts and Sciences Degree. It is comparable in length and course content to the first two years of a four-year engineering curriculum at a large university.

Completion of this curriculum enables a student to transfer with junior class standing in engineering at four-year universities, and to complete the baccalaureate degree program in one of the following engineering fields.

Aerospace	Civil	Mining
Agriculture	Electrical	Naval
Architecture	Electronic	Nuclear
Ceramics	Industrial	Ocean
Chemical	Mechanical	Petroleum
Computer	Metallurgical	

Admission Requirements: Entry into the engineering curriculum requires satisfactory completion of the following high school units, or their equivalent: 4 units of mathematics (2 units of algebra, 1 unit of geometry, and 1 unit of trigonometry) 1 unit of chemistry, 1 unit of physics, and 1 unit of social sciences. It is recognized that some students may not have developed the requisite background in mathematics and the sciences. These students are strongly urged to enroll in the summer school preceding their entry into the freshman year. Some four-year universities require two/three units of a single foreign or classical language.

Decelerated Option: A special 3-year program has been designed for students who wish to pursue the Associate of Arts and Sciences degree in Engineering at a less pressured pace. Details are available at the College's Engineering Division.

Program Requirements: The first semesters of the curriculum in engineering provide a common background to all engineering students and include courses essential for correct and effective oral and written communication in both technical and non-technical ideas, such as English, mathematics, and graphics. Included are other fundamental subjects in the humanities, physics, chemistry, computer programming, and engineering mechanics.

ASSOCIATE OF ARTS AND SCIENCES DEGREE
Associate of Arts & Sciences Degree
Major: Engineering

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
MTH 175	Calculus of One Variable I	3	0	3
MTH 177	Introductory Linear Algebra	2	0	2
CHM 111	College Chemistry I	3	3	4
ENG 111	College Composition I	3	0	3
SDV* 108	College Survival Skills	1	0	1
EGR 115	Engineering Graphics	1	3	2
EGR 120	Introduction to Engineering	2	0	2
	TOTAL	15	6	17
	Second Semester			
MTH 176	Calculus of One Variable II	3	0	3
MTH 178	Topics in Analytic Geometry	2	0	2
ENG 112	College Composition II	3	0	3
Elective	PED/HLT Elective	0	4	2
EGR 125	Intro. to Engineering Methods	3	0	3
EGR 140	Engineering Mechanics (Statics)	3	0	3
	TOTAL	14	4	16
	Third Semester			
MTH 277	Vector Calculus	4	0	4
PHY 241	University Physics I	3	3	4
Elective**	Humanities Elective	3	0	3
Elective**	Social Science Elective	3	0	3
EGR 246	Mechanics of Materials	3	0	3
	TOTAL	16	3	17
	Fourth Semester			
MTH 291	Differential Equation	3	0	3
PHY 242	University Physics II	3	3	4
Elective	Social Sciences Elective	3	0	3
Elective	Humanities Elective	3	0	3
EGR 245	Engineering Mechanics-Dynamics	3	0	3
	TOTAL	15	3	16

Total Credits for the Engineering Major..66

*   Students taking MTH 175, MTH 177, EGR 120, EGR 115, SDV 108 concurrently may substitute SDV 101 for SDV 108 for a
      unique orientation experience called the Engineering Learning Community.

**   Check with your advisor for a list of humanities and social science electives that are transferable to your senior institution.

ASSOCIATE OF ARTS AND SCIENCES DEGREE
Associate of Arts & Sciences Degree
Major: Engineering
Specialiation: Software Engineering

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
MTH 175	Calculus of One Variable I	3	0	3
MTH 177	Introductory Linear Algebra	2	0	2
CHM 111	College Chemistry I	3	3	4
ENG 111	College Composition I	3	0	3
SDV 108	College Survival Skills	1	0	1
EGR 115	Engineering Graphics	1	3	2
EGR 120	Introduction to Engineering	2	0	2
	TOTAL	15	6	17
Second Semester				
MTH 176	Calculus of One Variable II	3	0	3
MTH 178	Topics in Analytic Geometry	2	0	2
PED	Elective	0	2	1
ENG 112	College Composition II	3	0	3
EGR 125	Intro to Engineering Methods	3	0	3
ITP 100	Software Design	3	0	3
	TOTAL	14	2	15
Third Semester				
MTH 277	Vector Calculus	4	0	4
PHY 241	University Physics I	3	3	4
Elective*	Social Science Elective	3	0	3
Elective*	Humanities Elective	3	0	3
EGR 206	Engineering Economy	3	0	3
	TOTAL	16	3	17
Fourth Semester				
MTH 157	Elementary Statistics	3	0	3
PHY 242	University Physics II	3	3	4
Elective*	Social Science Elective	3	0	3
Elective*	Humanities Elective	3	0	3
ITP 120	Intro to Java Programming I	4	0	4
PED	Physical Education Elective	0	2	1
	TOTAL	16	5	18

Total Minimum Credits for Software Engineering Major 67

*Check with transfer institution for recommended elective.

ASSOCIATE OF ARTS AND SCIENCES DEGREE

Major: General Studies

Length: Two-year Program - Four semesters

Purpose: The Associate of Arts and Sciences program in General Studies is designed to enable individuals to acquire the knowledge, skills, and habitat of mind necessary for responsible participation in society. As well, it allows students to take courses that are accepted in most four-year colleges and universities in a wide range of baccalaureate curricula. A special feature of the general studies curriculum is that students are not required to declare a specialized major subject field the first two years of undergraduate education.

Admission Requirements: In addition to the general admission requirements established for the College, entry in the general studies program requires the satisfactory completion of the following high school units, or equivalent, as a minimum: 4 units of English; 2 units of college preparatory mathematics; 1 unit of laboratory science; and 1 unit of history. Students with deficiencies will require developmental studies. General studies students are urged to work closely with their faculty advisor or college counselor in planning their program and selecting electives. Students who plan to transfer to a four-year college or university are urged to check the academic program requirements for admission in the desired major field of study.

Program Requirements: The basic requirements of the curriculum are primarily courses considered to be in the category of general education. A minimum of 62 credits is required in the General Studies degree program. Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated and also to consult with the counseling department at SWCC in planning this program and selecting electives. Upon satisfactory completion of the four-semester program listed, the graduate will be awarded the Associate of Arts and Sciences degree with a major in General Studies.

ARTS AND SCIENCES DEGREE PROGRAM
Associate of Arts & Sciences Degree
Major: General Studies

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I	3	0	3
SDV 108	College Survival Skills	1	0	1
HIS	History (HIS 121 or 101)	3	0	3
MTH	Mathematics (MTH 151 or 163)	3	0	3
	Health or Physical Education	0	2	1
	Natural Science with Lab*	3	3	4
	TOTAL	13	5	15
	Second Semester			
ENG 112	College Composition II	3	0	3
HIS	History (HIS 122 or 102)	3	0	3
MTH	Mathematics (MTH 152 or 164)	3	0	3
	Natural Science with Lab*	3	3	4
	Health or Physical Education	0	2	1
	Elective**	3	0	3
	TOTAL	15	5	17
	Third Semester			
ENG	Literature (ENG 241, 243 or ENG 251)**	3	0	3
	Principles of Psychology OR Principles to Sociology **	3	0	3
Elective	Humanities or Social Sciences	3	0	3
Electives**		6	0	6
	TOTAL	15	0	15
	Fourth Semester			
ENG	Literature (ENG 242, 244 or ENG 252)**	3	0	3
	Principles of Psychology OR Principles to Sociology **	3	0	3
Elective	Humanities or Social Sciences	3	0	3
CST 100	Principles of Public Speaking	3	0	3
Elective**		3	0	3
	TOTAL	15	0	15

Total Minimum Credits for General Studies..62

Humanities Electives: PHI 101-102; ART 101-102; ENG 241-242, ENG 243-244, ENG 251-252, ENG 257, ENG 279;
       MUS 121-122; SPA 101-102, 201-202; FRE 101-102, 201-202; HUM 256; REL 100, REL 200, REL 210, REL 230, REL 246.
Social Science Electives: ECO 201-202; PLS 211-212; PSY 200, PSY 231-232, PSY 235, PSY 266; SOC 200, SOC 235, SOC 268;
       HIS 101-102, HIS 266, HIS 269, HIS 277; GEO 200, GEO 210.
*   BIO 101-102, CHM 111-112, NAS 131-132, PHY 201-202, GOL 105-106 may be used to fulfil requirements.
* *   Determine transfer institution's requirements prior to selection.

ARTS AND SCIENCES DEGREE PROGRAM
Associate of Arts & Sciences Degree
Major: General Studies
Specialization: Fine Arts

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
ART	121	Drawing I	3	0	3
MTH		Math (MTH 151 or 163)	3	0	3
ART	201	History of Art	3	0	3
Elective		Humanities	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	0	16
		Second Semester			
ENG	112	College Composition II	3	0	3
ART	122	Drawing II	3	0	3
or ART231		Sculpture I			
MTH		Math (Math 152 or 164)	3	0	3
Electives		Art or Crafts	6	0	6
PED		Physical Education	0	2	1
		TOTAL	15	2	16
		Third Semester			
		Natural Science with Lab*	3	3	4
ART	131	Design I	3	0	3
ART	283	Computer Graphics I	2	4	4
HIS		History (HIS 121 or 101)	3	0	3
SOC	200	Principles to Sociology	3	0	3
		TOTAL	14	7	17
		Fourth Semester			
		Natural Science with Lab*	3	3	4
Elective		Arts or Crafts	3	0	3
HIS		History (HIS 122 or 102)	3	0	3
PSY	200	Principles of Psychology	3	0	3
PED		Physical Education	0	2	1
		TOTAL	12	5	14

Total Minimum Credits for the Fine Arts Specialization..63

Suggested Art or Craft Electives: ART 122, ART 132, ART 231, ART 241/242, ART 125, ART 271, CRF 101/110
Suggested Humanities Electives: PHI 101/102, MUS 121/122, CST 100, SPA 101/102/201/202, FRE 101/102/201/202,
*   Students may select 8 credits from: BIO 101-102, CHM 111-112, NAS 131-132, PHY 201-202, or GOL 105-106

ARTS AND SCIENCES DEGREE PROGRAM
Associate of Arts & Sciences Degree
Major: General Studies
Specialization: Music

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I	3	0	3
SDV 108	College Survival Skills	1	0	1
MUS 111	Music Theory I	3	2	4
MTH	Mathematics (MTH 151 or 162)*	3	0	3
MUS 141	Class Piano I	1	2	2
Elective		3	0	3
	TOTAL	14	4	16
	Second Semester			
ENG 112	College Composition II	3	0	3
MTH	Mathematics (MTH 152, 164 or 240)	3	0	3
MUS 112	Music Theory II	3	2	4
MUS 142	Class Piano II	1	2	2
Elective		3	0	3
PED/HLT	Physical Education or Health	0	2	1
	TOTAL	13	6	16
	Third Semester			
	Natural Science with Lab	3	3	4
MUS 221	History of Music	3	0	3
HIS	History (HIS 121 or 101)	3	0	3
Elective	Humanities or Social Sciences	3	0	3
SOC 200	Principles of Sociology	3	0	3
	TOTAL	15	3	16
	Fourth Semester			
	Natural Science with Lab	3	3	4
HIS	History (HIS 122 or 102)	3	0	3
PED	Physical Education or Health	0	2	1
PSY 200	Principles of Psychology	3	0	3
Elective	Humanities or Social Sciences	3	0	3
	TOTAL	12	5	14

Total Minimum Credits for Music Specialization…………………………………62

Suggested Electives: MUS 121/122, MUS 137/237, MUS 149/249, MUS 211/212, MUS 241/242, MUS 222

*   Determine transfer institution's requirements prior to selection.

ARTS AND SCIENCES DEGREE PROGRAM
Associate of Arts & Sciences Degree
Major: General Studies
Specialization: Psychology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
SDV	108	College Survival Skills	1	0	1
PSY	200	Principles of Psychology	3	0	3
MTH		Mathematics (MTH 151 or 163)	3	0	3
		Health or Physical Education	0	2	1
BIO	101	General Biology I	3	3	4
		TOTAL	13	5	15
		Second Semester			
ENG	112	College Composition II	3	0	3
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
MTH		Mathematics (Math 152 or 164)	3	0	3
BIO	102	General Biology II	3	3	4
Elective		Social Sciences*	3	0	3
		TOTAL	15	3	16
		Third Semester			
ENG		Literature (ENG 241, 243 or 251)*	3	0	3
HIS		History (HIS 121 or 101)	3	0	3
MTH	240	Statistics	3	0	3
PSY	231	Life Span Human Dev. I	3	0	3
		Health or Physical Education	0	2	1
Elective		Humanities or Social Sciences*	3	0	3
		TOTAL	15	2	16
		Fourth Semester			
ENG		Literature (ENG 242, 244 or 252)*	3	0	3
HIS		History (HIS 122 or 102)	3	0	3
PSY	232	Life Span Human Dev. II	3	0	3
CST	100	Principles of Public Speaking	3	0	3
Elective*			3	0	3
		TOTAL	15	0	15

Total Minimum Credits for the Psychology Specialization 62

Humanities Electives: PHI 101-2; ART 101-2; MUS 121-2; SPA 101-2, SPA 201-2; FRE 101-2, FRE 201-2; REL 100; REL 200; REL 210; REL 230, REL 246.
Social Sciences Electives: ECO 201-2; PLS 211-2; SOC 200; HIS 101-102, HIS 266; HIS 269; HIS 277; GEO 200; GEO 210.

*   Determine transfer institution's requirements prior to selection.

ASSOCIATE OF ARTS AND SCIENCES DEGREE

Major: Liberal Arts

Length: Two-year Program - Four semesters

Purpose: The Associate of Arts and Sciences Degree program in Liberal Arts is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate degree program, usually the Bachelor of Arts degree, in the liberal arts or social sciences. Students in this program may wish to major in the following fields:

Economics	Foreign Language	Religion
Law	Philosophy	Humanities
Education	Government (Political	Sociology
Library Science	Science)	Journalism
English	Psychology	Teacher Education
Literature	History	

Admission Requirements: In addition to the admission requirements established for the College (as listed in the section on admission requirements), entry into the Associate of Arts and Sciences degree program in Liberal Arts requires the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English; 2 units of college preparatory mathematics; 1 unit of laboratory science; and 1 unit of history. The remaining units are elective courses, but at least two units of a foreign language are recommended. Students are urged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the proper mathematics courses to be taken in the community college. Students who do not meet these requirements may be permitted to correct their deficiencies in the developmental program before entering the Liberal Arts curriculum.

Program Requirements: The curriculum consists of courses in the humanities including a foreign language, natural sciences, and social sciences usually required in the first two years of a baccalaureate liberal arts curriculum. A minimum of 61 credits is required for the Liberal Arts major in the Associate of Arts and Sciences degree program. Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated and also to consult with the counseling department of the community college in planning their programs and selecting their electives. In order to help prepare for upper division (junior class) standing at a four-year college or university, the student usually must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four year college or university. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate of Arts and Sciences degree with a major in Liberal Arts.

ARTS AND SCIENCES DEGREE PROGRAM

Associate of Arts and Sciences Degree
Major: Liberal Arts

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
SDV	108	College Survival Skills	1	0	1
MTH		Mathematics (Math 151 or 163)	3	0	3
		Beginning Foreign Language	4	0	4
		Health or Physical Education	0	2	1
		Natural Science with Lab*	3	3	4
		TOTAL	14	5	16
		Second Semester			
ENG	112	College Composition II	3	0	3
MTH		Mathematics (Math 152 or 164)	3	0	3
		Beginning Foreign Language	4	0	4
		Natural Science with Lab*	3	3	4
		Health or Physical Education	0	2	1
		TOTAL	13	5	15
		Third Semester			
ENG		English (ENG 241, 243 or ENG 251)**	3	0	3
SOC	200	Principles to Sociology OR			
PSY	200	Principles of Psychology	3	0	3
HIS		History (HIS 121 or 101)	3	0	3
		Interm. Foreign Language	3	0	3
Elective		Humanities or Social Science	3	0	3
		TOTAL	15	0	15
		Fourth Semester			
ENG		English (ENG 242, 244 or ENG 252)**	3	0	3
SOC	200	Principles to Sociology OR			
PSY	200	Principles of Psychology	3	0	3
Elective**			3	0	3
HIS		History (HIS 122 or 102)	3	0	3
		Interm. Foreign Language	3	0	3
		TOTAL	15	0	15

Total Minimum Credits for the Liberal Arts Major 61

Humanities Electives: ENG 241-242, ENG 243-244, ENG 251-252, ENG 257, ENG 279; HUM 256; PHI 101-102; ART 101-102; MUS 121-122; CST 100; SPA 101-102, 201-202; FRE 101-102, 201-202; REL 100,REL 200, REL 210, REL 230, REL 246.
Social Science Electives: ECO 201-202; PLS 211-212; PSY 200, PSY 231-232, PSY 255, PSY 266; SOC 200, SOC 235, SOC 268; HIS 101-102, HIS 266, HIS 269, HIS 277; GEO 200, GEO 210.

*   BIO 101-102, CHM 111-112, NAS 131-132, PHY 201-202, GOL 105-106 may be used to fulfill requirements.
**   Determine transfer institution's requirements prior to selection.

NOTE: Students having completed three or more years of foreign language in high school with a "C" or better average may petition for credit by experience or credit by exam. It is recommended that students receiving credit by experience take humanities electives to meet the rquirements of the transfer institution. Please see your advisor for details.

ASSOCIATE OF ARTS AND SCIENCES DEGREE

Major: Science

Length: Two-year Program - Four semesters

Purpose: With the continuing emphasis on scientific progress and technological developments in today's society, there is a constant demand for scientists and persons with scientific training in business, industry, government, and the health care professions. The Science major is designed for those who are preparing to transfer into a science or health care program at a four-year college or university. Among the many baccalaureate degree programs available in this area are:

Agriculture	Geology	Pre-Pharmacy
Biology	Home Economics	Physical Therapy
Chemistry	Mathematics	Physics
Pre-Chiropractic	Pre-Medicine	Pre-Veterinary Medicine
Pre-Dentistry	Nursing	Science Education
Forestry	Health & Physical Education	

Admission Requirements: In addition to the admission requirements established for the college, entry into the Science program requires, as a minimum, satisfactory completion of the following high school units: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social science. Students with deficiencies will require Developmental Studies.

Program Requirements: Although the major emphasis in this curriculum is on mathematics, the biological sciences, and the physical sciences, the curriculum also includes courses in humanities and social sciences. Electives are provided so that the student can select the appropriate courses for his preprofessional or scientific program as required in the first two years of a four-year college or university. Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated and also to consult with the counseling office of the community college in planning their program and selecting electives. In order to prepare for junior class standing at a four-year college or university, the student usually must complete a program at the community college which is comparable in length and course content to the first two years of the program at the four-year institution. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Science.

ARTS AND SCIENCES DEGREE PROGRAM

Associate of Arts & Sciences Degree
Major: Science

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I	3	0	3
HIS	History I (HIS 101 or 121)	3	0	3
MTH*	Calculus (or Pre-Calculus)	3	0	3
SDV 101	Orientation to Science	2	0	2
	Science with Lab	3	3	4
	TOTAL	14	3	15
	Second Semester			
ENG 112	College Composition II	3	0	3
HIS	History II (HIS 102 or 122)	3	0	3
MTH*	Calculus (or Pre-Calculus)	3	0	3
HLT/PED	Health or Physcial Education	0	2	1
ITE 115	Intro. to Computer Applications and Concepts or Approved Elective	3	0	3
SDV 295	Orientation to Science II or Approved Elective	1	0	1
	Science with Lab	3	3	4
	TOTAL	16	5	18
	Third Semester			
ENG	Literature (ENG 241 or 243, or ENG 251)	3	0	3
HLT/PED	Health or Physical Education	0	2	1
MTH*	Calculus or Approved Elective in Science	3	0	3
Elective**	Social Science Elective	3	0	3
	Science with Lab	3	3	4
	TOTAL	12	5	14
	Fourth Semester			
MTH 240	Statistics	3	0	3
CST 100	Principles of Public Speaking	3	0	3
Elective**	Social Science Elective	3	0	3
Elective***	Humanities Elective	3	0	3
	Science with Lab	3	3	4
	TOTAL	15	3	16

Total Credits for the Science Major 63

*   MATH REQUIREMENTS: A minimum of 9 semester hours of mathematics is required for the SCIENCE major. This MUST include a semester of calculus. One option is MTH 163-271-240. Math Majors are encouraged to meet with their advisors for other options.

**   Social Science Electives: ECO 201-202; PLS 211-212; PSY 200, PSY 231-232, PSY 255, PSY 266; SOC 200, SOC 235, SOC 268; HIS 101-102, HIS 266, HIS 269, HIS 277; GEO 200, GEO 210.

***   Humanities Electives: ENG 241-242, ENG 243-244, ENG 251-252, ENG 257, ENG 279; HUM 256; PHI 101-102; ART 101-102; MUS 121-122; CST 100; SPA 101-102, SPA 201-202; FRE 101-102, FRE 201-202; REL 100, REL 200, REL 210, REL 230, REL 246.

ARTS AND SCIENCES DEGREE PROGRAM

Associate of Arts & Sciences Degree
Major: Science
Specialization: Environmental Science

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
ENG 111	College Composition I	3	0	3
**EEE	Environmental Elective	3	0	3
GOL 105	Physical Geology	3	3	4
MTH*	Calculus (or Pre-Calculus)	3	0	3
SDV 101	Orientation to Science	2	0	2
	TOTAL	14	3	15
Second Semester				
ENG 112	College Composition II	3	0	3
***GEO	Geography Elective	3	0	3
MTH*	Calculus (or Pre-Calculus)	3	0	3
ITE 115	Intro. to Computer Applications and Concepts	3	0	3
SDV 295	Orientation to Science II or Approved Elective	1	0	1
GOL 106	Historical Geology	3	3	4
	TOTAL	16	3	17
Third Semester				
ENG	Literature (ENG 241 or 243)	3	0	3
HLT/PED	Health or Physical Education	0	4	2
HIS	History (101 or 121)	3	0	3
MTH*	Calculus or Approved Elective in Science	3	0	3
Lab Science	BIO 101 or CHM 111	3	3	4
	TOTAL	12	7	15
Fourth Semester				
HIS	History (102 or 122)	3	0	3
MTH 240	Statistics or Aproved Elective	3	0	3
CST 100	Principles of Public Speaking	3	0	3
GOL 225	Environmental Geology	3	3	4
Lab Science	BIO 102 or CHM 112	3	3	4
	TOTAL	15	6	17

Total Credits for the Science Major 64

* MATH REQUIREMENTS: A minimum of 9 semester hours of mathematics is required for the SCIENCE major. This MUST include a semester of calculus. One of the following options is recommended:
MTH 271-272-240, 9 semester hours; MTH 175-176-177-178-240, 13 semester hours
MTH 163-164-240-271, 12 semester hours; MTH 175-177, Corequisite Courses
MTH 176-178, Corequisit Courses

** Approved Environmental Electives include: HRT 205, FOR 105 or 115, GOL 111, NAS 125,125,199, or 299,ENV 231, CIV 246.

*** Approved Geography Electives: GEO 200 and GEO 220.

Note: Students are encouraged to complete one semester of GIS.

ARTS AND SCIENCES DEGREE PROGRAM

Associate of Arts & Sciences Degree
Major: Science
Specialization: Natural Resource Management

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I	3	0	3
FOR 105	Forest Ecology	3	3	4
MTH	Calculus (or Pre-Calculus)	3	0	3
SDV 101	Orientation to Science	2	0	2
Lab Science*	Science w/lab elective	3	3	4
	TOTAL	14	6	16
	Second Semester			
ENG 112	College Composition II	3	0	3
GEO 200	Intro. to Physical Geography	3	0	3
MTH	Calculus (or Pre-Calculus)	3	0	3
GIS 200	Geographical Info. Systems	3	0	3
Lab Science*	Science w/ lab elective	3	3	4
	TOTAL	15	3	16
	Third Semester			
ENG	Literature (ENG 241 or 243)	3	0	3
HLT/PED	Health or Phys. Education	0	4	2
HIS	History (101 or 121)	3	0	3
NAS 106	Cons. Natural Resources	3	0	3
Lab Science*	Science w/ lab elective	3	3	4
	TOTAL	12	7	15
	Fourth Semester			
HIS	History (102 or 122)	3	0	3
CST 100	Principles of Public Speaking	3	0	3
MTH 240	Statistics or Approved Elective	3	0	3
ENV 221	Natural Resource Management	3	0	3
Lab Science*	Science w/ lab elective	3	3	4
	TOTAL	15	3	16

Total Credits for the Major 63

*   Students are encouraged to take Geology 105, Biology 101, Chemistry 111, and Forestry 115 as their Science with Lab elective.

ARTS AND SCIENCES DEGREE PROGRAM

Associate of Arts & Sciences Degree
Major: Science
Specialization: Pre-Medical

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I	3	0	3
BIO 101	General Biology I	3	3	4
CHM 111	College Chemistry I	3	3	4
MTH 271*	Applied Calculus I	3	0	3
HTL/PED	Health & Physical Education	0	2	1
SDV 101	Orientation to Science	2	0	2
	TOTAL	14	8	17
	Second Semester			
ENG 112	College Composition II	3	0	3
BIO 102	General Biology II	3	3	4
CHM 112	College Chemistry II	3	3	4
MTH 240	Statistics	3	0	3
HIS	Western Civ. or US History	3	0	3
	TOTAL	15	6	17
	Third Semester			
ENG	Literature (ENG 241, 243, or 251)	3	0	3
CHM 241/243	Organic Chemistry I	3	3	4
PHY 201	General College Physics I	3	3	4
ITE 115	Intro. to Computer Applications and Concepts	3	0	3
Elective**	Social Science	3	0	3
	TOTAL	15	6	17
	Fourth Semester			
CST 100	Principles of Public Speaking	3	0	3
CHM 242/244	Organic Chemistry II	3	3	4
PHY 202	General College Physics II OR	3	3	4
BIO 205	General Microbiology			
Elective***	Humanities	3	0	3
PED	Physical Education	0	2	1
	TOTAL	12	8	15

Total Credits for the Major 66-69

Discuss pre-health/medical choice with a transfer counselor.
*   The student who needs MTH 163 will need 68 total credits to include 9 hours of math.
**   Social Science Elective: ECO 201
***   Humanities Elective: PHI 101 or REL 200 or 210

TECHNICAL PROGRAMS

Technical education programs are designed to serve the students who are planning to enter their chosen vocation at the semi-professional level at the completion of a program of study, or those who plan to use the educational experiences attained to prepare for advancement in the field of present employment.

Programs of study are developed with the assistance of advisory committees representing business and industry and survey information that has enabled the College to identify area manpower needs.

An increasing number of high school graduates who do not plan to enter a four-year college program can continue their education by taking a two-year college-level technical program at SWCC. Broadly defined, technical occupations are those which usually require a high degree of specialized knowledge, a broad understanding of operational procedures, and the ability to supervise the work of others. SWCC prepares students for a number of the basic positions in a particular field, and not for one specific job. Technical programs are not intended for transfer to a four-year college or university. However, increasingly, senior institutions are accepting all or part of a technical program for transfer. Students should consult carefully with the transferring institution regarding technical programs if they wish to gain transfer credit.

PROGRAMS OF STUDY

Programs of study for students planning to pursue two-year technical programs are listed on the following pages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Accounting

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: The demand for qualified personnel in accounting has significantly increased due to advances in technology and the increased complexity of the business environment. The Associate of Applied Science Degree curriculum in Accounting is designed for persons who seek full-time employment in an accounting field immediately upon completion of the degree. Persons seeking their first employment in an accounting position and those presently in accounting who are seeking to upgrade their skills may benefit from this curriculum. Additionally, most four-year colleges will accept many of the courses for transfer credit.

Occupational Objectives:

Accountant	Junior Accountant
Tax Preparer	Payroll Clerk
Accounting Trainee	Manager of Small Business
Accounting Technician	Internal Auditor
Self-employment	

Admission Requirements: In addition to the admission requirements established for the college, entry into the Accounting program requires high school English, keyboarding, and mathematics proficiency. Deficiencies can be made up for English and mathematics through the College's developmental studies program. Keyboarding deficiencies can be made up by enrolling in AST 114 and 115 during the first semester of the Accounting program.

Program Requirements: The first two semesters of the Accounting program are similar to other curricula in business. In the second year, students specialize in Accounting courses. The curriculum will include technical courses in accounting, courses in related areas, general education and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in accounting. Students must consult with their faculty advisor in planning their program and selecting electives and/or substitutes. Students planning to transfer to a four-year college should contact that institution regarding the transfer of courses. Upon satisfactory completion of the program, the graduate will be awarded the Associate in Applied Science Degree in Business Technology with a major in Accounting.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Accounting

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
ACC	211	Principles of Accounting I	4	0	4
ITE	140	Spreadsheet Software	3	0	3
ENG	111*	College Composition I	3	0	3
MTH	120**	Introduction to Mathematics	3	0	3
SDV	108	College Survival Skills	1	0	1
ITE	115***	Intro. to Computer Apps and Concepts	3	0	3
		TOTAL	17	0	17
Second Semester					
ACC	212	Principles of Accounting II	4	0	4
ECO	120	Survey of Economics OR	3	0	3
ECO	201	Principles of Economics I			
Elective****		Social Science Elective	3	0	3
FIN	215	Financial Management	3	0	3
ENG	112*	College Composition II	3	0	3
PED		Health or Physical Education	0	2	1
		TOTAL	16	2	17
Third Semester					
ACC	221	Intermediate Accounting I	4	0	4
ACC	261	Principles of Federal Taxes I	3	0	3
AST	205	Business Communications	3	0	3
BUS	200	Principles of Management OR	3	0	3
BUS	165	Small Business Management			
ACC	225	Managerial Accounting	3	0	3
ACC	124	Payroll Accounting	2	0	2
		TOTAL	18	0	18
Fourth Semester					
BUS	241	Business Law I	3	0	3
Elective*****		Humanities/Fine Arts	3	0	3
ACC	222	Intermediate Accounting II	3	0	3
ACC	262	Principles of Federal Taxes II	3	0	3
ACC	241	Auditing I	3	0	3
ACC	290/299	Coordinated Internship In Accounting	0	10	1
PED		Health or Physical Education	0	2	1
		TOTAL	15	12	17

Total Minimum Credits for Accounting Major...69

*   Students who do not wish to pursue a Baccalaureate degree in Accounting may substitute ENG 101-102 for ENG 111-112.
**   Students may substitute either MTH series 151-152, 163-164, 271-272 for MTH 120.
***   Students who do not wish to pursue a Baccalaureate degree may enroll in AST 232.
****   Social Science Electives: PSY, PLS< ECO< or SOC.
***** Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Administrative Support Technology

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: The Administrative Support Technology program is designed to prepare individuals for employment immediately upon completion of the community college curriculum. Individuals who are seeking employment in an office position and those who are seeking promotion may benefit from this curriculum.

Occupational Objectives:

Administrative Assistant   Office Manager
Administrative Secretary   Office Services Specialist
Clerical Supervisor   Related Office Occupation
Executive Secretary   Word Processing Technician

Admission Requirements: In addition to the admission requirements established for the college, entry into the Administrative Support Technology program requires proficiency in English and reading skills. Deficiencies can be made up through the College's developmental studies program. Students who have completed training in advanced keyboarding may receive college credit for their skills.

Program Requirements: The curriculum combines instruction in the many areas required for competence as an administrative assistant in business, government, industry, law offices, medical offices, and other organizations. The curriculum includes courses in administrative support technology, general education, courses in related areas, and electives. Students may be required to repeat keyboarding courses in which grades lower than "C" are received. Students are urged to consult with their faculty advisor in planning their programs. Upon satisfactory completion of the four-semester curriculum, the graduate will be awarded the Associate of Applied Science Degree in Business Technology with a major in Administrative Support Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Administrative Support Technology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
AST	101	Keyboarding I	4	0	4
AST	140	Introduction to Windows	1	0	1
ACC	111	Accounting I	3	0	3
ENG	111*	College Composition I	3	0	3
MTH	120	Intro. to Mathematics	3	0	3
PSY	120	Human Relations	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	18	0	18
		Second Semester			
AST	102	Keyboarding II	4	0	4
ENG	112*	College Composition II	3	0	3
AST	234	Records & Database Mgmt.	3	0	3
ACC	112	Accounting II	3	0	3
ECO	120	Survey of Economics	3	0	3
Elective		PED/HLT	0	4	2
		TOTAL	16	4	18
		Third Semester			
AST	201	Keyboarding III	4	0	4
Elective**		Humanities/Fine Arts	3	0	3
AST`	238	Word Process. Advcd. Proc.	4	0	4
AST	243	Office Administration I	3	0	3
AST	205	Business Communications	3	0	3
		TOTAL	17	0	17
		Fourth Semester			
ITE	115	Intro. to Computer Apps & Concepts	3	0	3
AST	240	Machine Transcription	4	0	4
AST	244	Office Administration II	3	0	3
AST	290/	Coord. Intern. Adm. Sup. Tech./			
	298	Sup. Study in Admn. Support Tech.	0	5	3
AST	295	Topics in Medical/Legal Proc.	3	0	3
		TOTAL	13	5	16

Total Minimum Credits for Administrative Support Technology Major.......................69

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*   Students who do not wish to pursue a Baccalaureate degree in Administrative Support Technology
        may substitute ENG 101-102 for ENG 111-112.
**   Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art
        Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Information Systems Technology

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: To provide the skills, knowledge, and some of the experience required for employment in one or more of the following occupational areas.

Occupational Objectives:

Computer Programmer
Database Administrator
Information Systems Manager
Network Administrator

Systems Analyst
Information Systems Occupations
   related to specialization areas

Admission Requirements: In addition to the admission requirements established for the College, entry into the Information Systems Technology program requires proficiency in high school English, keyboarding ability, and two units of high school mathematics: Algebra I and II or Geometry. Deficiencies can be made up through the College's developmental studies program.

Program Requirements: The curriculum includes technical courses in computer programming, systems analysis and design, network administration, business, general education, E-Commerce and electives. Instruction includes both the theoretical concepts and practical applications required for success in business information systems. The student is required to participate in a capstone project during the sophomore year that allows for the investigation, analysis, design, development and implementation of a systems project appropriate to his/her area of specialization. Certification preparation within the program includes various Microsoft and vendor-neutral certifications. The student is urged to consult with their business faculty advisor in planning his/her program. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate of Applied Science Degree in Information System Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Information Systems Technology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111**	College Composition I	3	0	3
MTH	151*	Math for the Liberal Arts I	3	0	3
SDV	108	College Survival Skills	1	0	1
PED		Health or Physical Education	0	2	1
ITP	100	Software Design	3	0	3
ITE	115	Intro. to Computer Apps and Concepts	3	0	3
ITP	112	Visual Basic .NET I	4	0	4
		TOTAL	17	2	18
		Second Semester			
ITP	212	Visual Basic .NET II	3	0	3
ITN	101	Intro. to Network Concepts	3	0	3
Elective*****		Humanities/Fine Arts	3	0	3
MTH	152	Math for the Liberal Arts II	3	0	3
ITD	132	Structured Query Language	3	0	3
PED		Health or Physical Education***	0	2	1
		TOTAL	15	2	16
		Third Semester			
ACC	211	Principles of Accounting I	4	0	4
ITP	120	Java Programming I or	4	0	4
ITP	132	C++ Programming I			
ITN	113	Active Directory (Specify Version)	3	0	3
ITP	251	Systems Analysis and Design	3	0	3
ITD	110	Web Page Design I	4	0	4
		TOTAL	18	0	18
		Fourth Semester			
Elective****		Social Science	3	0	3
ITE	290	Coordinated Internship or	2	0	2
		Seminar and Project in Info.			
ETR	149	PC Repair	2	0	2
ITP	298	Seminar and Project in Capstone	3	0	3
Elective****		Social Science	3	0	3
ITP	220	Java Programming II or			
ITP	232	C++ Programming II	4	0	4
		TOTAL	17	0	17

Total Minimum Credits for Information Systems Technology..............................69

* Mathematics requirements may vary greatly from one transfer institution to another. Students wishing to transfer should consult their advisor and/or transfer counselor

** ENG 101 and 102 can substitute for ENG 111 and ENG 112 for those not wishing to transfer the credit.

*** Students wishing to transfer should take HLT 116 (3 credits) instead of two (1 credit) PED classes.

**** Social Science: PSY, PLS, ECO, or SOC

***** Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Information Systems Technology
Specialization: Database Administration

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: Technology is advancing at an alarming rate, increasing the demand for trained, qualified workers to fill the many available jobs. The Associate of Applied Science degree in Information Systems Technology will provide the student with the skills he/she needs in the developing job market. In addition to gaining skills and knowledge in computer programming, systems analysis, networking, databases, and web design, the student will also be able to focus his/her skills with a specialization. The specialization in Database Administration will allow the student to gain the knowledge to plan, design, and implement an enterprise-wide information system using various database technologies. The student will complete course work on various database platforms. In addition, the student will understand how to integrate the database technology with a local area network and/or wide area network (LAN/WAN). Emphasis is placed on problem solving and meeting the challenges associated with enterprise wide database administration. The student will have the skills, knowledge, and some of the experience required for employment in one or more of the following occupational areas.

Occupational Objectives:

Database Architect   Database Administrator
Database Specialist   DBA Oracle
DBA SQL Server   Computer Programmer
Systems Analyst   Network Administrator
Information Systems Manager

Admission Requirements: In addition to admission requirements established for the College, entry into the Information Systems Technology program requires proficiency in high school English, keyboarding ability, and two units of high school mathematics: Algebra I and II or Geometry. Deficiencies can be made up through the College's developmental studies program.

Program Requirements: The curriculum includes technical courses in computer programming, systems analysis and design, network administration, business automation, general education, database administration, PC repair, and web design. Instruction includes both theoretical concepts and practical applications required for success in business information systems. Certification preparation within the program include various Microsoft and vendor-neutral certification. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate in Applied Science Degree in Information System Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Information Systems Technology
Specialization: Database Administration

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111**	College Composition	3	0	3
MTH	151*	Math for the Liberal Arts I	3	0	3
SDV	108	College Survival Skills	1	0	1
PED		Health and Physical Education***	0	2	1
ITP	100	Software Design	3	0	3
ITE	115	Intro. To Computer Apps and Concepts	3	0	3
ITP	112	Visual Basic.NET I	4	0	4
		TOTAL	17	2	18
		Second Semester			
ITD	132	Structured Query Language	3	0	3
ITN	101	Introduction to Network Concepts	3	0	3
Elective*****		Humanities/Fine Arts	3	0	3
MTH	152*	Math for the Liberal Arts II	3	0	3
ITE	150	Desktop Database Software	3	0	3
Elective***		HLT or PED	0	2	1
		TOTAL	15	2	16
		Third Semester			
ITD	134	PL/SQL Programming	4	0	4
ITP	120	Java Programming or			
ITP	132	C++ Programming I	4	0	4
ITN	113	Active Directory (Specify Version)	3	0	3
ITP	251	Systems Analysis and Design	3	0	3
ITD	110	Web Page Design I	4	0	4
		TOTAL	18	0	18
		Fourth Semester			
Elective****		Social Science	3	0	3
ITE	290	Coordinated Internship in Information Technology	0	4	2
ETR	149	PC Repair	2	0	2
ITD	250	Database Architecture and Administration	3	0	3
ITN	216	Database Server Administration	4	0	4
Elective****		Social Science	3	0	3
		TOTAL	15	4	17

Total Minimum Credits for Info. Syst. Tech.-Database Administration....................69

*	Mathematics requirements may vary greatly from one transfer institution to another. Students wishing to transfer should consult their advisor and/or transfer counselor.
**	ENG 101 and ENG 102 can substitute for ENG 111 and ENG 112 for those not wishing to transfer the credit.
***	Students wishing to transfer should take HLT 116 (3 credits) instead of two (1 credit) PED classes.
****	Social Science: PSY, PLS, ECO, or SOC
*****	Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Information Systems Technology
Specialization: Game Development

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: Technology is advancing at an alarming rate, increasing the demand for trained, qualified workers to fill the many available jobs. The Associate of Applied Science degree in Information Systems Technology will provide the student with the skills he/she needs in the developing job market. In addition to gaining skills and knowledge in computer programming, systems analysis, networking, databases, and web design, the student will also be able to focus his/her skills with a specialization. The specialization in Game Development will provide the student with additional courses in computer graphics and game design fundamental. In addition, the students are encouraged to participate in a capstone project during their sophomore year that allows for the investigation, analysis, design, devlopment and implementation of a gaming project. The student will have the skills, knowledge, and some of the experience required for employment in one or more of the following occupational areas.

Occupational Objectives:

Gamer Programmer	Software Architect
Gameplay/Special Effects Programmer	Video Game Programmer
PC Games Artist	AI Programmer
Computer Programmer	Systems Analyst
Network Administrator	Information Systems Manager

Admission Requirements: In addition to admission requirements established for the College, entry into the Information Systems Technology program requires proficiency in high school English, keyboarding ability, and two units of high school mathematics: Algebra I and II or Geometry. Deficiencies can be made up through the College's developmental studies program.

Program Requirements: The curriculum includes technical courses in computer programming, systems analysis and design, network administration, business automation, general education, database administration, PC repair, and web design. Instruction includes both theoretical concepts and practical applications required for success in business information systems. Certification preparation within the program include various Microsoft and vendor-neutral certification. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate in Applied Science Degree in Information System Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Information Systems Technology
Specialization: Game Development

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
ENG	111**	College Composition	3	0	3
MTH	151*	Math for the Liberal Arts I	3	0	3
SDV	108	College Survival Skills	1	0	1
PED		Health or Physical Education***	0	2	1
ITP	100	Software Design	3	0	3
ITE	115	Intro. To Computer Apps and Concepts	3	0	3
ITP	112	Visual Basic.NET I	4	0	4
		TOTAL	17	2	18
Second Semester					
ART	284	Computer Graphics II	4	0	4
ITN	101	Introduction to Network Concepts	3	0	3
Elective*****		Humanities/Fine Arts	3	0	3
MTH	152*	Math for the Liberal Arts II	3	0	3
ITD	132	Structured Query Language	3	0	3
PED		Health or Physical Education***	0	2	1
		TOTAL	16	2	17
Third Semester					
ART	283	Computer Graphics I	4	0	4
ITP	120	Java Programming or	4	0	4
ITP	132	C++ Programming I			
ITN	113	Active Directory (Specify Version)	3	0	3
ITP	251	Systems Analysis and Design	3	0	3
ITD	110	Web Page Design I	4	0	4
		TOTAL	18	0	18
Fourth Semester					
Elective****		Social Science	3	0	3
ITE	290	Coordinated Internship in Information Technology	0	4	2
ETR	149	PC Repair	2	0	2
ITP	160	Intro to Game Design and Development	3	0	3
Elective****		Social Science	3	0	3
ITD	212	Interactive Web Design	3	0	3
		TOTAL	14	4	16

Total Minimum Credits for Info. Syst. Tech.-Game Development............................69

* Mathematics requirements may vary greatly from one transfer institution to another.
Students wishing to transfer should consult their advisor and/or transfer counselor.
** ENG 101 and ENG 102 can substitute for ENG 111 and ENG 112 for those not wishing to transfer the credit.
*** Students wishing to transfer should take HLT 116 (3 credits) instead of two (1 credit) PED classes.
**** Social Science: PSY, PLS, ECO, or SOC
***** Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Information Systems Technology
Specialization: Help Desk Support

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: Technology is advancing at an alarming rate, increasing the demand for trained, qualified workers to fill the many available jobs. The Associate of Applied Science degree in Information Systems Technology will provide the student with the skills he/she needs in the developing job market. In addition to gaining skills and knowledge in computer programming, systems analysis, networking, databases, and web design, the student will also be able to focus his/her skills with a specialization. The specialization in Help Desk Support will provide the student with additional courses to provide student with the knowledge to perform hardware and software support services in a networked environment. The student will be exposed to the basic principles of databases, Microsoft Office, operating systems, PC repair, security, networks, and help desk skills and principles. The student will have the skills, knowledge, and some of the experience required for employment in one or more of the following occupational areas.

Occupational Objectives:

Help Desk Technician   Help Desk Analyst
Help Desk Support   Help Desk Specialist
Computer Programmer   Systems Analyst
Network Administrator   Information Systems Manager

Admission Requirements: In addition to admission requirements established for the College, entry into the Information Systems Technology program requires proficiency in high school English, keyboarding ability, and two units of high school mathematics: Algebra I and II or Geometry. Deficiencies can be made up through the College's developmental studies program.

Program Requirements: The curriculum includes technical courses in computer programming, systems analysis and design, network administration, business automation, general education, database administration, PC repair, and web design. Instruction includes both theoretical concepts and practical applications required for success in business information systems. Certification preparation within the program include various Microsoft and vendor-neutral certification. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate in Applied Science Degree in Information System Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Information Systems Technology
Specialization: Help Desk Support

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111**	College Composition	3	0	3
MTH	151*	Math for the Liberal Arts I	3	0	3
SDV	108	College Survival Skills	1	0	1
PED		Health or Physical Education***	0	2	1
ITP	100	Software Design	3	0	3
ITE	115	Intro. To Computer Apps and Concepts	3	0	3
ITP	112	Visual Basic.NET I	4	0	4
		TOTAL	17	2	18
		Second Semester			
ITE	215	Advanced Computer Applications and Integration	3	0	3
ITN	101	Introduction to Network Concepts	3	0	3
Elective*****		Humanities/Fine Arts	3	0	3
MTH	152*	Math for the Liberal Arts II	3	0	3
ITD	132	Structured Query Language	3	0	3
PED		Health or Physical Education***	0	2	1
		TOTAL	15	2	16
		Third Semester			
ITE	180	Help Desk Support Skills	4	0	4
ITP	120	Java Programming or	4	0	4
ITP	132	C++ Programming I			
ITN	113	Active Directory (Specify Version)	3	0	3
ITP	251	Systems Analysis and Design	3	0	3
ITD	110	Web Page Design I	4	0	4
		TOTAL	18	0	18
		Fourth Semester			
Elective****		Social Science	3	0	3
ITE	290	Coordinated Internship in Information Technology	0	4	2
ETR	149	PC Repair	2	0	2
BUS	106	Security Awareness for Managers	3	0	3
Elective****		Social Science	3	0	3
ITE	182	User Support/Help Desk Principles	4	0	4
		TOTAL	15	4	17

Total Minimum Credits for Info. Syst. Tech.-Help Desk Support Major 69

* Mathematics requirements may vary greatly from one transfer institution to another. Students wishing to transfer should consult their advisor and/or transfer counselor.
** ENG 101 and ENG 102 can substitute for ENG 111 and ENG 112 for those not wishing to transfer the credit.
*** Students wishing to transfer should take HLT 116 (3 credits) instead of two (1 credit) PED classes.
**** Social Science: PSY, PLS, ECO, or SOC
***** Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Information Systems Technology
Specialization: Network Administration

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: Technology is advancing at an alarming rate, increasing the demand for trained, qualified workers to fill the many available jobs. The Associate of Applied Science degree in Information Systems Technology will provide the student with the skills he/she needs in the developing job market. In addition to gaining skills and knowledge in computer programming, systems analysis, networking, databases, and web design, the student will also be able to focus his/her skills with a specialization. The specialization in Network Administration is designed to fulfill two goals. The first goal is to prepare the student for certification as a Microsoft Certified Professional (MCP), Microsoft Certified Systems Administrator (MCSA), and to receive the CompTIA Network + certification. The MCP certification is a Microsoft certification that involves taking and passing one Mircrosoft certification exam. Becoming an MCP is the first step in becoming a Mircosoft Certified Systems Administrator (MCSA) or Microsoft Certified Systems Engineer (MCSE). Business and industry recognize Microsoft Certified Professionals as experts in their respective field. The second goal is for the student to actually to be able to plan, inplement, and service a local area network (LAN). The student is provided with the basic knowledge needed to understand the working relationship of LAN components on an enterprise basis. Emphasis is placed on problem solving and meeting the challenges associated with enterprise wide LAN administration. The student will have the skills, knowledge, and some of the experience required for employment in one or more of the following occupational areas.

Occupational Objectives:

Network Specialist	Network Architect
Network Technician	Network Engineer
Computer Programmer	Systems Analyst
Network Administrator	Information Systems Manager

Admission Requirements: In addition to admission requirements established for the College, entry into the Information Systems Technology program requires proficiency in high school English, keyboarding ability, and two units of high school mathematics: Algebra I and II or Geometry. Deficiencies can be made up through the College's developmental studies program.

Program Requirements: The curriculum includes technical courses in computer programming, systems analysis and design, network administration, business automation, general education, database administration, PC repair, and web design. Instruction includes both theoretical concepts and practical applications required for success in business information systems. Certification preparation within the program include various Microsoft and vendor-neutral certification. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate in Applied Science Degree in Information System Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Information Systems Technology
Specialization: Network Administration

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111**	College Composition	3	0	3
MTH	151*	Math for the Liberal Arts I	3	0	3
SDV	108	College Survival Skills	1	0	1
PED		Health or Physical Education***	0	2	1
ITP	100	Software Design	3	0	3
ITE	115	Intro. To Computer Apps and Concepts	3	0	3
ITP	112	Visual Basic.NET I	4	0	4
		TOTAL	17	2	18
		Second Semester			
ITN	110	Client Operating System (Specify Version)	3	0	3
ITN	101	Introduction to Network Concepts	3	0	3
Elective*****		Humanities/Fine Arts	3	0	3
MTH	152*	Math for the Liberal Arts II	3	0	3
ITD	132	Structured Query Language	3	0	3
PED		Health or Physical Education***	0	2	1
		TOTAL	15	2	16
		Third Semester			
ITN	112	Network Infrastructure (Specify Version)	4	0	4
ITP	120	Java Programming or	4	0	4
ITP	132	C++ Programming I			
ITN	113	Active Directory (Specify Version)	3	0	3
ITP	251	Systems Analysis and Design	3	0	3
ITD	110	Web Page Design I	4	0	4
		TOTAL	18	0	18
		Fourth Semester			
Elective****		Social Science	3	0	3
ITE	290	Coordinated Internship in Information Technology	0	4	2
ETR	149	PC Repair	2	0	2
BUS	106	Security Awareness for Managers	3	0	3
Elective****		Social Science	3	0	3
ITN	111	Server Administration (Specify Version)	4	0	4
		TOTAL	15	4	17

Total Minimum Credits for Info. Syst. Tech.-Network Administration....................69

*	Mathematics requirements may vary greatly from one transfer institution to another. Students wishing to transfer should consult their advisor and/or transfer counselor.
**	ENG 101 and ENG 102 can substitute for ENG 111 and ENG 112 for those not wishing to transfer the credit.
***	Students wishing to transfer should take HLT 116 (3 credits) instead of two (1 credit) PED classes.
****	Social Science: PSY, PLS, ECO, or SOC
*****	Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Information Systems Technology
Specialization: Web Programming

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: Technology is advancing at an alarming rate, increasing the demand for trained, qualified workers to fill the many available jobs. The Associate of Applied Science degree in Information Systems Technology will provide the student with the skills he/she needs in the developing job market. In addition to gaining skills and knowledge in computer programming, systems analysis, networking, databases, and web design, the student will also be able to focus his/her skills with a specialization. The specialization in Web Programming will provide the student with the skills to be successful developing web-based applications. The course work will consist of HTML, javascript, Visual Studio (Visual Basic and C#), ASP. NET, and XML. In addition, the students are encouraged to participate in a capstone project during their sophomore year that allows for the investigation, analysis, design, deveopment, and implementation of a web project. The student will have the skills, knowledge, and some of the experience required for employment in one or more of the following occupational areas.

Occupational Objectives:

Web Developer	.NET Developer
Web Applications Engineer	Web Programmer/Analyst
Solution Architect	Computer Programmer
Systems Analyst	Network Administrator
Information Systems Manager	

Admission Requirements: In addition to admission requirements established for the College, entry into the Information Systems Technology program requires proficiency in high school English, keyboarding ability, and two units of high school mathematics: Algebra I and II or Geometry. Deficiencies can be made up through the College's developmental studies program.

Program Requirements: The curriculum includes technical courses in computer programming, systems analysis and design, network administration, business automation, general education, database administration, PC repair, and web design. Instruction includes both theoretical concepts and practical applications required for success in business information systems. Certification preparation within the program include various Microsoft and vendor-neutral certification. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate in Applied Science Degree in Information System Technology.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Information Systems Technology
Specialization: Web Programming

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111**	College Composition	3	0	3
MTH 151*	Math for the Liberal Arts I	3	0	3
SDV 108	College Survival Skills	1	0	1
HLT or PED***		0	2	1
ITP 100	Software Design	3	0	3
ITE 115	Intro. To Computer Apps and Concepts	3	0	3
ITP 112	Visual Basic.NET I	4	0	4
	TOTAL	17	2	18
	Second Semester			
ITP 136	C# Programming I	4	0	4
ITN 101	Introduction to Network Concepts	3	0	3
Elective*****	Humanities/Fine Arts	3	0	3
MTH 152*	Math for the Liberal Arts II	3	0	3
ITD 132	Structured Query Language	3	0	3
PED	Health or Physical Education***	0	2	1
	TOTAL	16	2	17
	Third Semester			
ITP 140	Client Side Scripting	3	0	3
ITP 120	Java Programming or	4	0	4
ITP 132	C++ Programming I			
ITN 113	Active Directory (Specify Version)	3	0	3
ITP 251	Systems Analysis and Design	3	0	3
ITD 110	Web Page Design I	4	0	4
	TOTAL	17	0	17
	Fourth Semester			
Elective****	Social Science	3	0	3
ITE 290	Coordinated Internship in Information Technology	0	4	2
ETR 149	PC Repair	2	0	2
ITD 210	Web Page Design II	3	0	3
Elective****	Social Science	3	0	3
ITP 244	ASP.NET--Server Side Programming	4	0	4
	TOTAL	15	4	17

Total Minimum Credits for Info. Syst. Tech.-Web Programming 69

*   Mathematics requirements may vary greatly from one transfer institution to another.
        Students wishing to transfer should consult their advisor and/or transfer counselor.
**   ENG 101 and ENG 102 can substitute for ENG 111 and ENG 112 for those not wishing to transfer the credit.
***   Students wishing to transfer should take HLT 116 (3 credits) instead of two (1 credit) PED classes.
**** Social Science: PSY, PLS, ECO, or SOC
***** Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art
        Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY (AAS DEGREE)

Major: Management

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: With the development of business and industry in Virginia, there is a demand for qualified personnel to assist business management in this economic growth. The Associate of Applied Science Degree curriculum in Management is designed for individuals who seek employment in business management immediately upon completion of the community college curriculum. Individuals who are seeking the first employment in a managerial position and those presently in management who are seeking promotion may benefit from this curriculum.

Occupational Objectives:

Manager Trainee   Manager of Small Business
Supervisor   Branch Manager Trainee
Department Head   Administrative Assistant Trainee
Office Manager Trainee

Admission Requirements: In addition to the admission requirements established for the college, entry into the Business Management program requires high school English, keyboarding, computer skills, and mathematics proficiency. Deficiencies can be made up for English and mathematics through the College's developmental studies program. Keyboarding and computer skills deficiencies can be made up by enrolling in AST 114-115 and ITE 115 during the first semester of the Management program.

Program Requirements: The curriculum will include technical courses in business management, courses in related areas, general education, and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in business management. Students must consult with their faculty advisor in planning their program and selecting electives and/or substitutes. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate of Applied Science Degree in Business Technology with a major in Management.

Internship or Supervised Study will be done in the semester that the student completes the Management Program. The student must have completed the first three semesters of the Management curricula when enrolling in BUS 290 or BUS 299.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
BUS	100	Introduction to Business	3	0	3
MTH	120*	Fund. of College Mathematics	3	0	3
MKT	100	Principles of Marketing	3	0	3
SDV	108	College Survival Skills	1	0	1
ENG	111**	College Composition I	3	0	3
ITE	115**	Intro. to Information Systems	3	0	3
PED		Health or Physical Education	0	2	1
		TOTAL	16	2	17
Second Semester					
ITE	140	Spreadsheet Software	3	0	3
AST	205	Business Communications	3	0	3
BUS	111	Principles of Supervision	3	0	3
ENG	112**	College Composition II	3	0	3
Elective		Psychology, Government or History	3	0	3
Elective***		Humanities/Fine Arts	3	0	3
		TOTAL	18	0	18
Third Semester					
ACC	211	Principles of Accounting I	4	0	4
BUS	200	Principles of Management	3	0	3
BUS	241	Business Law I	3	0	3
ECO	201**	Principles of Economics I	3	0	3
PED		Health or Physical Education	0	2	1
CST	100	Principles of Public Speaking	3	0	3
		TOTAL	16	2	17
Fourth Semester					
ACC	212	Principles of Accounting II	4	0	4
BUS	201	Organizational Behavior OR	3	0	3
BUS	165	Small Business Management			
BUS	204	Project Management	3	0	3
BUS	205	Human Resource Management	3	0	3
BUS	290/	Coordinated Internship/	0	5	1
	299	Supervised Study			
Elective****		Business Elective	3	0	3
		TOTAL	16	5	17

Total Minimum Credits for Business Management Degree...69

*   Students who wish to pursue a Baccalaureate degree may substitute MTH 151.
**   Students who do not wish to pursue a Baccalaureate degree in Management may substitute ENG 101-102 for ENG 111-112, ECO 120 for ECO 201, and AST 232 for ITE 115.
***   Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.
**** Students may choose any three-credit ACC, BUS, FIN, ITE, or MKT course to satisfy this business elective.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science
Major: Management
Specialization: Call Center Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
MTH	120*	Fund. of College Mathematics	3	0	3
MKT	100	Principles of Marketing	3	0	3
SDV	106	Preparation for Employment	1	0	1
ENG	111**	College Composition I	3	0	3
ITE	127	Microcomputer Software: Beginning Windows	1	0	1
AST	171	Introduction to Call Center Services	3	0	3
PED		Health or Physical Education	0	2	1
		TOTAL	14	2	15
		Second Semester			
ITE	140	Spreadsheet Software	3	0	3
AST	205	Business Communications	3	0	3
BUS	111	Principles of Supervision	3	0	3
BUS	122*	Business Mathematics II	3	0	3
ENG	112**	College Composition II	3	0	3
Elective***		Humanities/Fine Arts	3	0	3
		TOTAL	18	0	18
		Third Semester			
ACC	211	Principles of Accounting I	4	0	4
BUS	200	Principles of Management	3	0	3
BUS	241	Business Law I	3	0	3
ECO	120	Survey of Economics	3	0	3
PED		Health or Physical Education	0	2	1
BUS	251	Coaching and Development in Customer Care Cntrs.	1	0	1
CST	100	Principles of Public Speaking	3	0	3
		TOTAL	17	2	18
		Fourth Semester			
ACC	212	Principles of Accounting II	4	0	4
BUS	204	Project Management	3	0	3
BUS	254	Customer Care Center Trainer	1	0	1
BUS	253	Quality Assurance in Customer Care Centers	1	0	1
BUS	252	Customer Care Center Operations Management	3	0	3
BUS	205	Human Resource Management	3	0	3
BUS	290/ 299	Coordinated Internship/ Supervised Study	0	5	1
		TOTAL	15	5	16

Total Minimum Credits for the Management Major…………………………......…....67

*   Students who wish to pursue a Baccalaureate degree may substitute MTH 151.

**   Students who do not wish to pursue a Baccalaureate degree in Management may substitute ENG 101-102 for ENG 111-112, ECO 120 for ECO 201, and AST 232 for ITE 115.

***   Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

BUSINESS TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Management
Specialization: Dietary Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
MKT	100	Principles of Marketing	3	0	3
MTH	120*	Fund. of College Mathematics	3	0	3
DIT	130	Food Service Systems	3	0	3
SDV	108	College Survival Skills	1	0	1
ENG	111**	College Composition I	3	0	3
ITE	115**	Intro to Computer Applications and Concepts	3	0	3
		TOTAL	16	0	16
Second Semester					
HLT	230	Principles of Nutrition and Human Development	3	0	3
AST	205	Business Communications	3	0	3
BUS	111	Principles of Supervision	3	0	3
ENG	112**	College Composition II	3	0	3
Elective*		PSY, GOV, HIS	3	0	3
Elective***		Humanities/Fine Arts	3	0	3
		TOTAL	18	0	18
Third Semester					
ACC	211	Principles of Accounting I	4	0	4
BUS	200	Principles of Management	3	0	3
BUS	241	Business Law I	3	0	3
ECO	201*	Principles of Economics I	3	0	3
CST	100	Principles of Public Speaking	3	0	3
HRI	115	Food Service Sanitation Cert.	1	0	1
		TOTAL	17	0	17
Fourth Semester					
HRI	215	Food Purchasing	3	0	3
HLT	100	First Aid and CPR	3	0	3
BUS	204	Project Management	3	0	3
BUS	205	Human Resource Management	3	0	3
BUS	290/299	Coordinated Internship/Supervised Study	0	5	1
Elective****		Business Elective	3	0	3
		TOTAL	15	5	16

Total Minimum Credits for the Dietary Manager Major.......................................67

*   Students who wish to pursue a Baccalaureate degree may substitute MTH 151.
**   Students who do not wish to pursue a Baccalaureate degree in Management may substitute ENG 101-102 for ENG 111-112,
           ECO 120 for ECO 201, and AST 232 for ITE 115.
***   Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art
           Appreciation, and Foreign Languages.
****   Students may choose any three-credit ACC, BUS, FIN, ITE, or MKT course to satisfy this business elective.

ENGINEERING TECHNOLOGY (AAS DEGREE)

Major: Computer and Electronics Technology

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: The global shift toward Information Technologies has produced a critical shortage of technicians skilled in the computer and networking technologies. Data suggest that the IT industry will grow at an unprecedented rate during the next century thus further exacerbating the shortage of qualified Information Technology technicians.

The Computer Networking Technology degree will provide students the opportunity to develop computer and networking skills and master the necessary content to sit for the CompTIA A+ and CISCO CCNA certification exams. Students will be prepared for full-time employment upon mastering the Computer Networking curriculum. The curriculum is delivered by means of modern state of the art educational technologies. Laboratory experiences will allow students to gain valuable experience working with actual industrial equipment.

Occupational Objectives:

Computer Service Technician	Telecommunications Technician
Information Technology Marketing	Systems Analyst
LAN Technician	InterNet Service Provider Technician
LAN Administrator	LAN Cable Installation
Technical Sales Associate	WAN Technician
Computer Systems Installation	Network Systems Installation

Admission Requirements: Students who meet the admission reqirements to the College are eligible for enrollment into the Comptuer Networking Technology program. Students are expected to be proficient in basic English and mathematics. Appropriate developmental courses are available for those needing to improve proficiency in these areas.

Program Requirements: The curriculum consists of course content in general education, basic electronics, computer and networking technologies. Several of the courses will be delivered online. In these courses students will access the curriculum and take assessments in the form of quizzes, tests and exams through the InterNet.

Note: High school students interested in a career in the IT industry should check with their counselor for the availability of articulation and dual-enrollment opportunities for those studies.

The Computer Networking Technology Degree program is designed to provide students the opportunity to develop the necessary skills for entry level employment in the Information Technology industry. Students interested in pursuing a Bachelors degree should consult with college counselors and program advisors early in their program of study at Southwest Virginia Community College.

ENGINEERING TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Computer and Electronics Technology
Specialization: Internetworking

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
MTH	151*	Math for the Liberal Arts	3	0	3
ENG	111**	College Composition I	3	0	3
ETR	158	Electronics Circuits for Computers	3	3	4
ETR	166	Fund. of Computer Technology	3	3	4
ITN	154	Networking Fundamentals (CISCO I)	3	0	3
ITN	154L	Networking Fundamentals Lab	0	2	1
		TOTAL	15	8	18
Second Semester					
Elective**		ART, HUM, MUS, REL, SPA	3	0	3
HLT/PED		Health/PE Elective	1	0	1
ESR	150	Software Configuration and Diagnostics	3	3	4
ETR	156	Digital Circuits & Micro. Fund.	3	3	4
ITN	155	Routing Protocols & Concepts (CISCO II)	3	0	3
ITN	155L	Routing Protocols & Concepts Lab	0	2	1
		TOTAL	13	8	16
Third Semester					
ETR***		Technical Elective	3	0	3
ITN	111	Windows Server	3	2	4
Elective		Java or C++ Programming	3	0	3
SS		PSY, PLS, ECO, SOC	3	0	3
ITN	156	LAN Switching & Wireless (CISCO III)	3	0	3
ITN	156L	LAN Switching & Wireless Lab	0	2	1
		TOTAL	15	4	17
Fourth Semester					
SSE*		PSY, PLS, ECO, SOC	3	0	3
ITN	260	Network Security Basics	3	2	4
SDV	106	Prep. for Employment	1	0	1
ETR***		Techical Elective	3	0	3
HLT/PED		Health/PE Elective	1	0	1
ITN	157	Accessing the WAN (CISCO IV)	3	0	3
ITN	157L	Accessing the WAN Lab	0	2	1
		TOTAL	14	4	16

Total Minimum Credits for the Computer Networking Technology Major................67

*	Student should take MTH 163-271 if planning to pursue a baccalaureate degree.
**	ENG 101 may substitute for ENG 111 for those not desiring to transfer the credit.
***	Students must consult with advisor to identify technical electives. Most ESR, ETR, ITN, and ITP classes will apply as well as other technical courses.

ENGINEERING TECHNOLOGY (AAS DEGREE)

Major: Electrical Electronics Technology

Degree: Associate of Applied Science

Length: Two-year Program - Four-semesters

Purpose: The Electrical/Electronics Engineering Technology program provides industry with personnel trained in state-of-the-art electrical/electronics equipment and systems. The program is designed to prepare technicians for full-time employment. Also, many of the credits required by the program are transferable to an appropriate Bachelor of Engineering Technology Program.

Occupational Objectives:

Engineering Technician
Electronics Operation/Service Technician
Electrical Maintenance Technician
Field Service Analyst
Maintenance Technician
Field Service Technician
Installation Technician
Technical Sales Specialist

Admission Requirements: In addition to the admission requirements established for the college, entry into the Electrical/Electronics Engineering Technology program requires proficiency in high school English, Mathematics, and Science. Students will be required to take English and Math placement test and complete pre-requisite developmental courses before being allowed to enter the program.

Program Requirements: The Electrical/Electronics Engineering Technology Degree is a two-year (four semesters) program with courses and training including circuit analysis, semiconductor devices, electrical drafting, digital electronics, electrical machinery, programmable logic controllers, control systems, and technical mathematics. In addition to acquiring broad knowledge of electrical components, students in the program will learn how to design and analyze electrical circuits; install, test and maintain electrical/electronic systems; operate and troubleshoot modern industrial controllers; and relate their knowledge to real-world applications. They will also acquire the communications, problem solving and teamwork skills necessary to succeed in their chosen career.

Note: A number of four-year institutions are offering Bachelor's Degree programs in Engineering Technology which build on this AAS degree. Students interested in such programs should consult with their program advisors early in their program.

ENGINEERING TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Electrical/Electronics Technology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
MTH	115	Technical Mathematics I	3	0	3
ITE	115	Computer Apps & Concepts	3	0	3
SDV	101	Orientation to Engineering Tech.	1	0	1
ENG	111	College Composition I*	3	0	3
ELE	140	Basic Electricity & Machinery	3	2	4
HLT/PED		HLT or Physical Education Elective	1	0	1
		TOTAL	14	2	15
Second Semester					
MTH	116	Technical Mathematics II	3	0	3
ELECTIVE		Humanities/Fine Arts	3	0	3
ETR	114	DC & AC Fundamentals II	3	2	4
DRF	132	Electrical & Electronic Drafting I	2	3	3
ETR	156	Digital Circuits & Microprocessor Fundamentals	3	3	4
		TOTAL	14	8	17
Third Semester					
ETR	143	Devices & Applications I	2	3	3
ITP	112	Visual Basic.Net	4	0	4
ELE	211	Electrical Machines I	3	3	4
ELE	233	Prog. Logic Controller Systems I	2	3	3
HLT/PED		HLT or Physical Education Elective	1	0	1
SSC**		Social Science Elective	3	0	3
		TOTAL	14	9	18
Fourth Semester					
ELE	136	National Electric Code (Commercial)	2	2	3
ELE	234	Prog. Logic Controller Systems II	2	3	3
SSC**		Social Science Elective	3	0	3
ELE	156	Electrical Control Systems	3	2	4
DRF	201	Computer Aided Drafting/Design	3	2	4
		TOTAL	13	9	17

Total credits for the Electrical/Electronics Technology Major 67

*   Students who do not wish to pursue a Baccalaureate degree in Electrical/Electronics Engineering Technology may
         substitute ENG 101 for ENG 111.
**   Social Science Elective approved courses: ECO 120, ECO 201, ECO 202, PLS 211, PLS 212, PSY 120, PSY 200, PSY 231,
         PSY 232, and SOC 200.

ENGINEERING TECHNOLOGY (AAS DEGREE)

Major: Electrical Electronics Technology
Specialization: Industrial Maintenance

Degree: Associate of Applied Science

Length: Two-year Program - Four-semesters

Purpose: The Electrical/Electronics Engineering Technology program with a Specialization in Industrial Maintenance provides industry with the personnel trained to troubleshoot, repair, and maintain electrical/electronics equipment and systems. The program is designed to allow a student to transfer to an appropriate bachelors program in Engineering Technology or go directly into the workforce as an Industrial Maintenance Technician.

Occupational Objectives:

Maintenance Technician	Engineering Technician
Field Service Technician	Installation Technician
Technical Sales Specialist	

Admission Requirements: In addition to the admission requirements established for the college, entry into the Electrical/Electronics Engineering Technology program requires proficiency in high school English, mathematics, (including one unit of algebra and one unit of geometry or two units of algebra, or equivalent), and science. Students lacking program entry prerequisites will be required to complete pre-requisite developmental courses before being allowed to enter the program.

Program Requirements: The Electrical/Electronics Engineering Technology Degree with a specialization in Industrial Maintenance begins with an emphasis in electrical theory and builds to include electronic circuits and electronic devices, digital electronics, rotating machines, process control, solid state and programmable logic controls along with training in blueprint reading, hydraulics, welding and machine tool applications. Upon satisfactory completion of the program the graduate will be awarded the Associate in Applied Science Technology with a Specialization in Industrial Maintenance.

ENGINEERING TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Electrical/Electronics Technology
Specialization: Industrial Maintenance

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
MTH	115	Technical Mathematics I	3	0	3
DRF	132	Electrical & Electronic Drafting I	2	3	3
SDV	101	Orientation to Engineering Tech.	1	0	1
ENG	111*	College Composition I	3	0	3
ELE	140	Basic Electricity and Machinery	3	2	4
PED		Elective	1	0	1
ITE	101	Introduction to Micro. Computers	1	0	1
		TOTAL	14	5	16
Second Semester					
MTH	116	Technical Mathematics II	3	0	3
Elective**		Humanities/Fine Arts	3	0	3
ETR	114	D.C. and A.C. Fundamentals II	3	3	4
ETR	143	Devices & Applications I	2	3	3
ETR	156	Digital Circuits & Microprocessor Fundamentals	3	3	4
		TOTAL	14	9	17
Third Semester					
ETR	144	Devices and Applications II	3	3	4
ITP	112	Visual Basic.Net	4	0	4
MEC	161	Basic Fluid Mechanics	2	2	3
ELE	233	Prog. Logic Controller Systems I	2	3	3
SSC		Social Science Elective	3	0	3
		TOTAL	14	8	17
Fourth Semester					
ELE	211	Electrical Machines I	3	3	4
MAC	161	Machine Shop Practices I	2	3	3
SSC		Social Science Elective	3	0	3
WEL	117	Oxy-fuel Welding and Cutting	2	3	3
PED		Physical Education Elective	1	0	1
ELE	299***	Supervised Study in Tech.	3	0	3
		TOTAL	14	9	17

Total credits for the Electrical/Electronics Technology-IM..................................67

*   Students who do not wish to pursue a Baccalaureate degree in Electrical/Electronics Engineering Technology may substitute ENG 101 for ENG 111.

**   Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

***   Students may substitute ELE 135-National Electric Code or OJT for this course.

ENGINEERING TECHNOLOGY (AAS DEGREE)

Major: Environmental Management
(NOTE: Specialization in Environmental Science on Page 89)

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: Concern for environmental protection and awareness is a rapidly increasing field in the United States and abroad. Training in environmental management is in demand due to rising population and associated environmental impacts. As public concern for the environment increases, training must be provided so that state and federal agencies and private industry will have the personnel to meet the public's demand. The Associate of Applied Science in Environmental Management is designed to prepare persons for either full-time employment in the field or for continued studies at appropriate four year institutions. In addition, future specializations will allow students to tailor the curriculum towards a general, more applied background in environmental technology which includes, but is not limited to, such classes as geology, hydrology, conservation, soil science, and forestry.

Students wishing to major in Environmental Management with an intent to complement their studies at one of the four year institutions that accept AAS degrees will follow a more rigorously oriented program designed to meet the needs of professional positions in high demand. A few of the career opportunities available for those wishing to complete the AAS degree in Environmental Management are listed below.

Occupational Objectives:

Technical Careers
Professional Careers
(AAS, Non-Transfer)
(With Complementary Studies)

Environmental Technician	Environmental Manager
Geotechnician	Environmental Scientist
Reclamation Technician	Geologist
Soil Conservaton Specialist	Geotechnical Engineer
Conservation Technician	Hydrologist
Lab Assistant/Technician	Soil Scientist
Forest Technician	Earth Scientist
Forester	

Admission Requirements: In addition to the admission requirements for the College, entry into the Environmental Management curriculum requires completion of courses in biology and chemistry at the high school level.

Program Requirements: The curriculum in Environmental Management is a two-year program encompassing instruction in many areas required for competence as an Environmental Technician/Professional. Approximately one-half of the curriculum will include courses in technically oriented areas, mathematics, physical/natural/environmental

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science and general education. The basic Environmental Management major, comprising 69 semester hours, will provide the student with a broad background qualifying her or him to perform effectively in several different occupational areas of environmental technology/management. Students are advised to consult with their faculty advisor and the counseling office in planning their program and selecting electives. Upon completion of the Environmental Management major, the student will be awarded the Associate of Applied Science Degree with a major in Environmental Management.

Associate of Applied Science Degree
Major: Environmental Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
ENG	111	College Composition I	3	0	3
MTH		Mathematics (MTH 163 or MTH 273)	3	0	3
ENV	121	General Environmental Science I	3	3	4
BUS	100	Introduction to Business	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	13	3	14
Second Semester					
ENG	112	College Composition II	3	0	3
MTH		Mathematics (MTH 164 or MTH 274)	3	0	3
ITE	115	Intro. to Computer Apps. & Concepts	3	0	3
GOL	105	Physical Geology	3	3	4
FOR	105	Forest & Wildlife Ecology	3	3	4
		TOTAL	15	6	17
Third Semester					
HLT/PED		Health or Physical Education Elective	2	0	2
BIO/CHM		General Biology I or General Chemistry I	3	3	4
ENG		Literature Elective	3	0	3
MTH		Mathematics (MTH 273 or MTH 275)	4	0	4
SSE*		Social Science Elective	3	0	3
		TOTAL	15	3	16
Fourth Semester					
ENV	221	Natural Resource Management	3	3	4
MTH	240	Statistics	3	0	3
FOR	135	Widlife & Fisheries Management	3	0	3
BIO/CHM		General Biology II or General Chemistry II	3	3	4
Elective**		Humanities/Fine Arts	3	0	3
		TOTAL	15	6	17

Total Credits for the Environmental Management Major 64

*   Social Science Electives include, PSY, SOC, HIS, ECO, PSL, GEO
**   Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages

ENGINEERING TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Environmental Management
Specialization: Alternative Energy Technology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
MTH		Mathematics (MTH 163 or MTH 273)	3	0	3
ENV	121	General Environmental Science I	3	3	4
BLD	200	Sustainable Construction	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	13	3	14
		Second Semester			
ENG	112	College Composition II	3	0	3
MTH		Mathematics (MTH 164 or MTH 274)	3	0	3
ITE	115	Intro. to Computer Apps. & Concepts	3	0	3
GOL	105	Physical Geology	3	3	4
ENE	100	Conventional & Alternate Energy Apps	3	3	4
		TOTAL	15	6	17
		Third Semester			
HLT/PED		Health or Physical Education Elective	2	0	2
BIO/CHM		General Biology I or General Chemistry I	3	3	4
ENG		Literature Elective	3	0	3
MTH		Mathematics (MTH 273 or MTH 275)	4	0	4
SSE*		Social Science Elective	3	0	3
		TOTAL	15	3	16
		Fourth Semester			
ENV	221	Natural Resource Management	3	3	4
MTH	240	Statistics	3	0	3
ENV	170	Fundamentals or Energy Technology	2	0	2
BIO/CHM		General Biology II or General Chemistry II	3	3	4
Elective**		Humanities/Fine Arts	3	0	3
		TOTAL	14	6	16

Total Credits for the Environmental Management Major
Specialization in Alternative Energy Technology...63

*   Social Science Electives include, PSY, SOC, HIS, ECO, PSL, GEO
**   Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and
       Foreign Languages

ENGINEERING TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Environmental Management
Specialization: Environmental Health and Safety

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
MTH		Mathematics (MTH 163 or MTH 273)	3	0	3
ENV	121	General Environmental Science I	3	3	4
BLD	101	Construction Management OR	3	0	3
BUS	200	Principles of Management			
SDV	108	College Survival Skills	1	0	1
		TOTAL	13	3	14
		Second Semester			
ENG	112	College Composition II	3	0	3
MTH		Mathematics (MTH 164 or MTH 274)	3	0	3
ITE	115	Intro. to Computer Apps. & Concepts	3	0	3
GOL	105	Physical Geology	3	3	4
SAF	120	Safety and Health Standards	3	0	3
		TOTAL	15	3	16
		Third Semester			
HLT/PED		Health or Physical Education Elective	2	0	2
BIO/CHM		General Biology I or General Chemistry I	3	3	4
ENG		Literature Elective	3	0	3
MTH		Mathematics (MTH 273 or MTH 275)	4	0	4
SSE*		Social Science Elective	3	0	3
		TOTAL	15	3	16
		Fourth Semester			
ENV	221	Natural Resource Management	3	3	4
MTH	240	Statistics	3	0	3
ENV	231	Environmental Codes I	3	0	3
BIO/CHM		General Biology II or General Chemistry II	3	3	4
Elective**		Humanities/Fine Arts	3	0	3
		TOTAL	15	6	17

Total Credits for the Environmental Management Major
Specialization in Alternative Energy Technology...63

*   Social Science Electives include, PSY, SOC, HIS, ECO, PSL, GEO
**   Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages

ENGINEERING TECHNOLOGY DEGREE PROGRAM

Associate of Applied Science Degree
Major: Mining

Degree: Associate in Applied Science

Length: Two-year Program - Four semesters

Purpose: Recent shortages in electrical generation and improvements in burning technology have led to a resurgence of coal production. Expansion of the coal industry has created excellent career opportunities for individuals with technical competence and strong leadership skills. Lean production techniques require managers and supervisors to have a broad-based knowledge of all aspects of a mining operation. The Associate of Applied Science Degree curriculum in Mining Technology is designed to prepare persons for both entry-level technical positions and career growth.

Occupational Objectives:

Operations Manager	Civil/Mining Engineer Assistant
Production Supervisor	Management Trainee

Admission Requirements: In addition to the admission requirements for the college, entry into the Mining Technology curriculum requires proficiency in high school mathematics, English, and science. Students with deficiencies will require Developmental Studies.

Program Requirements: The curriculum in Mining Technology is a two-year program encompassing instruction in the many areas required for competence as a technician in the Mining industry. The core of the program will provide the student with a strong background that will allow adaptation to many of the specialized jobs in the mining and construction industries. The program has specialized mining courses and considerable latitude for approved technical electives that allow the student to select courses of study leading to specialization. Upon completion of the four-semester curriculum, the student will be awarded the Associate of Applied Science Degree with a major in Mining.

ENGINEERING TECHNOLOGY (AAS DEGREE)
Associate of Applied Science Degree
Major: Mining

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
MTH	115	Technical Mathematics I	3	0	3
DRF	111	Technical Drafting I	2	3	3
MIN	110	Elements of Mining	3	0	3
SSC		Elective	3	0	3
		TOTAL	14	3	15
		Second Semester			
ENG	112	College Composition II	3	0	3
MTH	116	Technical Mathematics II	3	0	3
DRF	201	Computer Aided Drafting I	3	3	4
GOL	105	Physical Geology	3	3	4
SSC		Elective	3	0	3
		TOTAL	15	6	17
		Third Semester			
MIN	228	Mine Foreman and Ventilation Training	3	3	4
CIV	171	Surveying I	2	3	3
MIN	131	Mine Electricity I	3	3	4
MIN	120	Mining Hydraulics	3	0	3
		Technical Elective	3	0	3
		TOTAL	14	9	17
		Fourth Semester			
SDV	106	Prep. for Employment	1	0	1
MIN	132	Mine Electricity II	3	3	4
MIN	146	State & Federal Mining Law	4	0	4
MIN	210	Principles of Supervision	3	0	3
HLT/PED		Elective(s)	2	0	2
ELECTIVE*		Humanities/Fine Arts	3	0	3
		TOTAL	16	3	17

Total Credits for the Mining Major...66

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*   Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreig Languages.

HEALTH TECHNOLOGY (AAS DEGREE)

Major: Emergency Medical Services Technology

Degree: Associate of Applied Science

Major: Emergency Medical Services Technology

Length: Two-year Program - Five semesters

Purpose: The purpose of this curriculum is to produce competent entry-level Emergency Medical Technician-Paramedics (EMT-P) who can service the community with advanced life support care via the Emergency Medical Services (EMS) infrastructure. Upon completion of the program, students will be eligible for National Registry testing and certification in the Commonwealth of Virginia. Employment opportunities for Paramedics are available with ambulance; fire and rescue services; hospitals; local, state and federal government agencies; and humanitarian relief organizations.

Program Goals: At the completion of the program the graduate will be able to demonstrate:

- the ability to comprehend, apply, and evaluate the clinical information relative to his role as an entry-level paramedic;
- technical proficiency in all skills necessary to fulfill the role of an entry-level paramedic;
- personal behaviors consistent with professional and employer expectations for the entry-level paramedic.

Admission Requirements: Prior to the starting program courses, the applicant must:
1. meet eligibility requirements as stipulated by the Virginia Office of EMS; and
2. meet the college's general admission requirement.

Accreditation: This program is accredited nationally by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP).

Selection Process: To be eligible for selection to the program, interested persons should complete the following process by May 10:

1. Submit a college admission application
2. Submit an application to the program (separate document) with required attachments.
3. Take the COMPASS or ASSET placement test (or submit SAT or ACT scores).
4. Have transcripts of previous college courses sent to the college.

At this time the first round of students will be selected. Selection will be based on previous college coursework, interview, entrance exam and college placement reading scores. A score of 61 on the COMPASS or comparable score on the ASSET, SAT, or ACT is required for first round selection. Should openings still be available, persons who apply or meet requirements after May 10, or score lower than cut score on the reading exam will be considered.

Program Requirements:
Physical Requirements:
An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description. http://www.vdh.virginia.gov/oems/Training/ResourceCD/Content/TPAM/ Appendix/BLS%20Student%20Handouts.pdf

Academic Requirements:
Students must make a "C" or better in all program core courses. Any student receiving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of "C" or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.

Clinical and Behavioral Requirements:
Selected and supervised student experience is required by the program and will be accomplished at selected regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips. Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.

Other Requirements:
Applicants accepted to the program are required to submit a health certificate signed by a licensed physician, physician's assistant or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of Hepatitis B inoculation; Tuberculosis testing; and overall general health of the applicant.

The purchase of items such as uniforms, liability insurance and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.

Program Contact: Bill Akers Jr., MS, NREMTP, Program Director

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Emergency Medical Services Technology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester (Summer)			
EMS	111	Emergency Medical Technician - Basic	4	4	6
EMS	120	EMT-Basic Clinical	1	0	1
SCI*		Science Elective	3	3	4
SDV		Student Development/Orientation	1	0	1
		TOTAL	9	7	12
		Second Semester (Fall)			
EMS	151	Intro. to Advanced Life Support	3	2	4
EMS	170	ALS Internship I	0	3	1
EMS	153	Basic ECG Recognition	2	0	2
EMS	157	ALS-Trauma Care	2	2	3
ENG	111	English Composition	3	0	3
		TOTAL	10	7	13
		Third Semester (Spring)			
EMS	155	ALS-Medical Care	3	2	4
EMS	159	EMS Special Populations	1	2	2
EMS	172	ALS Clinical Internship II	0	3	1
EMS	173	ALS Field Internship I	0	3	1
ITE		Computer Elective	3	0	3
Elecitve		Social Science Elective**	3	0	3
		TOTAL	10	10	14
		Fourth Semester (Fall)			
EMS	205	Advanced Pathophysiology	3	0	3
EMS	207	Advanced Patient Assessment	2	2	3
EMS	242	ALS Clinical Internship III	0	3	1
EMS	243	ALS Field Internship II	0	3	1
EMS	201	EMS Professional Development	2	0	2
EMS/FIR/HLT		EMS, Fire Programs or HLT Elective	3	0	3
		TOTAL	10	8	13
		Fifth Semester			
EMS	209	Advanced Pharmacology	3	2	4
Elecitve		Social Science Elective II**	3	0	3
EMS	211	Operations	1	2	2
EMS	244	ALS Clinical Internship IV	0	3	1
EMS	245	ALS Field Internship III	0	3	1
Elecitve		Humanities Elective***	3	0	3
		TOTAL	10	10	14

Total Minimum Credits for Emergency Medical Services Tech. Major 66

*   BIO 141-142 are recommended if the student is planning to transfer to another medically related program
**   Social Science subject areas: PSY/PLS/ECO/HIS/SOC
***   Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art
         Appreciation, and Foreign Languages.

HEALTH TECHNOLOGY (AAS DEGREE)

Major: Nursing

Degree: Associate of Applied Science

Degree Program: Nursing

Major: Nursing

Length: Two-year Program - Four semesters

About the Program: The Virginia Appalachian Tricollege Nursing Program (VATNP) is a three college consortium serving Virginia Highlands Community College, Southwest Virginia Community College, and Mountain Empire Community.

Purpose: The two year Associate of Applied Science degree curriculum in Nursing is designed to prepare selected students to qualify as contributing members of the health team, rendering direct patient care as beginning practitioners of nursing in a variety of health service facilities. Upon successful completion of the curriculum, students will be eligible to take the National Council Licensure Examination leading to licensure as a registered nurse (RN).

State Approval and Accreditation Status: The program is approved by the Virginia State Board of Nursing and accredited by the National League for Nursing Accrediting Commission, Inc. (3343 Peach Tree Road NE, Suite 500, Atlanta, GA, 30326, telephone: 404- 957-5000, website:www.nlnac.org).

Occupational Objectives: Employment opportunities for the Registered Nurse include, but are not limited to, staff positions in hospitals, nursing homes, health departments, physician's offices, clinics, home health agencies, public schools, day care centers, and civil service.

Admission Requirements: Admission to the Virginia Appalachian Tricollege Nursing Program is a selective process. The nursing program is open to both male and female applicants who are free of any physical or mental condition which might adversely affect performance as a member of the nursing profession. In addition to the requirements for admission to the college, the applicant must meet the following requirements:

1. Graduation from high school or satisfactory completion of the GED.
2. The completion of one unit each of algebra, biology (with laboratory), and chemistry (with laboratory) with no grade below a "C" prior to January 15 application deadline (deficiencies can be made up through developmental studies or college courses).
3. A 2.5 average for high school courses or a 2.5 curricular average for college curriculum coursework.**
4. College students must be in good standing with the most recently attended institution with a minimum GPA of 2.0.
5. Completion of Health Science Program Application for each academic year interested in being considered for the Nursing Program.
6. Satisfactory performance (national percentile score of 45 or higher) on a nursing pre-admission test. An interview with a faculty member may be requested by the student.

7. Completion of college placement tests (COMPASS or ASSET) and prescribed developmental work.

**If the student has completed a minimum of 12 college credits that are included in calculating the curricular GPA (non-development courses), the 2.5 high school GPA requirement will be waived.

Special Notes:

The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Licensed nursing homes and similar organizations are prohibited from hiring persons who have been convicted of certain criminal acts. Any person wishing to enter the nursing program who has committed any legal offenses other than minor traffic violations should discuss these matters with the Dean of the Nursing Program prior to application.

Complete applications (including high school/college official transcripts; GED, if applicable; LPN Board scores, if applicable; and a college entry-level assessment examination score), must be received in the Admissions Office by January 15. Out-of-region applicants (Virginia residents) will be considered for any openings available after April 1. Out-of-state applicants will be considered for any openings available after May 1. (SWCC service region: Buchanan, Dickenson (partial), Russell and Tazewell Counties.) Qualified students will be admitted on an equal basis.
To be considered in-region, an applicant must be domiciled within the service region for 12 months prior to the program application deadline.

Advanced Placement: Currently licensed LPNs who have been accepted to the nursing program may be offered the option of entering a summer LPN to RN Bridge Program providing they have completed all the general education courses required as outlined in the Nursing Track 4: LPN to RN Curriculum or Track 5 Part-time Evening/Weekend LPN to RN. Applicants must have graduated from an LPN program after May 15, 2008 OR have at least one(1) year (2000 hours) of full-time LPN work experience in direct patient care during the past three years with written verification from employer at the time of application.

Transfer of Nursing Credit: Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. The student may be asked to provide course descriptions, course syllabi, achievement test scores and selected data from the course instructor in order to determine placement in the nursing program, subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression. Applicants must be in good standing at their previous college with a "C" average or better. All regular admission requirements must be met. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Program Requirements: Prior to enrollment in any NUR course, the student must provide the following documentation to the VATNP office (For more information, see the VATNP website at http://vhcc2.edu/vatnp/studentforms/forms1.htm):

1. Required Student Forms and Documentation Checklist.
2. Annual Student Statement of Health Form
3. Student Information, Physical, Immunization Forms. The VATNP physical examination form must be completed by a medical practitioner, MD, PA, or CNP.
   A. Immunizations including tetanus, Mumps-Measles-Rubella (MMR), Varicella, and Hepatitis B.
   B. Current testing for tuberculosis, either PPD or chest X-ray.
   C. Documentation of ability to perform physical demands required in direct patient care activities
4. Purchase and clearance of criminal background check and drug testing.
5. Certified Background Release Form.
6. Proof of CPR certification, American Heart Association, "Basic Life Support (BLS) for Healthcare Providers completed during the summer (May 15 – August 15) prior to admission to NUR courses and maintained throughout the program.
7. Proof of HIPAA Certification
8. Proof of Professional Liability Insurance

The cost of these requirements is the responsibility of the student.

Criminal Background Check/Drug Screening: Background checks for criminal history of barrier crimes (see BARRIER CRIMES, Code of Virginia 63.2-1726, July 1, 2007 http://www.dss.virginia.gov/files/division/obi/crf/guidelines_procedures/Barrier_ Crimes_63.2-1726.pdf) and drug testing are required for entrance into clinical agencies. Students with convictions or positive drug tests will be prohibited from clinical practice and will not be able to complete the program requirements. Cost of criminal background checks and drug testing will be the responsibility of the student.

Physical demands in this program include duties that frequently require squatting, bending, kneeling, reaching, and stair climbing; lifting and carrying up to 50 pounds; frequent pushing and pulling up to 200 pounds with assistance; occasional lifting up to 200 pounds with assistance and occasional carrying up to 51-74 pounds. Duties also require constant use of acute sense of sight, hearing, touch, and speech. Environmental conditions include procedures that involve handling blood and body fluids using universal precautions.

Course Requirements: The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, nursing homes, clinics, physicians' offices and comparable facilities. The nursing faculty will observe and evaluate the student's suitability for nursing and direct patient care.

The nursing program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

Students must complete all courses listed in the first year of the curriculum before being allowed to enter the second year. Exceptions due to unusual circumstances must be approved by the program Dean.

The student must complete all general education and related courses either before or concurrent with nursing program requirements. A student must have a "C" or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the nursing program. Most previous college credits will be accepted; however BIO 141 - 142, Anatomy and Physiology, must be completed within the ten (10) years prior to admission to the nursing program or concurrent with the nursing program. CPR certification must be maintained throughout the program.

Program Progression: Students must earn a minimum grade of "C" in all required courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. In addition, during the NUR 105 or NUR 115 course, a Comprehensive Drug Calculation Exam (CDCE) will be administered to verify skills. Students must achieve at least 90 percent of maximum score on the CDCE with no more than three attempts in order to achieve a passing grade in the course.
Any student who earns a final grade lower than a "C" in a required course (either general education or nursing courses) must repeat the course and earn a final grade of "C" or better before taking the next course in the sequence.

A student must obtain permission from the Dean of VATNP to continue in the Nursing Program under the following conditions:
1. Repeating a course with a grade below "C"
2. Withdrawal from a nursing course
3. Cumulative GPA below 2.0.

Virginia Community College System policy states that no course may be taken more than twice (original enrollment and one repeat). Any exception to this policy must be approved by the program dean and the vice president of instruction and student services.

Reapplication: A student not admitted to the nursing curriculum who is still interested must complete a new Nursing Program Application Packet (accepted August 15 – January 15).

Readmission Requirements: Students who are not successful in any first semester nursing course (NUR 105, NUR 108, or NUR 226) must reapply to the nursing program. Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course before progressing to the second semester.

A student who wishes to reenter the nursing curriculum at any other level (e.g., NUR 109, 114, 136, 137, 201, 205, 236, 208, 245, 237, or 254) must write a letter to the program dean requesting readmission at least one semester prior to the semester of enrollment. Re-enrollment must occur no later than three years or student will have to repeat all nursing courses. The student may be required to enroll in and satisfactorily complete specific courses before readmission. Additional date may be required. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional data, prior performance in the nursing program, and space availability. A student who has withdrawn because of academic failure may not reenroll in the nursing curriculum more than one time. Such a student may not be readmitted if the cumulative grade point average is less than 2.0, including all courses attempted other than nursing.

According to the VCCS Policy 5.7.4 "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the program dean and the vice president of instruction and student services.

The student may be required to enroll in and satisfactorily complete specific courses before readmission. Additional data may be required. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional data, prior performance in the nursing program and space availability.

Any exception to the above policy must have the approval of the dean of the nursing program.

Financial Requirements: In addition to the usual college tuition and fees, the nursing program requires uniforms with accessories, textbooks, Comprehensive Assessment Review Program (CARP), Comprehensive Live NCLEX Review, physical exam, immunizations, PPD or chest x-ray, criminal background checks and drug testing, CPR Certification, and HIPAA Certification.

Students are also responsible for transportation to and from the College and health agencies used for clinical experiences.

Clinical Contracts: The VATNP has contracts with clinical agencies for both student and patient safety. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. General guidelines follow:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Proper uniform must be worn.
3. Published policies of hospital must be adhered to. Each student must successfully complete an orientation program prior to participating in activities at any clinical facility.
4. Clinical facilities require that all students have documentation of ability to perform the physical demands required in direct patient care activities. **Physical demands** in this program include duties that frequently require squatting, bending, kneeling, reaching, and stair climbing; lifting and carrying up to 50 pounds; frequent pushing and pulling up to 200 pounds with assistance; occasional lifting up to 200 pounds with assistance and occasional carrying up to 51-74 pounds. Duties also require constant use of acute sense of sight, hearing, touch, and speech. Environmental conditions include procedures that involve handling blood and body fluids using universal precautions.
5. Immunizations must be current and include Hepatitis B, MMR, Tetanus, and Varicella. Proof of negative Tuberculin skin test (PPD) or chest X-ray. Previous positive reactors are exempt but must see the Program Dean.
6. Student releases hospital, its agents and employees from any liability for any injury or death to himself or damage to his property arising out of agreement or use of hospital's facilities.
7. Each student must have appropriate professional liability insurance while participating in clinical activities.

8. Students must have Proof of HIPAA Certification in order to participate in activities at clinical facilities.
9. Clinical facilities require a criminal background check and drug screen clearance as a condition for student placement.

Contracts for each agency are available in the VATNP office and may be reviewed by students upon request.

Nursing Track 1: Two-year curriculum plan
The VATNP offers an opportunity for recent high school graduates and other eligible adults to complete the nursing degree program after two-years of full-time attendance (four semesters and one summer session). This is a rigorous and academically challenging program.

Nursing Track 2: Health Sciences Certificate plus two-year curriculum plan
Students in this track will complete all general education courses required by the nursing curriculum and receive a health care science certificate before beginning nursing classes. This option takes three years or longer depending upon the amount of time taken to complete the general education classes. Many students who have families, work or other responsibilities often choose this track.

Nursing Track 3: Part-time Evening/Weekend
The VATNP part-time evening/weekend program is specifically designed for working adults or other adults who are interested in becoming RN's but have other responsibilities that interfere with their ability to attend the rigorous scheduling of the previously described program of study. Classes will be provided in a combination of evening, weekend and distance learning. The program is designed at a slower pace to be completed in four years. General education courses listed in year one must be completed before the student will be able to begin year two.

Admission Requirements: Admission requirements for the part-time evening/weekend nursing program are the same as the regular program with the following exception; students must complete 23 credits of support (general education) courses: BIO 141, BIO 142, ENG 111, ENG 112, MTH 126, ITE 100 or 115, humanities/fine arts elective and SDV 108. Additional required general courses can be completed after acceptance in the program.

Nursing Track 4: LPN to RN Bridge Curriculum
Students who are LPNs are required to complete at least 17 hours of the general education courses before beginning LPN to RN nursing classes. The length of this tract depends on the amount of time needed to complete the general education classes. The nursing classes can be completed in one year. Some LPNs may opt for the part-time evening weekend program, which requires two years of nursing classes after completion of general education requirements.

The Virginia Appalachian Tricollege Nursing Program's advance placement or "Bridge Program" is designed to grant advanced placement to LPNs who have been admitted to the Virginia Appalachian Tricollege Nursing Program (VATNP) Associate Degree program and meet prerequisite requirements.

If there is sufficient enrollment in the VATNP, Virginia Appalachian Tricollege Nursing Program, students who meet the eligibility requirements for the advanced placement will take "Bridge Courses" in the summer term and then be eligible to take the sophomore-level courses and graduate within one (1) academic year with an AAS Degree in Nursing. This program is designed to recognize the common abilities of nurses and to bridge thte difference between the LPN and RN knowledge base and to allow these students to finish the AAS program within a two and one-half sememster period.

Admission Requirements: Admission requirements for the LPN to RN nursing program are the same as the regular program with the follwoing exceptions:
1. Be a licensed LPN.
2. Be an accepted student in the regular VATNP program.
3. Completion of 17 credits of support (general education) courses required for graduation from the Nursing program: BIO 141, BIO 142, ENG 111, ENG 112, MTH 126, and SDV 108. Additional required general education courses can be completed after acceptance into the program.

Nursing Track 5: Part-time Evening/Weekend LPN to RN Program
A part-time evening/weekend LPN to RN option is available for LPNs who work with or wish to attend part-time. General education courses can be completed as night classes or by distance education options such as web based learning. Nursing classes and clinicals are taught on evenings and weekends on an extended plan. General education courses listed in Year one (1) must be completed before the student will be able to begin Year two (2).

Admission Requirements: Admission requirements for the LPN to RN nursing program are the same as the regular program with the following exceptions:
1. Be a licensed LPN.
2. Be an accepted student in the regular VATNP program.
3. Completion of 29 credits of support (general education) courses
required for graduation from the Nursing program: BIO 141, BIO142, ENG 111, ENG 112, MTH 126, and SDV 108. Additional required general education courses can be completed after acceptance into the program.

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Nursing
Nursing Track 1: Two-year curriculum plan

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Year 1 - Summer Session			
SDV	108	College Survival Skills	1	0	1
ENG	111	College Composition I	3	0	3
MTH	126	Mathematics for Allied Health	2	0	2
ITE	115	Intro. to Computer Applications & Concepts OR	3	0	3
ITE	100	Intro. to Information Systems	_	_	_
		TOTAL	9	0	9
		Fall Semester			
BIO	141	Human Anatomy & Physiology I	3	3	4
NUR	105	Nursing Skills	0	6	2
NUR	108	Nursing Princples and Concepts I	4	3	5
NUR	195	Topics in Geriatric Nursing	2	0	2
NUR	136	Principles of Pharmacology I	1	0	1
		TOTAL	10	12	14
		Sprimg Semester			
BIO	142	Human Anatomy & Physiology II	3	3	4
NUR	109	Nursing Principles and Concepts II	3	9	6
NUR	226	Nursing Health Assessment	1	3	2
NUR	137	Principles of Pharmacology II	1	0	1
		TOTAL	8	15	13
		Year 2 - Summer Session			
ENG	112	College Composition II	3	0	3
PSY	231	Life Span Human Development I	3	0	3
		Humanities Elective*	3	0	3
		TOTAL	9	0	9
		Fall Semester			
PSY	232	Life Span Human Development II	3	0	3
NUR	201	Psychiatric Nursing	2	3	3
NUR	205	Introduction to Second Level Nursing	2	9	5
NUR	236	Principles of Pharmacology III	1	0	1
		TOTAL	8	12	12
		Spring Semester			
NUR	245	Maternal/Newborn Nursing	2	3	3
NUR	208	Acute Medical/Surgical Nursing	3	9	6
NUR	237	Principles of Pharmacology IV	1	0	1
NUR	254	Dimensions of Professional Nursing	2	0	2
		TOTAL	8	12	12

Total Minimum Credits for the Nursing Major..69

*   Humanities electives include: ART 201, 202; foreign languages; literature; MUS 121, 122; PHI 101; REL 200, 210, 230; CST 130, 151, 152

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Nursing
Nursing Track 2: Health Sciences Certificate Plus 2 Year Curriculum Plan

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Certificate - Fall Semester			
SDV	108	College Survival Skills	1	0	1
ENG	111	College Composition I	3	0	3
MTH	126	Mathematics for Allied Health	2	0	2
BIO	141	Human Anatomy and Physiology I	3	3	4
PSY	231	Life Span Human Development I	3	0	3
ITE	115	Intro. to Computer Applications & Concepts OR	3	0	3
ITE	100	Intro. to Information Systems			
		TOTAL	15	3	16
		Spring Semester			
ENG	112	College Composition II	3	0	3
BIO	142	Human Anatomy and Physiology II	3	3	4
HTL	143	Medical Terminology I	3	0	3
PSY	232	Life Span Human Development II	3	0	3
		Humanities Elective*	3	0	3
		TOTAL	15	3	16
		Year 1 - Fall Semester			
NUR	105	Nursing Skills	0	6	2
NUR	108	Nursing Principles and Concepts I	4	3	5
NUR	195	Topics in Geriatric Nursing	2	0	2
NUR	136	Principles of Pharmacology I	1	0	1
		TOTAL	7	9	10
		Spring Semester			
NUR	109	Nursing Principles and Concepts II	3	9	6
NUR	226	Nursing Health Assessment	1	3	2
NUR	137	Principles of Pharmacology II	1	0	1
		TOTAL	5	12	9
		Year 2 - Fall Semester			
NUR	201	Psychiatric Nursing	2	3	3
NUR	205	Introduction to Second Level Nursing	2	9	5
NUR	236	Principles of Pharmacology	1	0	1
		TOTAL	5	12	9
		Spring Semester			
NUR	245	Maternal/Newborn Nursing	2	3	3
NUR	208	Acute Medical/Surgical Nursing	3	9	6
NUR	237	Principles of Pharmacology IV	1	0	1
NUR	254	Dimensions of Professional Nursing	2	0	2
		TOTAL	8	12	12

Total Minimum Credits for the Nursing Major.. 72

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*   Humanities electives include: ART 201, 202; foreign languages; literature; MUS 121, 122; PHI 101; REL 200, 210, 230; CST 130, 151, 152

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Nursing - Nursing Track 3: Part-time Evening/Weekend

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Year 1 - Summer Session			
ENG	111	College Composition I	3	0	3
SDV	108	College Survival Skills	1	0	1
ITE	100	Intro. to Information Systems OR	3	0	3
ITE	115	Intro. to Computer Applications & Concepts			
		TOTAL	7	0	7
		Fall Semester			
BIO	141	Human Anatomy and Physiology I	3	3	4
ENG	112	College Composition II	3	0	3
		TOTAL	6	3	7
		Spring Semester			
BIO	142	Human Anatomy and Physiology II	3	3	4
MTH	126	Mathematics for Allied Health	2	0	2
		TOTAL	5	3	6
		Year 2 - Summer Session			
NUR	136	Principles of Pharmacology I	1	0	1
PSY	231	Life Span Human Develoment I	3	0	3
		TOTAL	4	0	4
		Fall Semester			
NUR	105	Nursing Skills	0	6	2
NUR	108	Nursing Principles & Concepts I	3	3	4
NUR	195	Topics in Geriatric Nursing	2	0	2
		TOTAL	5	9	8
		Spring Semester			
NUR	109	Nursing Principles & Concepts II	3	9	6
NUR	137	Principles of Pharmacology II	1	0	1
		TOTAL	4	9	7
		Year 3 - Summer Session			
PSY	232	Life Span Human Development II	3	0	3
NUR	226	Nursing Health Assessment	1	3	2
		TOTAL	4	3	5
		Fall Semester			
NUR	205	Introduction to Second Level Nursing	2	9	5
NUR	236	Principles of Pharmacology III	1	0	1
		TOTAL	3	9	6
		Spring Semester			
NUR	201	Psychiatric Nursing	2	3	3
		TOTAL	2	3	3
		Year 4 - Summer Session			
Elective		Humanities Elective*	3	0	3
		TOTAL	3	0	3
		Fall Semester			
NUR	245	Maternal/Newborn Nursing	2	3	3
NUR	254	Dimensions of Professional Nursing	2	0	2
		TOTAL	4	3	5
		Spring Semester			
NUR	208	Acute Medical/Surgical Nursing	3	9	6
NUR	237	Principles of Pharmacology IV	1	0	1
		TOTAL	4	9	7

Total Minimum Credits for the Nursing Major...69

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* Humanities electives include: ART 201, 202; foreign languages; literature; MUS 121, 122; PHI 101; REL 200, 210, 230; CST 130, 151, 152

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Nursing
Nursing Track 4: LPN to RN Bridge

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
***Pre-Clinical Studies Must Be Completed Before Entering Program**					
SDV	108	College Survival Skills	1	0	1
BIO	141	Human Anatomy & Physiology I	3	3	4
BIO	142	Human Anatomy & Physiology II	3	3	4
ENG	111	College Composition I	3	0	3
ITE	115	Intro. to Computer Applications & Concepts OR	3	0	3
ITE	100	Intro. to Information Systems			
MTH	126	Mathematics for Allied Health	2	0	2
		TOTAL	15	6	17
Year 1 - Summer Semester					
NUR	115	LPN to RN Transition*	5	3	6
NUR	136	Principles of Pharmacology I	1	0	1
NUR	137	Principles of Pharmacology II	1	0	1
NUR	226	Health Assessment	1	3	2
		TOTAL	8	6	10
Fall Semester					
ENG	112	College Composition II	3	0	3
NUR	201	Psychiatric Nursing	2	3	3
NUR	205	Introduction to Second Level Nursing	2	9	5
NUR	236	Principles of Pharmacology III	1	0	1
PSY	231	Life Span Human Development I	3	0	3
		TOTAL	11	12	15
Spring Semester					
NUR	245	Maternal/Newborn Nursing	2	3	3
NUR	208	Acute Medical/Surgical Nursing	3	9	6
NUR	237	Principles of Pharmacology IV	1	0	1
NUR	254	Dimensions of Professional Nursing	2	0	2
PSY	232	Life Span Human Development II	3	0	3
Elective		Humanities Electives**	3	0	3
		TOTAL	14	12	18

Total Minimum Credits for the LPN to RN Bridge 60

*   Upon completion of NUR 115, credit will be awarded for NUR 105, 108,109, and 195 (15 credits). These credits will appear
    on the student's official transcript.

**   Humanities electives include: ART 201, 202; foreign languages; literature; MUS 121, 122; PHI 101; REL 200, 210, 230;
    CST 130, 151, 152

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Nursing
Nursing Track 5: Part-time/Weekend LPN to RN Bridge

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Year 1 - Summer Session			
ENG	111	College Composition I	3	0	3
ITE	115	Intro. to Computer Applications & Concepts OR	3	0	3
ITE	100	Intro. to Information Systems			
SDV	108	College Survival Skills	1	0	1
PSY	231	Life Span Human Development I	3	0	3
		TOTAL	10	0	10
		Fall Semester			
BIO	141	Human Anatomy and Physiology I	3	3	4
ENG	112	College Composition II	3	0	3
		TOTAL	6	3	7
		Spring Semester			
BIO	142	Human Anatomy and Physiology II	3	3	4
MTH	126	Mathematics for Allied Health	2	0	2
PSY	232	Life Span Human Development II	3	0	3
		TOTAL	8	3	9
		Year 2 - Summer Session			
NUR	115	LPN to RN Transition*	5	3	6
NUR	226	Nursing Health Assessment	1	3	2
NUR	136	Principles of Pharmacology I	1	0	1
NUR	137	Principles of Pharmacology II	1	0	1
		TOTAL	8	6	10
		Fall Semester			
NUR	205	Introduction to Second Level Nursing	2	9	5
NUR	236	Principles of Pharmacology III	1	0	1
		TOTAL	3	9	6
		Spring Semester			
NUR	201	Psychiatric Nursing	2	3	3
		TOTAL	2	3	3
		Year 3 - Summer Session			
Elective		Humanities Electives**	3	0	3
		TOTAL	3	0	3
		Fall Semester			
NUR	245	Maternal/Newborn Nursing	2	3	3
NUR	254	Dimensions of Professional Nursing	2	0	2
		TOTAL	4	3	5
		Spring Semester			
NUR	208	Acute Medical/Surgical Nursing	3	9	6
NUR	237	Principles of Pharmacology IV	1	0	1
		TOTAL	4	9	7

Total Minimum Credits for the Part-time/ Weekend LPN to RN Bridge 60

*   Upon completion of NUR 115, credit will be awarded for NUR 105, 108,109, and 195 (15 credits). These credits will appear on the student's official transcript.

**   Humanities electives include: ART 201, 202; foreign languages; literature; MUS 121, 122; PHI 101; REL 200, 210, 230; CST 130, 151, 152

HEALTH TECHNOLOGY (AAS DEGREE)
Major: Occupational Therapy Assistant
SWCC and Virginia Highlands Community College (Additional Accredited Site)

Length: Twenty-two month, five semester program

Purpose: To prepare selected students to qualify as contributing members of the health care team who will care for patients under the supervision of a Registered Occupational Therapist. The goals of the occupational therapy team are to develop, restore, or maintain adaptive skills in individuals whose abilities to cope with daily living are threatened or impaired by disease, injury, developmental disability, or social disadvantage.

Accreditation: The Occupational Therapy Assistant Program at Southwest Virginia Community College and Virginia Highlands Community College campus is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P. O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-2582. Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

Occupational Objectives: Employment opportunities include positions in hospitals, rehabilitation centers, clinics, day care centers, long-term care facilities, schools, sheltered workshops, homebound programs and community agencies.
Program Format: The OTA program educational experiences consists of on-site lecture, distance lecture to remote campus sites via the compressed video network, hands-on laboratory, computer web-based instruction through BlackBoard, and a variety of clinical experiences. Students are required to complete a computer course and need to have skills necessary to navigate the internet for researching projects and assignments and utilizing the BlackBoard components for classes (i.e., online testing, online resources, grades, and discussions).

Admission Requirements: In addition to the general requirements for admission to the College, consideration for a position in this program requires a high school diploma or GED; the completion of the SWCC entry-level assessment examination (ASSET or COMPASS); two units of mathematics (Algebra I plus Algebra II and/or Geometry. Note: MTH 126 may substitute for the second math unit), one unit of Biology with a laboratory, and one unit of Chemistry with a laboratory. High school seniors who have not completed the full sequence of the prerequisite courses must be enrolled in the second semester of these courses and have earned a grade of "C" or above for the first semester to be considered for program admission. Grades in these courses must reflect a minimum of "C." Eight (8) hours of observation in an occupational therapy setting should be documented by the OT personnel denoting and date (s') and time (s).

All high school courses and/or college work must reflect an overall grade average of "C" (2.0 GPA) or higher. Satisfactory performance on the ASSET or COMPASS testing program is required. All pre-requisite courses, including any prescribed developmental studies courses, must be successfully completed before the January 15 application deadline. Students

planning to transfer to senior institutions should inform their advisors and should consider coursework that can be used for transfer.

Because entry into this program is competitive, students must complete the application process with the Admissions Office by January 15. Classes begin the fall semester of each academic year. Out-of-service region applicants will be considered for any openings available after April 1 and out-of-state applicants will be considered for any openings available after May 1. When enrollments must be limited for any curriculum, priority shall be given to all qualified applicants who are residents of the political subdivisions (Buchanan, Dickenson (partial), Russell, or Tazewell counties), supporting the College and to Virginia residents not having access to a given program at their local community college, provide such students apply for admission to the program prior to registration or by a deadline established by the College. In addition, residents of localities with which the College has a clinical site or other agreements may receive equal consideration for admission.

Students accepted into the program are required to submit a certificate reflecting a successful physical examination, signed by a licensed physician. The physical examination must be completed after receiving notification of acceptance to the program and prior to beginning classes. Immunizations must be current and include Hepatitis B and MMR. Proof of Tuberculin skin test (PPD) and CPR certification must be shown on admission to the program and kept current throughout the program.

Program Requirements:
Academic Requirements: The student is required to complete a sequence of courses and learning experiences. Students must achieve a grade of "C" or better in all program courses. Any student receiving a grade of "D" in any of the program courses will be placed on Program Probation. That course shall be remediated once, with a written contract containing the requirements of the remediation. Please note: Students may be required to wait at least one academic year before they will have an opportunity to remediate the course. Students on program probation status will only be allowed to remediate the course if there is an open position in the class. Dismissal from the program shall result if: 1) the student does not meet the requirements of the probationary contract; 2) the student receives a final grade of less than "C" in any program courses either during or after the period of the Program Probation; or 3) earning more than one "D" in a semester on program courses or a final grade of "F" in any coursework after admittance to the program will result in dismissal from the program. Remediated courses must be completed with a final grade of "C" or better.

Clinical and Behavioral Requirements: Selected and supervised learning experiences are required by this program and will be accomplished at selected health care facilities. Because there are limited clinical sites within the area, students may be required to travel to other areas to complete clinical training. Students are responsible for providing their own transportation, uniforms, and living expenses during fieldwork experiences. In the fifth semester, there will be 40 hours per week of clinical time (Level II fieldwork) in two eight week segments, so students must plan their schedules accordingly. Program faculty will observe and evaluate the student's suitability for the profession. If in the judgment of the program faculty the student does not exhibit those behaviors required of the occupational therapy assistant, the student may be asked to withdraw from the program.

NOTE: All OTA students must complete Level II Fieldwork within 18 months following completion of academic preparation.

NOTE: A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

NOTE: Criminal Background Checks/Drug Testing:
Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.

HEALTH TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Occupational Therapy Assistant

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Fall Session			
BIO	141	Human Anatomy & Physiology I	3	3	4
ENG	111	College Composition I*	3	0	3
HLT	141	Intro. to Medical Terminology**	2	0	2
OCT	100	Intro. to Occupational Therapy	3	0	3
ITE	102	Computers and Info. Systems***	2	0	2
PSY	231	Human Life Span Development I	3	0	3
SDV	104	Study Skills OR			
SDV	108	College Survival Skills	1	0	1
		TOTAL	17	3	18
		Spring Semester			
BIO	142	Human Anatomy & Physiology II	3	3	4
OCT	201	OT with Psychosocial Dysfunction	3	0	3
OCT	195	Topics in OT for Physical Dysfunction	2	0	2
OCT	205	Therapeutic Media	1	3	2
NAS	195	Topics in Upper Extremity Anatomy & Kinesiology	1	0	1
Elective		Humanities/Fine Arts****	3	0	3
PSY	232	Human Life Span Development II	3	0	3
		TOTAL	16	6	18
		Summer Session			
OCT	190	Coord. Practice in OT I (Level I)	0	5	1
OCT	207	Therapeutic Skills	2	3	3
OCT	220	Occupational Therapy for the Adult	2	0	2
		TOTAL	4	8	6
		Third Semester			
OCT	210	Assistive Tech. in OT	2	0	2
OCT	202	OT with Physical Disabilities	3	3	4
OCT	203	OT with Developmental Disabilities	3	3	**4**
OCT	208	OT Service Mgmt. & Delivery	3	0	3
OCT	190	Coord. Pract. in OT II-Level I Fieldwork	0	5	1
		TOTAL	11	11	14
		Fourth Semester			
OCT	290	Coord. Pract. In OT III-Level II Fieldwork	0	40	6
OCT	290	Coord. Pract. in OT IV-Level II Fieldwork	0	40	6
		TOTAL	0	80	12

Total Credits for the Occupational Therapy Assistant Program 68

* Students who wish to pursue a Baccalaureate degree are advised to take both ENG 111-112, ENG 101 may be substituted for ENG 111, but is not a transferable course.
** HLT 143 or HLT 144 may substitute for HLT 141.
*** AST 232 or ITE 100 may substitute for ITE 102.
**** A list of suggested classes may be obtained from advisor or program director.

HEALTH TECHNOLOGY (AAS DEGREE)
SWCC-VHCC-WCC COOPERATIVE PROGRAM IN RADIOGRAPHY
Major: Radiography

Degree: Associate of Applied Science

Length: Two-year Program - six semesters with practical experience in a radiology department to complete requirements for ARRT certification.

Program Mission: To prepare and graduate selected students to qualify as contributing members of the allied health team, who will care for patients under the supervision of qualified physicians. The Program combines adequate didactic instruction with clinical experience to create a sound foundation for a professional career. Contact us at: www.sw.edu.

Program Goals:
1. The Cooperative Radiography Program will monitor program efeectiveness.
2. Students will demonstrate clinical competence and entry-level radiographer skills.
3. Student will demonestrate problem solving and critical thinking skills.
4. Student will demonstrate effective communication skills and personal accountability.
5. Students will develop professionally and demonstrate an understanding of the benefits of life-long learning.

Accreditation: This program is fully accredited by the Joint Review Committee for Radiologic Technology Education (JRCERT) (20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182).

Occupational Objectives: Employment opportunities for well-trained registered radiographer are available in hospitals, clinics, education, industry, government agencies, and private offices.

Admission Requirements: In addition to the general admission requirements to the College, applicants must be high school graduates or the equivalent and must reflect "C" average. A cumulative grade point average of 2.0 must be achieved on all college work. To meet the Radiography Program admission requirements the applicant **must** have completed:
- One unit of Biology with lab, one unit of Chemistry with lab, and two units of mathematics (Algebra I, and Algebra II and/or Geometry) **with a "C" or better**;

- Biology 20 and Chemistry 05 at SwVCC will be considered equivalent to high school Biology and Chemistry. Math 03 and 04 will be considered equivalent to high school Algebra I and Algebra II;

- Completion of a college placement test (ASSET or COMPASS), which includes sections of reading, writing and mathematics. All prescribed developmental work must be completed before admission into the program;

- Submitted radiography application (including all high school and college transcripts or copy of GED;

- Observation in a Radiology Department for a minimum of twelve (12) hours; this observation is to be documented by radiology personnel denoting date(s) and time(s);

- Complete entrance test and attend a general information session. An interview with Radiography Program faculty may be required.

The Radiology Program admission requirements listed on the previous page must be completed and on file at the college by January 15.

Students should make their advisor aware of any plans to transfer to a senior institution. Students who are planning to transfer to a senior institution may be advised to take upper-level math and science courses as prerequisites to the Radiography Program.

Students are required to submit a health certificate signed by a physician prior to final admission to the program. The certificate is furnished by the college(s) and must be on file with the program before the student may begin Radiography classes. Since the physical examination is somewhat expensive, applicants should have the physical examination completed after receiving notification of acceptance to the program.

When enrollments must be limited for any curriculum, priority shall be given to all qualified applicants who are residents of the political subdivisions (Buchanan, Dickenson [partial], Russell, or Tazewell counties), supporting the College and to Virginia residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the College. In addition, residents of localities with which the College has clinical-site or other agreements may receive equal consideration for admission. To be considered as a Virginia resident, an applicant must be domiciled within Virginia for 12 months prior to January 15. Applicants moving out-of-state between January 15 and the first day of classes will lose their preferred status and any offer of admission to the program will be withdrawn. Out-of-region applicants who are Virginia residents will be considered for program openings available after April 1 and out-of-state applicants for openings available May 1.

Technical Standards:
Physical Demands:
A.   Duties frequently require squatting, bending, kneeling, reaching, and stair climbing Also includes occasional crawling and climbing.

B.   Duties include lifting/positioning of patients and equipment required to provide care:
- frequent lifting and carrying up to 50 pounds
- frequent pushing and pulling up to 200 pounds with assistance
- occasional lifting up to 200 pounds with assistance
- occasional carrying up to 51-74 pounds

C.   Duties require constant use of acute sense of sight, hearing, and touch.
- ability to read orders, test results, instructions, labels differentiate color, consistency
- must be able to hear heart sounds, etc.
- must be able to palpate and distinguish heat/cold

Environmental Conditions:
Environmental conditions include procedures that involve handling blood and body fluids using universal precautions.

Program Requirements: Upon admission and during the course of the program, the radiologic faculty will carefully observe and evaluate the student's suitability for the profession. If, in the opinion of the radiologic faculty, a student does not exhibit professional behavior, the student may be asked to withdraw from the program.

Once enrolled, students who receive a final grade lower than "C" in any of the courses in radiography or related areas must obtain permission from the program director to continue the major in radiography.

Selected learning experiences will be provided at the cooperating hospitals within the geographic areas served by the college. The student is expected to provide transportation to such facilities. Travel, time and expense, must be anticipated because of program design and location. Travel distance will vary from 1-60 miles one way from your home campus depending on the hospital clinical assignment.

The purchase of items such as student's uniforms, accessories, and liability insurance is the financial responsbility of the individual student.

Criminal Background Checks/Drug Testing: Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.

Radiography is a cooperative program with Southwest Virginia Community College, Virginia Highlands Community College and Wytheville Community College.

Radiography Program Outcomes

Annual Program Statistics - most recent five years

Year	Program Completion Rate	ARRT Certification Examination Pass %	ARRT - Pass % Comparison to SWCC to National Stats
2005	19 of 25	90	90 / 89.4
2006	28 of 36	91	91 / 90.1
2007	27 of 36	94	94 / 90.8
2008	26 of 36	93	93 / 91
2009	26 of 36	100	100 / 91.4

*2010 data incomplete at this report date and will be posted summer 2011.

RADIOGRAPHY TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Radiography

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Summer Session			
RAD	105	Intro. to Radiology Protection and Patient Care	3	0	3
SDV	108	College Survival Skills	1	0	1
RAD	195	Topics in: Ethics, Teamwork &			
		Professional Development	2	0	2
MTH	126	Mathematics for Allied Health	2	0	2
HLT	143	Medical Terminology	3	0	3
		TOTAL	11	0	11
		Fall Semester			
ENG	111*	College Composition I	3	0	3
BIO	141	Human Anatomy & Physiology I	3	3	4
RAD	110	Imaging Equip. & Protection	3	0	3
RAD	121	Radiographic Procedures I	3	3	4
PSY	230	Developmental Psychology	3	0	3
		TOTAL	15	6	17
		Spring Semester			
Elective**		Humanities/Fine Arts	3	0	3
BIO	142	Human Anatomy & Physiology II	3	3	4
RAD	112	Radiologic Science II	3	3	4
RAD	221	Radiologic Procedures II	3	3	4
		TOTAL	12	9	15
		Summer Session			
RAD	190	Coordinated Internship (Term II)	0	40	3
RAD	205	Radiation Protection & Radiobiology (Term I)	3	0	3
		TOTAL	3	40	6
		Fall Semester			
RAD	290	Coordinated Internship	0	32	6
RAD	255	Radiographic Equipment	3	0	3
		TOTAL	3	32	9
		Spring Semester			
RAD	290	Coordinated Internship	0	32	6
RAD	240	Radiographic Pathology	3	0	3
		TOTAL	3	32	9
		Summer Session			
RAD	215	Correlated Radiographic Theory	2	0	2
RAD	290	Coordinated Internship (Term I)	0	32	2
		TOTAL	2	32	4

Total Minimum Credits for Radiography Program...71

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*   Students who wish to pursue a Baccalaureate degree are advised to take both ENG 111-112. ENG 101 may be substituted for ENG 111.

**   Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Language.

*HUMAN SERVICES TECHNOLOGY (AAS DEGREE)

Major: Early Childhood Development

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: The Associate of Applied Science Degree is designed to prepare students as paraprofessionals in the field of early childhood development. Successful completion of the program will qualify students for employment in a variety of situations where care and maintenance of young children is the primary objective. The program will expose students to the characteristics, basic skills, and knowledge necessary for early childhood development providers.

Occupational Objectives: Preparation for positions as early childhood development workers in the following settings:

Child Care Centers   Residential Facilities
Day Care Centers   Family Day Care Homes
Nursery (Pre-kindergarten Schools)   Head Start Programs
Elementary Schools (Kindergarten, Special Education, Tutoring)
Recreational Programs for Preschool Children

Admission Requirements: In addition to requirements for general admission to the College, a personal interview with the program head is recommended.

Program Requirements: The program combines a blend of general education courses with specialized courses intended to provide preparation in the areas most directly applicable to the child-care function. Additionally, the Coordinated Internship courses provide an opportunity for individualized practicum in the type of work situation in which the student is particularly interested.

Note: Not designed as a direct transfer program.

HUMAN SERVICES TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Early Childhood Development

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
SDV	108	College Survival Skills	1	0	1
CHD	120	Intro. to Early Childhood Educ.	3	0	3
CHD	145	Teaching Art, Music, and Movement to Children	2	2	3
CHD	118	Lang. Arts for Young Children	2	2	3
PSY	231	Life Span Human Dev. I	3	0	3
ENG	111	College Composition I*	3	0	3
		TOTAL	14	4	16
		Second Semester			
CHD	215	Models of Early Chld. Educ. Prog.	3	0	3
CHD	165	Obser. & Part. in Early Chld./Primary Settings	1	6	3
CHD	117	Intro. to Reading Methods	2	2	3
CHD	146	Math, Science, & Social Studies for Children	2	2	3
ENG	112	College Composition II*	3	0	3
HLT	135	Child Health & Nutrition	3	0	3
		TOTAL	14	10	18
		Third Semester			
MTH	151	Mathematics for the Liberal Arts OR	3	0	3
MTH	120	Introduction to Mathematics			
CHD	205	Guiding the Behavior of Children	3	0	3
CHD	216	Early Childhood Programs, School and Social Change	3	0	3
CST	100	Principles of Public Speaking	3	0	3
Elective**		Social/Behav. Science or Free Elective	3	0	3
HLT	100	First Aid & Cardiopulmonary Resuscitation	3	0	3
		TOTAL	18	0	18
		Fourth Semester			
CHD	265	Adv. Observ. & Part. in Early Chd./ Primary Settings	1	6	3
CHD	166	Infant & Toddler Programs	3	0	3
CHD	210	Intro. to Exceptional Children	3	0	3
CHD	270	Administration of Childcare Programs	3	0	3
CHD	298	Seminar and Proj. in Portfolio Development	1	0	1
Elective***		Humanities/Fine Arts	3	0	3
		TOTAL	14	6	16

Total Minimum Credits for Early Childhood Development 68

*   Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
**   Recommend ITE 115 as free elective.
***   Humanities/Fine Arts Electives: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages.

HUMAN SERVICES TECHNOLOGY (AAS DEGREE)
Major: Human Services
Specialization: Mental Health
In addition to the above specialization, specializations in
Early Childhood Education and Gerontology are also available.

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Purpose: The Associate of Applied Science Degree is designed to prepare students as paraprofessionals in the field of human services. Successful completion of the program will qualify students for entry-level jobs in social services, mental health, mental retardation, child care, nursing homes, substance abuse and correctional facilities. The program will expose students to the characteristics, basic skills and knowledge necessary for human services providers.

Occupational Objective: Preparation for positions as human services workers in the following settings:

Alcohol Treatment	Program Nursing Homes
Sheltered Workshop Programs	Social Services Departments
Senior Citizens Centers	Correctional Institutions
Group Homes and Clubhouses	Juvenile Treatment Centers

Admission Requirements: In addition to the admission requirements, established for the College (as listed under the general admission), entry into the Associate of Applied Science degree program with a major in mental health will require departmental permission.

HUMAN SERVICES TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Human Services
Specialization: Mental Health

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111*	College Composition I	3	0	3
HMS	100	Introduction to Human Services	3	0	3
HMS	121	Basic Counseling Skills I	3	0	3
PSY	231	Life Span Human Development I	3	0	3
PSY	200	Principles of Psychology	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	0	16
		Second Semester			
ENG	112*	College Composition II	3	0	3
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
PED		Elective or HLT 100	3	0	3
MTH		Mathematics (MTH 151 or 163)	3	0	3
HMS	122	Basic Counseling Skills II	3	0	3
PSY		Elective	3	0	3
		TOTAL	18	0	18
		Third Semester			
MEN	101	Mental Health Skills I	3	0	3
PSY	215	Abnormal Psychology	3	0	3
HMS		Elective	3	0	3
PSY	232	Life Span Human Development II	3	0	3
SOC	200	Principles to Sociology	3	0	3
Elective***		Humanities/Fine Arts	3	0	3
		TOTAL	18	0	18
		Fourth Semester			
MEN	102	Mental Health Skills II	3	0	3
SOC	268	Social Problems	3	0	3
MEN	225	Counseling Therapy	3	0	3
ECO	120	Survey of Economics OR			
ECO	201	Prin. of Eco. I - Macroecon.	3	0	3
HMS	190**	Coord. Internship/Mental Health	0	10	3
		TOTAL	12	10	15

Total Minimum Credits for the Mental Health Major..67

*   Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
**   Requires approval of the Human Services Advisor
***   Humanities/Fine Arts Electives: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages. Before making a selection, the student is advised to determine the transfer institution's requirements.

HUMAN SERVICES TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Human Services
Specialization: Early Childhood Education

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111*	College Composition I	3	0	3
HMS	100	Introduction to Human Services	3	0	3
HMS	121	Basic Counseling Skills I	3	0	3
PSY	231	Life Span Human Development I	3	0	3
PSY	200	Principles of Psychology	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	0	16
		Second Semester			
ENG	112*	College Composition II	3	0	3
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
PED		Elective or HLT 100	3	0	3
MTH		Mathematics (MTH 151 or 163)	3	0	3
HMS	122	Basic Counseling Skills II	3	0	3
PSY		Elective	3	0	3
		TOTAL	18	0	18
		Third Semester			
CHD	145	Teaching Art, Music & Movement to Children	2	2	3
CHD	118	Lang. Arts for Young Children	2	2	3
CHD	120	Intro. to Early Childhood Educ.	3	0	3
MEN	101	Mental Health Skills Training I	3	0	3
Elective**		Humanities/Fine Arts	3	0	3
		TOTAL	13	4	15
		Fourth Semester			
CHD	146	Math, Science and Social Studies for Children	2	2	3
CHD	215	Models of Early Childhood Educ. Program	3	0	3
MEN	102	Mental Health Skills Training II	3	0	3
ECO	120	Survey of Economics OR			
ECO	201	Prin. of Eco. I - Macroecon.	3	0	3
		Elective	3	0	3
HMS	190	Coordinated Internship in Early Childhood Education	0	10	3
		TOTAL	14	12	18

Total Minimum Credits for the Early Childhood Education Specialization...........67

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*   Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
**   Humanities/Fine Arts Electives: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages. Before making a selection, the student is advised to determine the transfer institution's requirements.
Note: Not designed as a direct transfer program.

HUMAN SERVICES TECHNOLOGY DEGREE PROGRAM
Associate of Applied Science Degree
Major: Human Services
Specialization: Gerontology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111**	College Composition I	3	0	3
HMS	100	Intro. to Human Services	3	0	3
HMS	121	Basic Counseling Skills I	3	0	3
PSY	200	Principles of Psychology	3	0	3
PSY	231	Life Span Human Devel. I	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	0	16
		Second Semester			
ENG	112*	College Composition II	3	0	3
HMS	122	Basic Counseling Skills II	3	0	3
PSY	232	Life Span Human Devel. II	3	0	3
MTH		Math (MTH 151 or 163)	3	0	3
HMS	231	Gerontology I	3	0	3
		TOTAL	15	0	15
		Third Semester			
MEN	101	Mental Health Skills I	3	0	3
SOC	200	Principles to Sociology	3	0	3
HMS	232	Gerontology II	3	0	3
Elective**		Humanities/Fine Arts	3	0	3
ITE	115	Basic Computer Literacy	3	0	3
SOC	268	Social Problems	3	0	3
		TOTAL	18	0	18
		Fourth Semester			
MEN	102	Mental Health Skills II	3	0	3
DIT	125	Cur. Concepts In Diet & Nutrit.	3	0	3
HLT	100	First Aid & CPR	3	0	3
PED	116	Lifetime Fitness & Wellness	2	2	2
MEN	245	Problems in Aging	3	0	3
HMS	190	Coord. Clinical Practice	0	10	3
		TOTAL	14	12	17

Total Minimum Credits for the Gerontology Specialization 66

*   Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102.
**   Humanities/Fine Arts Electives: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages. Before making a selection, the student is advised to determine the transfer institution's requirements.

PUBLIC SERVICE TECHNOLOGY (AAS DEGREE)
Major: Administration of Justice
In addition to the above major, specializations in
Corrections and Wildlife Management and Enforcement are available.

Degree: Associate of Applied Science

Length: Two-year Program - Four semesters

Program: The Administration of Justice curriculum is designed to prepare individuals for careers and positions of leadership in the field of criminal justice. Supported by a broad general education component, the curriculum is structured toward the development of professional proficiency in the career fields of law enforcement, corrections, security, and wildlife management and enforcement. This curriculum is applicable to both the preparatory student and the experienced officer. Articulation agreements and transfer information are available for those students who intend to continue their education beyond the community college level and into four-year colleges or universities.

Occupational Objectives:
>   Local, State and Federal Enforcement Officer
>   Local, State and Federal Corrections Officer
>   State Wildlife Enforcement Officer
>   Local, State, and Federal Criminal Justice Administrators
>   Commercial and Industrial Security Officer
>   Private Investigator

Admission Requirements: In addition to the general requirements for admission to the college, entry into the administration of justice, corrections, or wildlife enforcement and management programs requires the following:

1. Good physical condition. Any debilitating physical condition may result in either disqualification or restrictions in certain career fields.

2. Normal hearing and visual acuity is required by most agencies. Visual acuity that is correctable to 20/20 will meet most agency requirements.

3. The conviction of a felony and certain misdemeanors, history of substance abuse, or an excessive number of traffic violations may be detrimental to the student entering most criminal justice fields. If questions in this area should arise, students are encouraged to consult with the department head to discuss the specific qualification standards of most criminal justice agencies.

Program Requirements: Approximately one-half of the curriculum will include courses in law enforcement with the remaining courses in related areas, general education, and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in law enforcement related activities. Students are urged to consult with their faculty advisor and the counseling office in planning their semester program. The graduate will be awarded the Associate in Applied Science Degree in Public Service, with a major in Administration of Justice

PUBLIC SERVICE DEGREE PROGRAM
Associate of Applied Science Degree
Major: Administration of Justice

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
ENG	111*	College Composition I	3	0	3
ADJ	140	Introduction to Corrections	3	0	3
ADJ	100	Survey of Criminal Justice	3	0	3
SDV	108	College Survival Skills	1	0	1
CST	100	Principles of Public Speaking	3	0	3
Elective		Elective	3	0	3
		TOTAL	16	0	16
Second Semester					
ENG	112*	College Composition II	3	0	3
ADJ	131	Legal Evidence	3	0	3
Elective		PLS or HIS	3	0	3
SOC	235	Juvenile Delinquency OR	3	0	3
ADJ	105	The Juvenile Justice System			
ITE		Approved ITE Elective	3	0	3
Elective		Elective	3	0	3
		TOTAL	18	0	18
Third Semester					
ADJ	211	Criminal Law, Evidence and Procedures I	3	0	3
ADJ	171	Forensic Science 1	3	3	4
ADJ		Elective	3	0	3
PSY	250	Law Enforcement Psychology	3	0	3
SOC	200	Principles to Sociology	3	0	3
HLT/PED		Health or Physical Education	0	2	1
		TOTAL	15	5	17
Fourth Semester					
ADJ	111	Law Enforcement Organization and Administration I	3	0	3
ADJ	201	Criminology I	3	0	3
ADJ		Elective	3	0	3
MTH		Approved Math Elective **	3	0	3
Elective***		Humanities/Fine Arts	3	0	3
HLT/PED		Health or Physical Education	0	2	1
		TOTAL	15	2	16

Total Minimum Credits for the Administration of Justice Major 67

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*   Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
**   Determine transfer institution's requirements prior to selection.
***   Humanities/Fine Arts Electives: Students may choose from the following courses: Philosophy, Religion, Music Appreciation, Art Appreciation, and Foreign Languages. Before making a selection, the student is advised to determine the transfer institution's requirements.

PUBLIC SERVICE DEGREE PROGRAM
Associate of Applied Science Degree
Major: Administration of Justice
Specialization: Corrections

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111*	College Composition I	3	0	3
ADJ	100	Survey of Criminal Justice	3	0	3
ADJ	140	Intro. to Corrections	3	0	3
ADJ		Elective	3	0	3
CST	100	Prin. of Public Speaking	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	0	16
		Second Semester			
ENG	112*	College Composition II	3	0	3
ADJ	131	Legal Evidence	3	0	3
PLS or HIS		Elective	3	0	3
SOC	235	Juvenile Delinquency OR	3	0	3
ADJ	105	The Juvenile Justice System			
ITE	115	Approved ITE Elective	3	0	3
ADJ	245	Mgmt. of Corr. Facilities OR	3	0	3
ADJ		Elective			
		TOTAL	18	0	18
		Third Semester			
ADJ	211	Crim. Law, Evid., & Procedures I	3	0	3
ADJ	171	Forensic Science 1	3	3	4
		ADJ Elective	3	0	3
PSY	250	Law Enforcement Psychology	3	0	3
ADJ	147	Local Adult Detention Facilities OR	3	0	3
ADJ		Elective			
HLT/PED		Health or Physical Education	0	2	1
		TOTAL	15	5	17
		Fourth Semester			
ADJ	111	Law Enforcement Organization and Administration I	3	0	3
ADJ	201	Criminology I	3	0	3
ADJ		Elective	3	0	3
MTH**		Approved Math Elective	3	0	3
Elective		Sociology or Psychology	3	0	3
HlT/PED		Health or Physical Education	0	2	1
		TOTAL	15	2	16

Total Minimum Credits for Corrections Specialization..67

* Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
** Determine transfer institution's requirements prior to selection.

PUBLIC SERVICE DEGREE PROGRAM
Associate of Applied Science Degree
Major: Administration of Justice
Specialization: Wildlife Management and Enforcement

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I*	3	0	3
ADJ	166	Fish and Game Regulations	3	0	3
ADJ	100	Survey of Criminal Justice	3	0	3
SDV	108	College Survival Skills	1	0	1
CST	100	Principles of Public Speaking	3	0	3
Elective**			3	0	3
		TOTAL	16	0	16
		Second Semester			
ENG	112	College Composition II*	3	0	3
ADJ	131	Legal Evidence	3	0	3
Elective		PLS or HIS	3	0	3
FOR	211	Wildlife Investigational Tech. I	2	2	3
ITE	115	Approved ITE Elective	3	0	3
		Elective	3	0	3
		TOTAL	17	2	18
		Third Semester			
ADJ	211	Criminal Law, Evidence and Procedures I	3	0	3
ADJ	171	Forensic Science I	3	3	4
FOR	135	Wildlife and Fisheries Mgmt.	3	3	4
Elective**			3	0	3
SOC	200	Principles to Sociology	3	0	3
HLT/PED		Health or Physical Education	0	2	1
		TOTAL	15	8	18
		Fourth Semester			
ADJ	111	Law Enforcement Organization and Administration I	3	0	3
ADJ	298	Seminar and Project in Wildlife and Fishery Research	3	0	3
ADJ	201	Criminology	3	0	3
MTH		Approved Math Elective***	3	0	3
SOC/PSY		Elective	3	0	3
HLT/PED		Health or Physical Education	0	2	1
		TOTAL	15	2	16

Total Minimum Credits for Wildlife Management and
 Enforcement Specialization 68

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*	Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
**	Suggested Electives: FOR 115, GWR 105, NAS 106, ADJ 227.
***	MTH 151 or higher

TECHNICAL STUDIES DEGREE PROGRAM
Associate of Applied Science
Major: Construction Management

Length: Two-year Program - Four semesters

Occupational Objectives:
      Project Manager
      Construction Superintendent
      Construction Foreman
      Construction Estimator

Admission Requirements: In addition to the admission requirements established for the college, entry into the Construction Management Technical Studies degree program requires proficiency in high school English, mathematics (including one unit of algebra), and science.

Program Requirements: The Construction Management Technical Studies degree is a two-year (four semesters) program which includes instruction in safety, planning, scheduling, cost-control, productivity, human relations, estimating, and building codes. Students will also gain proficiency in specific construction related skills. Successful graduates of the Construction Management degree will qualify for entry-level positions in the field of construction management.

TECHNICAL STUDIES DEGREE PROGRAM
Associate of Applied Science
Major: Construction Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
MTH	115	Technical Mathematics I	3	0	3
ENG	111	English Composition	3	0	3
BLD	109	Understanding and Managing Project Cost	2	0	2
BLD	165	Construction Field Operations	1	2	2
BLD	110	Introduction to Construction	3	0	3
ITE	115	Basic Computer Literacy	3	0	3
		TOTAL	15	2	16
		Second Semester			
ENG	115	Technical Writing	3	0	3
DRF	201	Computer Aided Drafting & Design I	3	2	4
BLD	108	Construction Leadership and Motivation	2	0	2
BLD	188	Intro. to Construction Supervision	3	0	3
ITE	116	Survey of Computer Software Applications	2	0	2
BUS	165	Small Business Management	3	0	3
		TOTAL	16	2	17
		Third Semester			
HLT	100	First Aid and CPR	3	0	3
ACC	111	Accounting I	3	0	3
SPA	101	Beginning Spanish I	4	0	4
BLD	118	Problem Solving and Decision Making	2	0	2
ECO	201	Principles of Economics I	3	0	3
PSY	120	Human Relations	3	0	3
		TOTAL	18	0	18
		Fourth Semester			
BLD	215	OSHA 30 Construction Safety	2	0	2
BLD	247	Construction Planning and Scheduling	3	0	3
SDV	106	Preparation for Employment	1	0	1
IND	140	Quality Control	2	0	2
BLD	231	Construction Estimating I	3	0	3
BLD	217	Contract Documents & Construction Law	2	0	2
BLD	290	Coordinated Internship	0	20	3
		TOTAL	13	20	16

Total Minimum Credits Required for Construction Management Major..................67

TECHNICAL STUDIES DEGREE PROGRAM
Associate of Applied Science Degree
Major: Agribusiness

Length: Two-year program – Four semesters

Purpose: To provide a response to current and anticipated workforce shortage in the agribusiness industry. Individuals who are interested in owning or seeking employment in managing an agribusiness, farm, nursery, greenhouse, or other related fields may benefit from this program. The Agribusiness program will prepare the student to enter the rapidly changing areas of Agricultural Business and the challenges that are currently facing today's Agricultural industry. Agriculture is facing a period of change trying to compete in today's world markets and to provide food for the growing world's populations.

Admission Requirements: In addition to the admission requirements established for the college, entry into the Agribusiness Technical Studies degree program requires proficiency in high school English, mathematics, and science.

Program Requirements: The curriculum in Agribusiness is a two-year program encompassing instruction in many areas required for competency in agriculture and agribusiness. Approximately one-third of the curricula will include courses in general education areas such as English, public speaking and economics while the other two-thirds of the curriculum will relate specifically to Agribusiness. The Agribusiness major will provide the student with a broad background qualifying her or him to perform effectively in several different occupational areas of agribusiness. Students are advised to consult with their faculty advisor and the counseling office in planning their program and selecting electives. Upon completion of the Agribusiness major, the student will be awarded the Associate of Applied Science Degree with a major in Agribusiness.

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TECHNICAL STUDIES DEGREE PROGRAM
Associate of Applied Science Degree
Major: Technical Studies in Agribusiness

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I	3	0	3
ECO	120	Survey of Economics OR	3	0	3
ECO	201	Principles of Macroeconomics			
SDV	101	Orientation to Agribusiness	1	0	1
ITE	115	Intro. To Computer Applications & Concepts	3	0	3
AGR	141	Introduction to Animal Science and Technology	3	3	4
AGR	142	Introduction to Plant Science and Technology	2	3	3
		TOTAL	15	6	17
		Second Semester			
CST	100	Public Speaking	3	0	3
AGR	205	Soil Fertility and Management	2	2	3
AGR	144	Agricultural Human Resource Management	2	2	3
Elective		ECO, SOC or PSY	3	0	3
ENG	112	College Composition II	3	0	3
		TOTAL	13	4	15
		Summer Term			
AGR	297	Cooperative Education in Agribusiness	5	0	5
		TOTAL	5	0	5
		Third Semester			
AGR	143	Agribusiness & Financial Management	3	0	3
HUM	165	Controversial Issues in Contemporary American Culture	3	0	3
Elective		Technical Elective, ACC, CAD or ITD	3	0	3
AGR	233	Food Production, Safety, Bio-security, & Quality Control	2	2	3
AGR*		AGR Elective	3	0	3
PED		PED Elective	2	0	2
		TOTAL	16	2	17
		Fourth Semester			
AGR	231	Agribusiness Marketing, Risk Mgmt & Entrepreneurship	2	2	3
AGR	234	Chemical Applications & Pest Management	1	2	2
AGR	232	Professional Selling for Agribusiness	2	1	2
AGR*		AGR Elective	3	0	3
AGR*		AGR Elective	3	0	3
AGR	298/299	Seminar & Project/Supervised Study	1	0	1
		TOTAL	12	5	14

Total Minimum Credits for the Technical Studies Degree in Agribusiness.............. 68

*Take Three of the Five Electives
    AGR 241 Agricultural Policy, Leadership, and Professional Service
    AGR 242 Livestock Production, Products & Emerging Technologies
    AGR 244 Agricultural Alternative Energy Solutions
    AGR 295 Topics in Crop Production, Products & Emerging Technologies
    SPA 160 Spanish for the Green Industry

DIPLOMA PROGRAMS

Diploma programs are generally two years in length. They are designed to prepare students for employment in a given occupational area.

CERTIFICATE PROGRAMS

Certificate Programs are designed to prepare skilled craftsmen to meet the needs created by technological advancement and to provide related areas of study which equip students with the ability to develop an understanding of the American free enterprise system and an appreciation for a broader social outlook.

The certificates are is designed to prepare students for initial employment, retraining for new skills, or for advancement within a given vocation. Most certificate programs at the College are one year in length. However, any one of the certificate curricula may be pursued on a part-time basis with the understanding that it will require more than one year to complete the program.

GENERAL EDUCATION REQUIREMENTS

In order that the diploma and certificate curricula will contain a requisite increment of general education to satisfy the policy established by the State Board for Community Colleges and still allow for maximum institutional and individual flexibility, the following guidelines will apply:

1. Fifteen to twenty (15-20) percent of the credit-hour requirements should include courses in general education, exclusive of specialized courses in the major field, or supporting technical and theory courses in related fields. These courses should be selected from the following:

    Communication Skills   Humanities
    Health, Physical Education   Orientation
      or Recreation   Social Science
    Mathematics   Laboratory Sciences

2. In satisfying the above requirement, repetition of a discipline is not encouraged; the maximum number of courses allowable from any discipline should be two.

PROGRAMS OF STUDY

Programs of study for students planning to pursue certificate programs are listed on the following pages.

WELDING DIPLOMA

Major: Welding

Length: Two-year Program - Four semesters

Purpose: This curriculum has been designed to prepare welding students to fill the gap in industrial manufacturing between the welder/fitter-welder and the welding shop foreman. The welding Diploma program is designed to train students to fulfill higher positions in industrial welding upon graduation from the program.

Occupational Objectives:
Welder
Fitter-Welder
Shop Foreman

Admission Requirements: Students must meet the general admission requirements established by the College.

Program Requirements: The Welding Diploma program is designed to prepare students to work as industrial welders in a leadership position, and to provide them with an introduction to the problems associated with the various types of equipment and materials used in welding. In addition to the courses in welding, students will receive instruction in first aid and safety, blueprint reading, computer applications, machine shop practices, computer aided drafting, and computer numerical controls. The student also receives instruction in basic occupational communication, and applied mathematics which provide the graduate with a general knowledge base necessary for effective functioning in the industrial setting.

Students successfully completing the program receive the Diploma in Welding. Job opportunities for industrial welding leadership exists in many areas, primarily in the manufacturing and service areas.

WELDING DIPLOMA

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
MAC	161	Machine Shop Practices I	2	3	3
WEL	150	Welding Drawing and Interpretation	3	0	3
MTH	103	Applied Technical Mathematics I	3	0	3
AST	232	Microcomputer Office App.	3	0	3
WEL	117	Oxyacetylene Welding & Cutting	2	3	3
WEL	123	Arc Welding I	2	3	3
		TOTAL	15	9	18
		Second Semester			
ENG	100	Basic Occup. l Communication	3	0	3
MTH	104	Applied Technical Mathematics II	3	0	3
MAC	162	Machine Shop Practices II	2	3	3
WEL	160	Semi-Automatic Welding Proc.	2	3	3
WEL	126	Pipe Welding I	2	3	3
		TOTAL	12	9	15
		Third Semester			
PSY		Elective	3	0	3
MAC	163	Machine Shop Practices III	2	3	3
WEL	130	Inert Gas Welding	2	3	3
WEL	141	Welder Certification Test	2	3	3
WEL	195	Topics in Welding: Pipe Fitting	2	3	3
		TOTAL	11	12	15
		Fourth Semester			
HLT	100	First Aid and CPR	3	0	3
DRF	200	Survey of Computer Aided Drafting	3	2	4
BLD	110	Intro. to Construction	3	0	3
SDV	106	Prep. for Employment	1	0	1
WEL	295	Advanced Topics in Welding	2	3	3
MAC	164	Machine Shop Practices IV	2	3	3
		TOTAL	14	8	17

Total Credits for Diploma in Welding 65

ARTS AND CRAFTS PRODUCTION CERTIFICATE

Length: One-year Program - Two semesters

Purpose: The Arts and Crafts Production certificate program is designed to prepare students for careers as practicing craftpersons and professional artists. The self-employed craftpersons will benefit in the production of crafts by increasing their artistic abilities and developing their business, organization, planning, and communication skills.

Admission Requirements: Students are required to meet the general admission requirements of the College.

Program Requirements: The curriculum for arts and crafts production is designed to provide general education for the student as well as the necessary technical background essential for the success of the students in their chosen crafts field.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	101	Practical Writing I*	3	0	3
ART	286	Communication Arts Workshop	1	4	3
CRF	101	Hand Built Pottery OR	1	4	3
CRF	110	Introduction to Crafts			
ART	121	Drawing I	3	0	3
ART	131	Fundamentals of Design I	3	0	3
ART	125	Introduction to Painting OR	2	3	3
CRF	100	Survey of Hand Crafts OR			
ART	283	Computer Graphics I			
SDV	108	College Survival Skills	<u>1</u>	<u>0</u>	<u>1</u>
		TOTAL	14	11	19
		Second Semester			
PSY	200	Prin. of Psychology or	3	0	3
SOC	200	Principles to Sociology			
BUS	165	Small Business Management	3	0	3
ART	287	Portfolio and Resume Preparation	1	4	3
CRF	107	Hand Crafted Leather Work	1	4	3
ART	122	Drawing II OR	3	0	3
CRF	102	Wheel Thrown Pottery			
ART	132	Fundamentals of Design II OR	<u>2</u>	<u>3</u>	<u>3</u>
ART	231	Sculpture I OR			
ART	171	Airbrush I OR			
ART	290	Coordinated Internship			
		TOTAL	13	11	18

Total Minimum Credits for Arts and Crafts Production Certificate........................37

*Students who wish to pursue a Baccalaureate degree need to take English 111-112.

BANKING CERTIFICATE

Length: One-year Program - Two semesters plus Summer Session

Purpose: The Certificate in Banking is designed to provide the student, whether already employed in banking or preparing for a career therein, with a broad and professional knowledge of banking theory and practice.

Occupational Objectives:

Bank Loan Examiner	Bank Teller
Bank Branch Manager	Bank Cashier

Admission Requirements: Admission to the program is governed by the established admission requirements to the College. In addition, entry into the Banking program requires proficiency in high school English and Mathematics. Students with deficiencies will require Developmental Studies.

Program Requirements: The curriculum in Banking includes courses in banking and a variety of related courses in business, economics, and accounting. Students who satisfactorily complete the program are eligible to receive the SWCC Certificate in Banking.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
SDV	108	College Survival Skills	1	0	1
ACC	211	Principles of Accounting I	4	0	4
FIN	110	Principles of Banking	3	0	3
ECO	201	Principles of Economics I	3	0	3
ENG	111	College Composition I*	3	0	3
BUS	121	Business Mathematics I	3	0	3
		TOTAL	17	0	17
		Second Semester			
		Elective	3	0	3
ACC	212	Principles of Accounting II	4	0	4
ECO	202	Principles of Economics II	3	0	3
ENG	112	College Composition II*	3	0	3
BUS	122	Business Mathematics II	3	0	3
FIN	205	Consumer Credit Analysis	3	0	3
		TOTAL	19	0	19
		Summer Session			
		Elective	3	0	3
AST	205	Business Communications	3	0	3
AST	232	Microcomputer Office App.	3	0	3
ECO	231	Principles of Money & Banking I	3	0	3
		TOTAL	12	0	12

Total Minimum Credits for Certificate in Banking..48

*   Students who do not wish to pursue a Baccalaureate degree in Banking may substitute ENG 101-102 for ENG 111-112.

COMPUTER AIDED DRAFTING CERTIFICATE

Length: One-year Program - Two semesters

Purpose: This certificate program in computer aided drafting is designed to teach the fundamentals of engineering drawing and graphics. This program will prepare a student to perform the duties of an engineer's aide, apprentice draftsman, or the general duties performed in a construction engineering or contractor's office.

Occupational Objective:

Apprentice Draftsman
Engineering Aide

Admission Requirements: Applicant must meet the general requirements for admission to the college.

Program Requirements: The student is required to take basic technical courses and general education courses.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	101	Practical Writing I	3	0	3
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
MTH	103	Applied Technical Mathematics I	3	0	3
DRF	111	Technical Drafting I	2	3	3
DRF	201	Computer Aided Drafting & Design I	3	3	4
		TOTAL	14	6	16
		Second Semester			
SDV	106	Prep. for Employment	1	0	1
ARC	121	Architectural Drafting I	2	3	3
MAC	121	Computer Numerical Control I	3	0	3
CIV	115	Civil Engineering Drafting	2	3	3
DRF	112	Technical Drafting II	2	2	3
DRF	202	Computer Aided Drafting & Design II	3	2	4
		TOTAL	13	10	17

Total Credits for the Computer Aided Drafting Certificate Program....................33

DIESEL POWERED EQUIPMENT CERTIFICATE

Length: One-year Program - Two semesters plus Summer Session

Purpose: This program is designed to train diesel mechanics. Diesel power mechanics are involved with those machines commonly found in the Commercial Driving Licensing (CDL)/Transportation Industry. The program option is geared to produce students who can transition easily into today's job market. Another advantage is that that one-year program allows a person to selest a "going career while it is still going.

Occupational Objectives:
Transportation
Diesel Dealership Service
Diesel Truck Troubleshooting

Admission Requirements: Applicant must meet the general requirements of admission to the college.

Program Requirements: The student is required to take courses in electrical systems, diesel fuel systems, air brake systems, mechanical maintenance, shop safety, and computer applications. as well as related math and other general education courses. In addition, the student is to take those specialized technocal courses within the chosen option. Students enrolled in this program are participating with the college's partnership with Tri-County Skills Center in Hansonville, Virginia.

DIESEL POWERED EQUIPMENT CERTIFICATE

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
DSL	131	Diesel Fuel Systems and Tune-Up	2	4	4
DSL	141	Transportation Electricl Systems I	2	0	2
DSL	181	Diesel Mechanics I	4	6	6
MTH	103	Applied Technical Mathematics I	3	0	3
DRF	160	Machine Blueprint Reading	3	0	3
		TOTAL	14	10	18
		Second Semester			
DSL	142	Transportation Electrical Systems II	2	0	2
DSL	161	Air Brake Systems I	2	0	2
DSL	182	Diesel Mechanics II	4	6	6
MEC	161	Basic Fluid Mechanics Hydraulics/Pneumatics	2	2	3
ENG		English Elective	3	0	3
		TOTAL	13	8	16
		Summer Session			
DSL	162	Air Brakes Systems II	2	0	2
DSL	152	Diesel Power Trains, Chassis, and Suspension	2	4	4
ITE	115	Intro. to Computer Applications and Concepts	3	0	3
SDV	106	Preparation for Employment	1	0	1
		TOTAL	8	4	10

Total Credits for the Diesel Powered Equipment/Mine Machinery Maintenance.........44

EARLY CHILDHOOD EDUCATION CERTIFICATE

Length: One-year Program - Two semesters

Purpose: The certificate program is designed to prepare individuals for employment in a variety of situations where care and maintenance of young children is the primary objective. Practitioners already employed in the child care function may find this program appropriate for upgrading and broadening their paraprofessional abilities and qualifications.

Occupational Objectives: Preparation of upgrading for positions as child care assistants (or aides) in the following types of facilities:

Child Care Centers   Residential Facilities
Day Care Centers   Family Day Care Homes
Nursery (pre-kindergarten) Schools

Admission Requirements: In addition to requirements for general admission to the College, a personal interview with the program head is necessary.

Curriculum Requirements: The program combines a blend of general education courses with specialized courses intended to provide preparation in the areas most directly applicable to the child-care function. Additionally, the Coordinated Internship courses provide an opportunity for individualized practicum in the type of work situation in which the student is particularly interested. Students may carry either the full curriculum to receive the certificate in one year or may take a lesser number of courses suitable to their own schedule and complete the curriculum over a longer period of time.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
CHD	145	Teaching Art, Music and Movement to Children	2	2	3
CHD	118	Language Arts for Young Children	2	2	3
CHD	120	Introduction to Early Childhood Education	3	0	3
ENG	101	Practical Writing I	3	0	3
PSY	231	Life Span Human Develop. I	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	14	4	16
		Second Semester			
CHD	146	Math, Science and Social Studies for Children	2	2	3
CHD	215	Models for Early Childhood Education Programs	3	0	3
CHD	165	Observ. & Particip. in Early Childhood/Primary Settings	1	6	3
ENG	102	Practical Writing II	3	0	3
HLT	135	Child Health and Nutrition	3	0	3
HLT	100	First Aid & Cardiopulmonary Resuscitation	3	0	3
		TOTAL	15	8	18

Total Minimum Credits for Early Childhood Education Certificate.....................34

FINANCIAL SERVICES/BOOKKEEPING CERTIFICATE

Length: One-year Program - Two semesters

Purpose: The certificate program in Financial Services is designed to provide individuals with an educational level that will enable them to obtain employment requiring basic bookkeeping skills.

Occupational Objectives:

Bookkeeping
Bank Teller
Payroll Clerk
Accounts Receivable Clerk
Accounts Payable Clerk

Admission Requirements: Admission to the program will be governed by requirements for general admission to the college. In addition, the student must show a satisfactory aptitude for financial services education as measured by appropriate tests and interviews administered by the College Counseling Department.

Program Requirements: The Financial Services Program is designed to prepare students to work in bookkeeping related positions. The curriculum is composed of business courses consisting of accounting, administrative support technology, business math and economics. The students will be awarded a Financial Services Certificate upon completion of the course requirements.

FINANCIAL SERVICES/BOOKKEEPING CERTIFICATE

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ACC	211	Principles of Accounting I	4	0	4
BUS	100	Introduction to Business	3	0	3
ENG	101*	Practical Writing I	3	0	3
AST	232	Microcmputer Office App.	3	0	3
MTH	120**	Introduction to Mathematics	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	17	0	17
		Second Semester			
ACC	212	Principles of Accounting II	4	0	4
ACC	215	Computerized Accounting	3	0	3
ACC	124	Payroll Accounting	2	0	2
ECO	120	Survey of Economics or	3	0	3
ECO	201	Principles of Economics I			
ENG	102*	Practical Writing II	3	0	3
HLT or PED			0	2	1
		TOTAL	15	2	16

Total Minimum Credits for Financial Services/Bookkeeping Certificate..............33

*   Students considering pursuit of a Baccalaureate degree should take the
      ENG 111-112 series.

**   MTH 02 will be required for students who do not meet minimum Asset Test
      guidelines. Students may substitute either MTH 151, 163, or 271 for MTH
      120.

Students may pursue the requirements for an AAS degree in Accounting by completing
the third and fourth semester requirements for that program.

GENERAL EDUCATION CERTIFICATE

Length: Two Semesters

Purpose: The Certificate in General Education prepares first time job seekers with the basic competencies which can help them be more competitive in the job market and more valuable in the workplace. For those individuals who wish to continue their education, the general education certificate provides foundational courses that allow students to progress toward the associate degree or to transfer to a senior institution.

Admissions Requirements: In addition to the general admissions requirements of the college, entry requires satisfactory completion of the following high school units or equivalents as a minimum: 4 units of English; 2 units of college preparatory mathematics; 1 unit of laboratory science; and 1 unit of history. Students with deficiencies will require developmental studies.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
SDV	108	College Survival Skills	1	0	1
ENG	111	College Composition I	3	0	3
HUM		*Humanities/Fine Arts Elective	3	0	3
MTH	163	Precalculus I OR			
MTH	151	Math for Liberal Arts I	3	0	3
HIS	121	U.S. History I	3	0	3
BIO	101	General Biology I**	3	3	4
		TOTAL	16	3	17
		Second Semester			
ENG	112	College Composition II	3	0	3
CST	100	Principles of Public Speaking	3	0	3
HIS	122	U.S. History II	3	0	3
PSY	200	Principles of Psychology	3	0	3
BIO	102	General Biology II**	3	3	4
		TOTAL	15	3	16

Total Minimum Credits for the General Education Certificate……...............................33

*Humanities/Fine Arts Electives: PHI 101-102; ENG 241-242-243-244-278-279; MUS 121-122; SPA 101-102; FRE 101-102-201-202; HUM 256; REL 100-200-210-246

**Lab Sciences may also include: CHM 111-112, GOL 105-106, PHY 201-202 or 241-242.

HEALTH SCIENCES CERTIFICATE

Length: One-Year Program - Two Semesters

Purpose: This program is designed for those individuals interested in pursuing a career in the health professions. The program will enable students interested in health care professions to acquire an academic foundation to continue their education in one of the health programs. The program can also be used as a stepping-stone to the Associate in Science degree. Students should consult an academic advisor for any course substitutions to this curriculum.

Occupational Objective: Preparation for entry into the health professions and general health care employment skills.

Admission Requirements: The applicant must meet the general requirements for admission to the College including placement testing in reading, composition, and mathematics.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	111	College Composition I*	3	0	3
BIO	141	Human Anatomy & Physiology I**	3	3	4
HLT	143	Medical Terminology I	3	0	3
SDV	108	College Survival Skills	1	0	1
PSY	231	Human Life Span Development I	3	0	3
		TOTAL	13	3	14
		Second Semester			
ENG	112	College Composition II*	3	0	3
BIO	142	Human Anatomy & Physiology II **	3	3	4
AST	232	Microcomputer Office App.	3	0	3
PSY	232	Human Life Span Development II	3	0	3
Elective***			3	0	3
		TOTAL	15	3	16

Total Minimum Credits for the Health Sciences Certificate………...............................30

* Students who do not place in college composition should take Eng 03, 04, 05 as recommended by placement testing.

** Students lacking high school chemistry and or biology should take CHM 05 and BIO 20. Students lacking only one of these courses may start the BIO 141 in second semester upon completion of Chemistry and/or Biology.

*** Electives should be chosen with the advice of healthcare faculty or the Division Dean for Math, Science, & Health Technology. Students pursuing nursing may elect Math 126 in the second semester if placement testing allows. Students may also consider Math 240 with program advisement and if placement scores allow.

HEATING, VENTILATION, & AIR CONDITIONING (HVAC) CERTIFICATE

Length: One year Program - Two-semester plus Summer session (full-time)

Purpose: Demands for trained, certified personnel to serve a variety of industries and businesses who sell, service, and maintain modern heating, ventilating, and air conditioning equipment are very much in evidence. This program is designed to train individuals in basics of Heating, Ventilation, and Air Conditioning (HVAC) technology. Persons completing this course of study should be able to enter the workforce as an entry level Maintenance Technician.

Occupational Objectives:
Air Conditioning Repair
Air Conditioning Mechanic Helper
Refrigeration Mechanic
Refrigeration Mechanic Helper
Technical Sales Specialist

Heat Pump Installer
Heat Pump Mechanic
Furnace Installer Mechanic
Furnace Installer Helper

Admission Requirements: In addition to the admission requirements for the College, entry into the HVAC Certificate program requires that the program coordinator and the college counseling staff conduct an entry assessment interview with each applicant.

Program Requirements: The curriculum comprises 49 semester hours of the basics and essentials of refrigeration systems, together with concurrent support courses in communications, computation, and electricity. Practical skills in blueprint reading provide a basis for employment in larger or smaller operations.

Program Features: The Certificate course offerings will be oriented towards part-time or full-time students who wish to develop their career while in full-time employment or while pursuing full-time studies. The curriculum partially fulfills requirements for certification by the Refrigeration Industries of America (RIA). Co-requisites: ELE 140 for AIR 134, AIR 121 or 122 for AIR 165, AIR 134 and AIR 136 for AIR 235, and AIR 154 and AIR 235 for AIR 190 or equivalent.

HEATING, VENTILATION, & AIR CONDITIONING (HVAC)
CERTIFICATE

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
AIR	121	Air Cond. & Refrigeration I	3	3	4
AIR	122	Air Cond. & Refrigeration II	3	3	4
AIR	134	Circuits & Controls I	2	3	3
ELE	140	Basic Electricity & Machinery	3	2	4
MTH	103	Applied Technical Mathematics I	3	0	3
		TOTAL	14	11	18
		Second Semester			
AIR	136	Circuits & Controls III	3	3	4
AIR	165	Air Conditioning Systems I	3	3	4
ELE	135	National Electric Code-Res.	3	2	4
ENG		Approved English Elective	3	0	3
ENV	193	Studies in Your Role in the Green Evironment	1	0	1
BLD	111	Blueprint Reading and the Building Code*	2	2	3
		TOTAL	15	10	19
		Summer Session			
STD	106	Prep. for Employment	1	0	1
AIR	235	Heat Pumps	3	3	4
AIR	154	Heating Systems I	2	2	3
AIR	190	Coordinated Internship	0	12	3
AIR	295	Topics in EPA Regs. (Recovery, Recycle, Reclaim)	1	0	1
		TOTAL	7	17	12

Total Credits for the HVAC Certificate..49

* BLD 111 - Blueprint Reading and Building Codes - pre/co-requisite BLD 110.

HUMAN SERVICES TECHNOLOGY CERTIFICATE

Length: One-year Program - Two semesters plus summer session

Purpose: There is a growing need for entry-level human services workers as aides, attendants, instructors, and paraprofessionals. This certificate program is designed to prepare individuals for potential employment in settings where social welfare, health, mental health, substance abuse, mental retardation, and residential services are provided. The program will expose students to the structure, purpose, philosophy, and services of these programs, and survey the basic skills and characteristics necessary for human service providers. Awareness of professional careers in these fields will be gained.

Occupational Objective: Preparation for positions as human services technicians in the following settings:

Licensed home for adults	Alcohol treatment programs
Residential treatment programs	Sheltered workshop programs
Group homes	Senior citizen programs
Rehabilitation programs	Social service programs
Psychiatric treatment facilities	

Admission Requirements: In addition to requirements for general admission to the College, a personal interview with the program head is recommended.

Program Requirements: Students take various general education courses in addition to Human Services specialty courses. Many of these courses are transferable to two-year and four-year programs. In addition, the program provides an opportunity for a field placement in which students work (on volunteer basis) in the specialty area of their choice. Individuals currently employed in Human Services or related agencies may find it more convenient to take courses on a part-time basis.

HUMAN SERVICES TECHNOLOGY CERTIFICATE

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester				
HMS 100	Introduction to Human Services	3	0	3
HMS 121	Basic Counseling Skills I	3	0	3
ENG 111	College Composition I*	3	0	3
SDV 108	College Survival Skills	1	0	1
Elective***	Social Sciences	3	0	3
PSY 200	Principles of Psychology	3	0	3
	TOTAL	16	0	16
Second Semester				
ITE 115	Intro. to Computer Applications and Concepts	3	0	3
PSY 215	Abnormal Psychology	3	0	3
MEN 101	Mental Health Skills I	3	0	3
ENG 112	College Composition II*	3	0	3
HMS 122	Basic Counseling Skills II	3	0	3
PSY***	Elective	3	0	3
	TOTAL	18	0	18
Summer Session				
MEN 102	Mental Health Skills II	3	0	3
HMS 190	Coordinated Internship in Human Services**	3	10	3
Elective***	Elective	3	0	3
	TOTAL	9	10	9

Total Minimum Credits for Human Services Technology Certificate............................43

* Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
** HMS 190 requires approval of the Human Services advisor.

***Electives:
PSY 166 Psychology of Marriage
SOC 200 Principles to Sociology
SOC 215 Sociology of the Family
SOC 236 Criminology
SOC 268 Social Problems
PSY 108 Psychology of Aging

LAW ENFORCEMENT CERTIFICATE

Length: One-year Program - Two semesters

Purpose: The certificate curriculum in law enforcement has been developed in accordance with the need of local law enforcement agencies and personnel. The program is designed to meet the needs of the large number of local inservice law enforcement personnel and pre-service students who at present do not possess the necessary qualifications for entrance into the associate degree program in administration of justice or for other reasons do not wish to continue their education or in the interim obtain the necessary qualifications for the associate degree program. All credits obtained in the certificate program will be transferable.

Occupational Objective:

Commercial and Industrial Security Officer   Policeman
Local, State, and Federal Enforcement Officers
Private or Government Investigator

Admission Requirements: In addition to the general requirements for admission to a college certificate program, entry into the certificate program in law enforcement shall also be contingent upon the students meeting all special requirements applicable for entrance into the associate degree program in administration of justice program.

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ENG 111	College Composition I*	3	0	3
ADJ 140	Introduction to Corrections	3	0	3
ADJ 100	Survey of Criminal Justice	3	0	3
SDV 108	College Survival Skills	1	0	1
CST 100	Principles of Public Speaking	3	0	3
Elective**	Elective	3	0	3
	TOTAL	16	0	16
	Second Semester			
ENG 112	College Composition II*	3	0	3
ADJ 131	Legal Evidence	3	0	3
PLS or HIS	Elective	3	0	3
SOC 235	Juvenile Delinquency	3	0	3
ITE 115	Approved ITE Elective	3	0	3
Elective**	Elective	3	0	3
	TOTAL	18	0	18

Total Minimum Credits for the Law Enforcement Certificate 34

*   Students who do not wish to pursue a Baccalaureate degree may substitute ENG 101-102 for ENG 111-112.
**   Recommended Elective Courses:

ITE 115 Basic Computer Literacy	AST 232 Microcomputer Office Applications
ADJ 228 Narcotics & Dangerous Drugs	ADJ 227 Constitutional Law for Justice Personnel
ADJ 248 Probation, Parole, and Treatment	

LEGAL ASSISTANT CERTIFICATE

Length: One-year program -Three semesters

Purpose: The Legal Assistant Certificate program is designed to prepare individuals for the performance of independent legal work under the supervision of an attorney.

Occupational Objectives: The preparation of pre-service and/or in-service personnel for positions such as legal assistant.

Curriculum Admission Requirements: Students are required to meet the general admission requirements of the College. Entry into the Legal Assistant Program requires proficiency in high school English. Students with an English deficiency must successfully complete the appropriate developmental English course(s) before they will be permitted to enroll in any LGL subject.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
SDV	108	College Survival Skills	1	0	1
ITE	115	Introduce to Computer App. & Concepts	3	0	3
LGL	110	Introduction to Law & the Legal Assistant	3	0	3
LGL	130	Law Office Adm. & Accounting I	3	0	3
LGL	117	Family Law	3	0	3
LGL	127	Legal Research and Writing	3	0	3
		TOTAL	16	0	16
		Second Semester			
AST	205	Business Communications	3	0	3
LGL	225	Estate Planning & Probate	3	0	3
PSY	120	Human Relations	3	0	3
LGL	218	Criminal Law	3	0	3
BUS	241	Business Law	3	0	3
		TOTAL	15	0	15
		Third Semester			
LGL	150	Law & Mediation	3	0	3
LGL	217	Trial Practice & Law Evidence	3	0	3
LGL	230	Legal Transactions	3	0	3
LGL	190	Coordinated Internship	0	5	3
		TOTAL	9	5	12

Total Minimum Credits for Legal Assistant Certificate...43

PHOTOGRAPHY CERTIFICATE

Length: One-year Program - Two semesters plus one Summer session

Purpose: This certificate program is designed to prepare individuals for entry-level employment in careers where visual communication is the primary objective. Photographers in all disciplines may find this program appropriate for upgrading their skills.

Occupational Objectives:

Photojournalist

Industrial Photographer

Advertising Photographer

Sports Photographer

Journal/Magazine Photographer

Freelance Photographer

Photography Retailers

Photographic Processor

Admissions Requirements: Applicant must meet the general requirements of admission to the College. In addition, entry into the Photography program requires proficiency in English as measured by appropriate tests administered by the College Counseling department.

Program Requirements: In order to provide the student with a broad experience in the different types of media, i. e., newspaper, radio and television, the Photography curriculum will feature courses in Journalism, Mass Media, Radio and Television, Writing for Radio and Television, Photography Fundamentals of Design, and Computer Graphics. These courses are in addition to general courses which are also part of the curriculum. Students will be required to prepare a photo portfolio during their last term of the program. The program also features an internship which will provide an opportunity for students to earn hands-on experience in the field. Students who complete the requirements of the program will be awarded a Certificate in Photography.

PHOTOGRAPHY CERTIFICATE

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
PSY	120	Human Relations	3	0	3
ITE		Elective OR	3	0	3
MKT	220	Principles of Advertising			
ENG	101*	Practical Writing I	3	0	3
ENG	120	Survey of Mass Media	3	0	3
PHT	101	Photography I	1	4	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	14	4	16
		Second Semester			
ART	291	Computerized Graphic Design I	2	4	4
BUS	165	Small Business Management	3	0	3
PHT	102	Photography II	1	4	3
PHT	207	Color Slide Workshop	2	3	3
CST	100	Prin. of Public Speaking	3	0	3
		TOTAL	11	11	16
		Summer Session			
ART	283	Computer Graphics I	2	4	4
PHT	190	Coord. Internship in Photography	0	5	3
PHT	226	Commercial Photography	2	3	3
		TOTAL	4	12	10

Total Minimum Credits for Photography Certificate 42

*Students who wish to pursue a baccalaureate degree in photography need to take ENG 111.

PRACTICAL NURSING CERTIFICATE

Length: Four semester program.

Purpose: The practical nurse program prepares students to qualify as contributing members of the health care team, rendering patient care as practical nurses in a variety of health service facilities. At the successful completion of the program, and application approval of the state board of nursing, students will be eligible to sit for the NCLEX exam, leading to licensure as a practical nurse.

Occupational Objective: Position in health-related facilities such as hospitals, clinics, nursing homes, physicians' offices, certain government agencies, or other health-related agencies.

Admission Requirements: To enter the Certificate Practical Nursing program, the student must be a high school graduate or the equivalent. High school courses must include one unit of biology (lab) and one unit of algebra with a "C" grade or better. Students not having Biology and Algebra in high school must complete Biology 20 and Math 03. COMPASS or ASSET prior to consideration for the program. Students who do not meet the above requirements, or who do not score high enough on math, writing, and reading tests to be eligible for ENG 101, must enroll in the college Developmental Studies program to gain proficiency in this area.

This program is open to both male and female applicants. Application should be made by January 15 of the year students plan to enter the program and all application materials must be in place by this date. Out- of-region applicants will be considered after April 1. Out-of-state applicants will be considered for any openings available after May.

> The SWCC service region is Buchanan, Dickenson (partial), Russell, Tazewell counties.

> The nursing law of Virginia addresses criteria for application for licensure. The Virginia State Board of Nursing has the power to deny opportunity to procure license through testing if the applicant has willfully committed a felony/ misdemeanor under laws of the Commonwealth of Virginia or of the United States.

Program Requirements: Upon admission, students must complete a health examination form before enrolling in the classes. During the course of the program, the practical nursing faculty will carefully observe and evaluate the student's suitability for nursing.

Students must earn at least a "C" grade in each of a given semester's PNE prefix courses to continue into the next semester. Students who receive a grade lower than the required "C" must drop out of the program.

Proof of tuberculin skin test (PPD) must be shown on admission to the program and /or before entry into the clinical areas. Previous positive reactors are exempt but must see the program director.

Physical demands in this program include duties that frequently require squatting, bending, kneeling, reaching, and stair climbing; lifting and carrying up to 50 pounds; frequent pushing and pulling up to 200 pounds with assistance; occasional lifting up to 200 pounds with assistance and occasional carrying up to 51-74 pounds. Duties also require constant use of acute sight, hearing, touch, and speech. Environmental conditions include procedures that involve handling of blood and body fluids using universal precautions.

Other Requirements:

1. Professional liability insurance is required of all students.
2. Students are responsible for transportation to classes and to agencies used for clinical experience.
3. Complete required physical examination prior to admission with current immunizations.
4. Be assigned to clinical agencies on a space available basis.
5. Be certified in CPR (American Heart Association Health Care Provider or Red Cross CPR for Professional Rescuers). Student must maintain CPR certification throughout the entire clinical phase of the program.
6. Purchase of uniforms and accessories.
7. Travels to clinical facilities are the responsibility of the student.
8. Students doing clinical rotations must adhere to the policies of clinical affiliate.

Program Readmission: In order to return to the program (usually the following year when the course(s) in question are offered again), the student must meet the following:

1. Apply in writing to the program head <u>at least one semester</u> before the readmission semester for permission to repeat the course(s) in which a grade lower than a "C" was earned.
2. Have at least a 2.0 cumulative GPA at the time of application for readmission.
3. Have a conference with the program head and/or a designated representative to discuss and review a) personal or professional factors which may have an influence in the student's success; and b) academic or professional activities in which student may have undertaken since the interruption of the program.

Decisions on readmission will depend on this criteria <u>and</u> upon the availability of a clinical slot in the desired class. Normally, students will be notified of readmission four to six weeks before the requested admission date, except in situations where there are mitigating circumstances.

A Virginia law may affect an individual's ability to find employment in certain settings as a Licensed Practical Nurse. Effective July 1, 1992, licensed nursing home and similar organizations are prohibited from hiring persons who have been convicted of certain criminal acts. Any person wishing to enter the LPN Program who has committed any legal offenses other than minor traffic violations should discuss these matters with the Director of the Program prior to application.

Financial Requirements: In addition to the usual college tuition and fees, the nursing program requires: Uniforms, Books, Liability Insurance, CPR certification, and Achievement tests.

Clinical Contracts: Individual contracts are in effect with each affiliate clinical agency and these contracts differ in requirements made of students. The general stipulations are as follows:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with any due cause. This will be done with advance notice except in an emergency.
2. Proper uniform must be worn.
3. Published policies of hospital must be adhered to.
4. Immunizations must be current and include Hepatitis B and MMR. Proof of Tuberculin skin test (PPD) must be shown on admission to the program and before beginning a readmission second year. Previous positive reactors are exempt but must see the Program Director.
5. Student releases the hospital, its agents and employees from any liability for any injury or death to himself or damage to his property arising out of agreement of use of hospital's facilities. Contracts for each agency are available in the Nursing office and may be reviewed by the students upon request.
6. Certain clinical facilities require a criminal history record check or drug screen as a condition for placement. All nursing students will be required to provide proof of the background checks and drug screens prior to placement. Associated costs for the background checks are the responsibility of the students.

PRACTICAL NURSING CERTIFICATE

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		Summer Semester			
PNE	155	Body Structure and Function	3	0	3
HLT	130	Nutrition Diet Therapy	1	0	1
SDV	108	College Survival Skills	1	0	1
		TOTAL	5	0	5
		Fall Semester			
PNE	141	Nursing Skills I	2	3	3
PNE	151	Medical Surgical Nursing I	3	3	4
PNE	181	Clinical Experience I	0	15	5
MTH	126	Mathematics for Allied Health	2	0	2
		TOTAL	7	21	14
		Spring Session			
PNE	173	Pharmacology I	2	0	2
PNE	135	Maternal & Child Health Nursing I	4	3	5
PNE	152	Medical Surgical Nursing II	3	3	4
PNE	182	Clinical Experience II	0	15	5
		TOTAL	9	21	16
		Summer Semester			
PNE	290	Geriatric Nursing	2	15	7
PNE	158	Mental Health/Psychiatric Nursing	1	3	2
ENG	101*	Practical Writing I	3	0	3
PNE	145	Trends in Practical Nursing	1	0	1
		TOTAL	7	18	13

Total Credits for the Practical Nursing Certificate..48

*Students who wish to pursue a Baccalaureate degree may substitute ENG 111 for ENG 101.

RADIO/TELEVISION BROADCAST PRODUCTION CERTIFICATE

Length: One-year Program - Two semesters plus one Summer session

Purpose: The curriculum is designed to provide intensive "hands-on" training and instruction in the production and broadcast of television and radio.

Occupational Objectives:

Videographers	Radio Disc Jockeys and Technicians
Graphic Designers	Broadcast Production Assistant
Recording Engineers	Self-employment
Video Technicians	

Admissions Requirements: Applicant must meet the general requirements of admission to the College. In addition, entry into the Radio/Television Broadcast Production program requires proficiency in English as measured by appropriate tests administered by the College Counseling department.

Program Requirements: The student is required to take basic technical courses and general education courses. Students who complete the requirements of the program will be awarded a Certificate in Radio/Television Broadcast Production.

RADIO/TELEVISION BROADCAST PRODUCTION CERTIFICATE

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
BCS	115	Audio Prod. for Electronic Media	3	3	4
ITE		Elective	3	0	3
ENG	101*	Practical Writing I	3	0	3
ENG	120	Survey of Mass Media	3	0	3
CST	100	Principles of Public Speaking	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	16	3	17
		Second Semester			
ART	131	Fundamentals of Design I	3	0	3
BCS	110	Fund. in Video Production	3	3	4
BCS	130	Media Performance	2	3	3
BUS	100	Intro. to Business	3	0	3
PSY	120	Human Relations	3	0	3
		TOTAL	14	6	16
		Summer Session			
ART	283	Computer Graphics I	2	4	4
BCS	190	Coord. Internship in Broadcasting	0	5	3
MKT	100	Principles to Marketing	3	0	3
		TOTAL	5	9	10

Total Minimum Credits for Radio/Television Broadcast
Production Certificate 43

* Students who wish to pursue a baccalaureate degree in communications need to take ENG 111.

CAREER STUDIES CERTIFICATE

Award: Certificate

Length: Variable for part-time students (contain 29, or fewer, credits).

Purpose: The Career Studies Certificate is in response to the non-conventional short-term program of study needs of many adults in our service region for an award which provides for upgrading, re-training, and investigating career possibilities.

Program Options:

Admission Requirements: Student must meet general admission requirements established by the College as well as program specific requirements as outlined in the Program Brochures for specific programs.

The following pages depict <u>selected</u> Career Studies Certificate programs, with required courses shown. Course requirements for all Career Studies Certificate programs may be obtained by contacting the SWCC Admissions Office.

CAREER STUDIES CERTIFICATE

Automated Office & Computer Applications

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
ITE	126	Operating Systems Fundamentals	2	0	2
ITE	140	Spreadsheet Software	3	0	3
AST	141	Word Processing	3	0	3
		TOTAL	8	0	8
Second Semester					
ITE	130	Introduction to Internet Services	3	0	3
ITE	170	Multimedia Software	2	2	3
ART	291	Computerized Graphic Design I	4	0	4
		TOTAL	9	2	10
Third Semester					
ITD	110	Web Design I	4	0	4
ITE	150	Desktop Database Software	3	0	3
		TOTAL	7	0	7

Total Minimum Credits for the Career Studies Certificate
in Automated Office and Computer Applications...25

Carpentry

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
BLD	110	Intro. to Construction	3	0	3
BLD	111	Blueprint Reading and The Building Code	2	2	3
BLD	131	Carpentry Framing I	3	4	5
SDV	106	Preparation for Employment	1	0	1
ENV	193	Studies in Your Role in The Green Environment	1	0	1
		TOTAL	10	6	13
Second Semester					
BLD	132	Carpentry Framing II	3	4	5
BLD	133	Carpentry Framing III	3	4	5
MTH	103	Applied Technical Math I	3	0	3
		TOTAL	9	8	13

Total Minimum Credites for Career Studies Certificate in Carpentry..................26

CAREER STUDIES CERTIFICATE

Commercial Driver Training

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
TRK	101	DOT Safety Rules and Reg.	2	0	2
TRK	102	Preventative Maintenance for Trucks	1	0	1
TRK	103	Tractor Trailer Driving	3	12	9
		TOTAL	6	12	12
		Second Semester			
HLT	100	First Aid and Cardiopulmonary Resuscitation	3	0	3
MIN	288	New Miner Surface Training	1	0	1
SAF	246	Hazardous Chemicals, Materials, and Waste in the Workplace	3	0	3
MTH	103	Applied Technical Mathematics	3	0	3
ENG	100	Basic Occupational Comm.	3	0	3
		TOTAL	13	0	13

Total Minimum Credits for the Career Studies Certificate in
Commercial Driver Training...25

Construction Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
BLD	110	Intro. to Construction	3	0	3
MTH	103	Applied Technical Math I	3	0	3
BLD	109	Understanding and Managing Project Costs	2	0	2
BLD	117	Construction Documents and Construction Law	2	0	2
HLT	100	First Aid and Cardiopulmonary Resuscitation	3	0	3
BLD	165	Construction Field Operations	2	0	2
		TOTAL	15	0	15
		Second Semester			
BLD	188	Intro. to Construction Supervision	3	0	3
BLD	215	OSHA 30 Construction Safety	2	0	2
BLD	231	Construction Estimating I	3	0	3
BLD	217	Managing the Construction Project	2	0	2
BLD	247	Construction Planning and Scheduling	3	0	3
		TOTAL	13	0	13

Total Minimum Credits for the Career Studies Certificate in
Construction Management...28

CAREER STUDIES CERTIFICATE

Customer Care Representative

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
AST	101	Keyboarding I	4	0	4
AST	205	Written & Oral Communication	3	0	3
AST	171	Intro. to Call Center Services	3	0	3
MKT	110	Prin. of Selling	3	0	3
		TOTAL	13	0	13
		Second Semester			
BUS	121	Business Math	3	0	3
ITE	180	Help Desk Support Skills	3	0	3
AST	206	Professional Development	3	0	3
HLT	116	Lifestyle Management	3	0	3
GEO	220	World Regional Geography	3	0	3
		TOTAL	15	0	15

Total Minimum Credits for the Career Studies Certificate in
Customer Care Representative...28

Electrical Installation

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
MTH	103	Applied Technical Math 1	3	0	3
BLD	110	Intro. to Construction	3	0	3
ELE	140	Basic Electricity and Machinery	3	2	4
ELE	135	National Electric Code-Residential	2	3	3
		TOTAL	11	5	13
		Second Semester			
ELE	136	National Electric Code (Commercial)	2	3	3
ELE	156	Electrical Control Systems	2	2	3
ELE	245	Industrial Wiring	2	2	3
BLD	111	Blueprint Reading and The Building Code	2	2	3
SDV	106	Preparation for Employment	1	0	1
ENV	193	Studies in Your Role in The Green Environment	1	0	1
		TOTAL	10	9	14

Total Minimum Credit Requirements for the Career Studies
Certificate in Electrical Installation..27

CAREER STUDIES CERTIFICATE

Electronic Medical Records Specialist

Length: One-year program – Two Semesters

Purpose: An essential component involved in the successful transition from paper to digital medical records that healthcare providers are now experiencing is a staff member with knowledge of computer technology specifically related to the management and processing of health information with an emphasis on the electronic health record. The Electronic Medical Records Career Studies Certificate will develop skills needed for healthcare-specific topics such as medical record content and format; standard techniques for filing, maintenance, and acquisition of health information; processes of collecting, computing, analyzing, interpreting, and presenting data related to health care services; and the role that accrediting and licensing bodies play in the delivery of health care.

Occupational Objectives: Medical Records and Health Information Technician

Admission Requirements: In addition to the admission requirements established for the college, entry into the Administrative Support Technology program requires proficiency in English and reading skills. Deficiencies can be made up through the College's developmental studies program. Students who have completed training in advanced keyboarding may receive college credit for their skills.

Program Requirements: The curriculum will include technical courses in electronic medical records, courses in related areas, general education, and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in medical office related occupations. Students must consult with their faculty advisor in planning their program and selecting electives and/or substitutes. Upon satisfactory completion of the two-semester program, the graduate will be awarded the Career Studies Certificate in Electronic Medical Records.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
HIM	100	Intro to Health Care Delivery System	1	0	1
HLT	143	Medical Terminology I	3	0	3
HIM	130	Healthcare Info Systems	3	0	3
HIM	150	Health Records Management	3	0	3
HIM	230	Info Sys and Tech in Health Care	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	14	0	14
		Second Semester			
BUS	209	Continuous Quality Improvement	3	0	3
HLT	144	Medical Terminology II	3	0	3
HIM	295	Special Topics: Vendor Specific Systems	4	0	4
HIM	233	Electronic Health Records Mgmt	3	0	3
HLT	145	Ethics/Health Care Personnel	2	0	2
		TOTAL	15	0	15

Total Minimum Credit Requirements for the Career Studies Electronic Medical Records Specialist..29

CAREER STUDIES CERTIFICATE

Emergency Medical Technician - Intermediate

Length: Two semesters

Purpose: The purpose of this curriculum is to produce competent entry-level Emergency Medical Technician-Intermediates (EMT I/99) who can service the community with advanced life support care via the Emergency Medical Services (EMS) infrastructure. Upon completion of the program, students will be eligible for National Registry testing and certification in the Commonwealth of Virginia. Employment opportunities for EMT-Intermediates are available with ambulance; fire and rescue services; hospitals; local, state and federal government agencies; and humanitarian relief organizations.

Program Goals: At the completion of the program the graduate will be able to demonstrate:

- the ability to comprehend, apply, and evaluate the clinical information relative to his role as an entry- level EMT-Intermediate;
- technical proficiency in all skills necessary to fulfill the role of an entry-level EMT-Intermediate; and
- personal behaviors consistent with professional and employer expectations for the entry-level EMT-Intermediate.

Admission Requirements: Prior to the starting program courses, the applicant must:

1. meet eligibility requirements as stipulated by the Virginia Office of EMS; and
2. meet the college's general admission requirements.

Accreditation: This program is accredited nationally by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP).

Selection Process:
To be eligible for selection to the program, **interested persons should complete the following process by May 10:**

1. Submit a college admission application.
2. Submit an application to the program (separate document) with required attachments.
3. Take the COMPASS or ASSET placement test (or submit SAT or ACT scores).
4. Have transcripts of previous college courses sent to the college.

At this time the first round of students will be selected. Selection will be based on previous college coursework, entrance exam, interview, and college placement reading scores. A score of 61 on the COMPASS or comparable score on the ASSET, SAT, or ACT is required for first round selection. Should openings still be available, persons who

apply or meet requirements after May 10, or score lower than cut score on the reading exam will be considered.

Program Requirements:

Physical Requirements:
An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description. http://www.vdh.virginia.gov/oems/Training/ResourceCD/Content/TPAM/ Appendix/BLS%20Student%20Handouts.pdf

Academic Requirements:
Students must make a "C" or better in all program core courses. Any student receiving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of "C" or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.
Clinical and Behavioral Requirements:

Selected and supervised student experience is required by the program and will be accomplished at selected, regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips. Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.
Other Requirements:

Applicants accepted to the program are required to submit a health certificate signed by a licensed physician, physician's assistant or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of Hepatitis B inoculation; Tuberculosis testing; and overall general health of the applicant.
The purchase of items such as uniforms, liability insurance and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.

Program Contact:
Bill Akers Jr., MS, NREMTP, Program Director

CAREER STUDIES CERTIFICATE

Emergency Medical Technology - Intermediate

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
EMS	111	Emergency Medical Technician-Basic	4	4	6
EMS	120	EMT-Basic Clinical	1	0	1
		TOTAL	5	4	7
		Second Semester			
EMS	151	Intro to Advanced Life Support	3	2	4
EMS	170	ALS Internship I	0	3	1
EMS	153	Basic ECG Recognition	2	0	2
EMS	157	ALS – Trauma Care	2	2	3
		TOTAL	7	7	10
		Third Semester			
EMS	155	ALS – Medical Care	3	2	4
EMS	159	EMS Special Populations	1	2	2
EMS	172	ALS Clinical Internship II	0	3	1
EMS	173	ALS Field Internship I	0	3	1
		TOTAL	4	10	8

Total Credits for the Career Studies Certificate in
EMT-Intermediate……………………………………………………………25

CAREER STUDIES CERTIFICATE

Emergency Medical Technician - Paramedic

Length: Three semesters

Purpose: The purpose of this curriculum is to produce competent entry-level Emergency Medical Technician- Paramedics (EMT-P) who can service the community with advanced life support care via the Emergency Medical Services (EMS) infrastructure. Upon completion of the program, students will be eligible for National Registry testing and certification in the Commonwealth of Virginia. Employment opportunities are available with ambulance; fire and rescue services; hospitals; local, state, and federal government agencies; and humanitarian relief organizations.

Program Goals:
At the completion of the program, the graduate will be able to demonstrate:

- the ability to comprehend, apply, and evaluate the clinical information relative to his role as an entry-level paramedic;

- technical proficiency in all skills necessary to fulfill the role of an entry-level paramedic; and

- personal behaviors consistent with professional and employer expectations for the entry-level paramedic.

Admission Requirements:
Prior to the starting program courses, the applicant must:
1. meet eligibility requirements as stipulated by the Virginia Office of EMS; and
2. be certified and EMT-Intermediate and have three years experience at or above that level; and
3. meet the college's general admission requirements.

Accreditation:
This program is accredited nationally by the Committee of Accreditation of Allied Health Educational Programs (CAAHEP).

Selection Process:
To be eligible for selection to the program, **interested persons should complete the following process by May 10:**
1. Submit a college admission application.
2. Submit an application to the program (separate document) with required attachments.
3. Take the COMPASS or ASSET placement test (or submit SAT or ACT scores).
4. Have transcripts of previous college courses sent to the college.

At this time, the first round of students will be selected. Selection will be based on previous college coursework, interview, entranc exam, and college placement reading scores. A score of 61 on the COMPASS or comparable score on ASSET, SAT, or ACT is required for first round selevtion. Should openings be available, persons who apply or

meet requirements after May 10, or score lower than the cut score on the reading exam will be considered.

Program Requirements:
Physical Requirements:

An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description.

http://www.vdh.virginia.gov/OEMS/Training/TPAM/Appendix/ALS%20Part%20ll.pdf

Academic Requirements:

Students must make a "C" or better in all program core courses. Any student recieving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of "C" or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.

Clinical and Behavioral Requirements:

Selected and supervised student experience is required by the program and will be accomplished at selevted regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips. Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.

Other Requirements:

Applicants accepted into the program are required to submit a health certificate signed by a licensed physician, physician's assistant or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of the Hepatitis B inoculation; Tuberculosis testinng; and overall general health of the applicant.

The purchase of items such as uniforms, liability insurance, and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity advantageous in subsequent course scheduling.

Program Contact:

Bill Akers Jr., MS, NREMTP, Program Director, 276.964.7729, Bill.Akers@sw.edu

CAREER STUDIES CERTIFICATE

Emergency Medical Technician - Paramedic

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
EMS	213	ALS Skills Development	0	4	2
SDV		Student Development/Orientation	1	0	1
		TOTAL	1	4	3
		Second Semester			
EMS	201	EMS Professional Development	2	0	2
EMS	205	Advanced Pathophysiology	3	0	3
EMS	207	Advanced Patient Assessment	2	2	3
EMS	242	ALS Clinical Internship III	0	3	1
EMS	243	ALS Field Internship III	0	3	1
EMS/FIR/HLT		EMS, Fire Programs, or HLT Elective	3	0	3
		TOTAL	10	8	13
		Third Semester			
EMS	209	Advanced Pharmacology	3	2	4
EMS	211	Operations	1	2	2
EMS	244	ALS Clinical Internship IV	0	3	1
EMS	245	ALS Field Internship IV	0	3	1
		TOTAL	4	10	8

Total Minimum Credits for the Career Studies Certificate in Emergency Medical Technician- Paramedic 24

CAREER STUDIES CERTIFICATE

Entrepreneurship

Length: Two Semesters

Purpose: The Career Studies Certificate in Entrepreneurship is designed to provide stduents with the knowledge and skills to start and run a small business. The focus of the program will include communications, accounting, designing a businesses are critical to the foundation of America and provide unlimited opportunities for entrepreneurs.

Admission Requirements: Admission to the program is governed by the established admission requirements to the College.

Program Requirements: The Entrepreneurship Career Studies Certificate program enables the student to develop the skill set needed to operate a small business.

Delivery Modes: Program is available throught web-based, traditional or on-site courses.

Entrepreneurship

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ENG	100	Bsic Occupational Communication	3	0	3
BUS	116	Entrepreneurship	3	0	3
BUS	160	Legal Aspects of Small Business Operations	1	0	1
AST	117	Keyboarding for Computer Usage	1	0	1
ACC	111	Accounting I	3	0	3
SDV	108	College Survival Skills	1	0	1
		TOTAL	12	0	12
		Second Semester			
MKT	100	Principles of Marketing	3	0	3
ACC	134	Small Business Taxes	2	0	2
ITE	115	Intro. to Computer Concepts and Applications	3	0	3
ACC	124	Payroll Accounting	2	0	2
BUS	298	Capstone Project or			
PSY	120	Human Relations	3	0	3
		TOTAL	13	0	13

Total Minimum Credits for the Career Studies Certificate in
Entrepreneurship 25

CAREER STUDIES CERTIFICATE

Entrepreneurship for Building Trades

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
BUS	160	Legal Aspects of Small Business Operations	1	0	1
BUS	165	Small Business Management	3	0	3
BLD	110	Introduction to Construction	3	0	3
ENG	101	Practical Writing I	3	0	3
BUS	121	Business Math 1 or			
MTH	103	Applied Technical Math I	3	0	3
		TOTAL	13	0	13
		Second Semester			
ACC	134	Small Business Taxes	3	0	3
MKT	100	Principles of Marketing	3	0	3
PSY	120	Human Relations	3	0	3
ACC	111	Accounting I	3	0	3
		TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in
Entrepreneurship for Building Trades..25

CAREER STUDIES CERTIFICATE

Fire Science Technology

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
FST	100	Principles of Emergency Services	3	0	3
FST	110	Fire Behavior and Combustion	3	0	3
FST	112	Hazardous Materials Chemistry I	3	0	3
FST	115	Fire Prevention	3	0	3
		TOTAL	12	0	12
		Second Semester			
FST	120	Occupational Health and Safety	3	0	3
FST	205	Fire Protection Hydraulics and Water Supply	3	0	3
FST	220	Building Construction for Fire Protection	3	0	3
FST	235	Strategy and Tactics	3	0	3
		TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in
Fire Science Technology 24

Health Care Technician
(Geriatric Nurse Aide)

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
HCT	101	Health Care Technician I	3	0	3
HCT	102	Health Care Technician II	2	3	3
HCT	115	Medication Management	3	0	3
HCT	195	Topics in Medication Management Lab	0	2	1
HMS	231	Gerontology I	3	0	3
		TOTAL	11	5	13
		Second Semester			
HMS	232	Gerontology II	3	0	3
HCT	119	Advanced Health Care Technician	3	2	4
HCT	100	Introduction to Health Career Occupations	3	0	3
HCT	117	Common Causes of Problem Behavior	3	0	3
		TOTAL	12	2	13

Total Minimum Credits for the Career Studies Certificate in
Health Care Technician 26

CAREER STUDIES CERTIFICATE

Geographic Information Systems

Length: One Year Program -- Two Semester

Purpose: The Geographic Information Systems (GIS) Career Studies Certificate program is designed to prepare students for entry-level positions in technologies using Geographic Information Systems or to expand the knowledge and skills of individuals presently employed in a wide variety of careers in business, computer technologies, environmental, urban and regional planning, government, forestry, land management and many more. This program also provides an excellent foundation for continued study of GIS at the university and four year college level.

Occupational Objectives: GIS technician/specialist

Admission Requirements: Admission to the program is governed by the established admission requirements to the College.

Program Requirements: GIS is a merging of technological fields and traditional disciplines. The demand for GIS trained employees continues to grow at an astounding rate. The demand for employees with GIS knowledge is increasing in every imaginable area such as commercial business and marketing, management, computer programming, systems/business analysis, urban and regional planning, governmental agencies, forestry, wildlife management, parks and recreation, land management. To be successful in this program, students must possess basic computer literacy to include keyboard and mouse usage and file management. This advanced Career Studies Certificate program requires a strong background in microcomputer applications, including word processing, spreadsheets, databases, operating systems, Internet maneuverability, and e-mail. Students can obtain proficiency in these areas by completing ITE115. Upon satisfactory completion of the program, the graduate will be awarded the Career Studies Certificate in Geographic Information Systems. This certificate will compliment degrees in just about any discipline.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
GEO	200	Introduction to Physical Geography	3	0	3
ITE	150	Desktop Datebase Software	3	0	3
ITD	132	Structured Query Language	3	0	3
GIS	200	Geographical Information Systems I	3	2	4
		TOTAL	12	2	13
		Second Semester			
GIS	201	Geographical Information Systems II	3	2	4
GIS	205	GIS 3-D Analysis	3	2	4
GIS	210	Understanding Geographic Data	3	2	4
		TOTAL	9	6	12

Total Minimum Credits for the Career Studies Certificate in
Geographic Information Systems 25

Pre-Requisites or Co-Requisites: Associate Applied Science - Information System Technology or ITE 115 - Introduction to Computer Applications and Concepts, or Division approval

CAREER STUDIES CERTIFICATE

Heating, Ventilation, & Air Conditioning (HVAC)

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
AIR	121	Air Cond, & Refrigeration I	3	3	4
AIR	122	Air Cond. & Refrigeration II	3	3	4
AIR	134	Circuits & Controls I	2	3	3
ELE	140	Basic Electricity & Machinery	3	2	4
MTH	103	Applied Technical Math I	3	0	3
		TOTAL	14	11	18
		Second Semester			
BLD	110	Intro. to Construction	3	0	3
ENV	193	Studies in Your Role in the Green Environment	1	0	1
BLD	111	Blueprint Reading and the Building Code	2	2	3
AIR	136	Circuits & Controls III	3	3	4
		TOTAL	9	5	11

Total Minimum Credits for the Career Studies Certificate in HVAC 29

Heavy Equipment/Geo-Technical Drilling

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
HVE	161	Heavy Equipment Operation	2	15	7
DRF	169	Blueprint Reading/Heavy Const.	1	2	2
SAF	127	Industrial Safety	2	0	2
		TOTAL	5	17	11

Total Minimum Credits for the Career Studies Certificate in
Heavy Equipment/Geo-Technical Drilling 11

CAREER STUDIES CERTIFICATE

Help Desk Support

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITE	215	Advanced Computer Applications and Integration	3	0	3
ITN	113	Active Directory (Specify Version) or			
ITN	171	Unix I	3	0	3
ITD	130	Database Fundamentals or			
ITE	150	Desktop Database Software	3	0	3
ITE	180	Help Desk Support Skills	4	0	4
		TOTAL	13	0	13
		Second Semester			
ITN	101	Introduction to Network Concepts	3	0	3
BUS	106	Security Awareness for Managers	3	0	3
ETR	149	PC Repair	2	0	2
ITE	182	User Support/Help Desk Principles	4	0	4
		TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in
Help Desk Support 25
*Program prerequisite: keyboarding skills and ITE 115.

Horticultural Management

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
HRT	110	Principles of Horticulture	3	0	3
HRT	115	Plant Propagation	2	2	3
BUS	165	Small Business Management	3	0	3
		TOTAL	8	2	9
		Second Semester			
HRT	227	Professional Landscape Mgmt.	2	2	3
HRT	205	Soils	2	2	3
BUS	116	Entrepreneurship	3	0	3
HRT	121	Greenhouse Crop Production	2	2	3
		TOTAL	9	6	12
		Third Semester			
HRT	207	Plant Pest Management	2	2	3
HRT	226	Greenhouse Management	2	2	3
HRT	190	Coordinated Internship	0	10	2
		TOTAL	4	14	8

Total Minimum Credits for the Career Studies Certificate
in Horticultural Management...29

CAREER STUDIES CERTIFICATE

Industrial Maintenance

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
AIR	134	Circuits & Controls I	2	3	3
ELE	140	Basic Electricity & Machinery	3	2	4
MAC	161	Machine Shop Practices I	2	3	3
MTH	103	Applied Technical Math I	3	0	3
MEC	161	Basic Fluid Mechanics	2	2	3
		TOTAL	12	10	16
		Second Semester			
DRF	165	Arch. Blueprint Reading	2	2	3
ELE	135	National Electrical Code - Res.	3	2	4
ELE	195	Topics in Elementary PLC's	2	2	3
WEL	117	Oxyfuel Welding and Cutting	2	3	3
		TOTAL	9	9	13

Total Minimum Credits for the Career Studies Certificate in Industrial Maintenance..29

CAREER STUDIES CERTIFICATE

Information Technology

Length: Two Semesters

Purpose: The Career Studies Certificate in Information Technology is designed to provide students with the knowledge and skills to operate a personal computer. The focus of the program will include general computer usage, keyboarding, Windows, Word, Excel, PowerPoint, email and Internet. The program covers the competencies for the Digital Literacy certification.

Admission Requirements: Admission to the program is governed by the established admission requirements to the College.

Program Requirements: The Information Technology Career Studies Certificate program enables the student to develop the skill set needed to be productive with a personal computer on the job.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
SDV	108	College Survival Skills	1	0	1
AST	117	Keyboarding for Computer Use	1	0	1
ITE	101	Introduction to Microcomputers	2	0	2
AST	132	Word Processing I	1	0	1
AST	133	Word Processing II	1	0	1
PSY	120	Human Relations	3	0	3
ITE	115	Intro. to Computer Concepts and Applications	3	0	3
		TOTAL	12	0	12
Second Semester					
ENG	100	Basic Occuptional Communications	3	0	3
BUS	121	Business Mathematics I	3	0	3
ITE	298	Seminar and Project in Information Technology	3	0	3
ITE	130	Introduction to Internet Services	3	0	3
		TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in Information Technology...24

CAREER STUDIES CERTIFICATE

Interaction Design

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ART	283	Computer Graphics I	2	4	4
ITD	110	Web Page Design	4	0	4
BCS	115	Audio Production of Electronic Media	3	3	4
ART	131	Fundamentals of Design I	1	4	3
		TOTAL	10	11	15
		Second Semester			
ART	284	Computer Graphics II	2	4	4
ITD	210	Web Design II	3	0	3
BCS	110	Fundamentals in Video Production	3	3	4
ITE	170	Multimedia Software	3	0	3
		TOTAL	11	7	14

Total Minimum Credits for the Career Studies Certificate in

Interaction Design..29

Java and Oracle Associate

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITP	100	Software Design	3	0	3
ITP	120	Java Programming I	4	0	4
ITD	130	Database Fundamentals	3	0	3
ITD	132	Structured Query Language	3	0	3
		TOTAL	13	0	13
		Second Semester			
ITD	134	PL/SQL Programming	4	0	4
ITD	55	Certification Preparation	1	0	1
ITD	250	Database Architecture and Adm.	3	0	3
ITP	220	Java Programming II	4	0	4
		TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in

Java and Oracle Associate 25

CAREER STUDIES CERTIFICATE

Management of Information Technology

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
BUS 106	Security Awareness for Managers	3	0	3
ITN 101	Introduction to Network Concepts	3	0	3
	TOTAL	6	0	6
	Second Semester			
BUS 211	Managing Technology Resources	3	0	3
BUS 212	Disaster Recovery Planning for Managers	3	0	3
	TOTAL	6	0	6

Total Minimum Credits for the Career Studies Certificate in
Management of Information Technology…………………....………………..…12

CAREER STUDIES CERTIFICATE

Management Specialist

Length: One Semester

Purpose: The Career Studies Certificate in Management Specialist is designed to provide students with business management concepts and skills needed to advance to higher levels of management responsibilites. This certificate may be beneficial to those students who want to train or retrain in preparation for a career change or add management job skills to an existing degree.

Occupational Objectives: Depending on student's existing level of education, the program is designed to prepare students for promotion in thier current place of employment or for an entry-level management position. Specific positions include supervisor, management trainee, team leader, department head, office manager, sales manager, branch manager, and executive assistant.

Admission Requirements: Admission to the program is governed by the established admission requirements to the College.

Program Requirements: General college curricular admission

Delivery Modes: Program is available through web-based, traditional or on-site courses.

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
BUS 100	Introduction to Business	3	0	3
BUS 111	Principles of Supervision	3	0	3
BUS 200	Principles of Management	3	0	3
Elective*	BUS Elective	3	0	3
Elective*	BUS Elective	3	0	3
	TOTAL	15	0	15

*Select two courses to satisfy the elective: BUS116, BUS 165, BUS 201, BUS 204, BUS 205, BUS 209, BUS 265

CAREER STUDIES CERTIFICATE

Masonry

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
BLD	110	Intro. to Construction	3	0	3
BLD	111	Blueprint Reading and The Building Code	2	2	3
BLD	147	Principles of Block and Bricklaying I	2	2	3
BLD	148	Principles of Block and Bricklaying II	2	2	3
MTH	103	Applied Technical Math I	3	0	3
		TOTAL	12	6	15
		Second Semester			
BLD	193	Studies in Advance Masonry Concepts I	3	2	4
BLD	195	Topics in Advance Masonry Concepts II	3	2	4
BLD	295	Topics in Advance Masonry Concepts III	3	2	4
SDV	106	Preparation for Employment	1	0	1
ENV	193	Studies in Your Role in the Green Environment	1	0	1
		TOTAL	11	6	14

Total Minimum Credits for the Career Studies Certificate
in Masonry..29

CAREER STUDIES CERTIFICATE

Medical Coding

Length: Two Semester Program

Purpose: The health care industry has the need for trained individuals who can provide the necessary skills for medical coding. This course is designed to prepare individuals with the knowledge and skills necessary for employment as a medical coder. This objective is fulfilled through study and application by coding medical records using a variety of nomenclatures and classification systems.

Admission Requirements: The student in Medical Coding must be a high school graduate or equivalent. Students should be proficient in reading, writing, and English skills. The student in Medical Coding must abide by all community college policies as well as hospital policies while enrolled in the program.

Criminal Background Checks/Drug Testing:
Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.

Program Requirements: A final grade of "C" or better is required for all courses in the program. Students receiving less than a "C" in the first semester for any course(s), must take the course(s) over prior to continuation into the second semester. A grade less than a "C" in any second semester course must be repeated prior to receiving the certificate.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
HLT	143	Medical Terminology	3	0	3
BIO	145*	Human Anatomy and Physiology for Health Sciences*	4	3	5
HLT	140	Intro. to Health Related Careers	2	0	2
ENG	101	Practical Writing I or			
ENG	111	College Composition I	3	0	3
		TOTAL	12	3	13
		Second Semester			
HIT	253	Health Records Coding	4	0	4
HLT	144	Medical Terminology II	3	0	3
HIT	254	Advanced Coding & Reimburse.	3	0	3
ITE	102**	Computers and Info. Systems	2	0	2
		TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in Medical Coding..25

* BIO 141-142 may be substituted for BIO 145.
** Students may check with Health Technology faculty for substitution.

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CAREER STUDIES CERTIFICATE

Network Administration

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITN	113	Active Directory (Specify Version)	3	0	3
ITN	101	Introduction to Network Concepts	3	0	3
	TOTAL		6	0	6
		Second Semester			
ITN	112	Network Infrastructure (Specify Version)	4	0	4
ITN	111	Server Administration (Specify Version)	4	0	4
		TOTAL	8	0	8

Total Minimum Credits for the Career Studies Certificate in Network Administration... 14

Network and Database Administration

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITN	101	Introduction to Network Concepts	3	0	3
ITN	113	Active Directory (Specify Version)	3	0	3
ITD	110	Web Design I	4	0	4
ITN	216	Database Server Administration (Specify Version)	4	0	4
		TOTAL	14	0	14
		Second Semester			
ITN	112	Network Infrastructure (Specify Version)	4	0	4
ITN	111	Server Administration (Specify Version)	4	0	4
ITD	132	Structured Query Language	3	0	3
		TOTAL	11	0	11

Total Minimum Credits for the Career Studies Certificate in Network and Database Administration 25

Prerequisites or Division Approval: ITE 115 Basic Computer Literacy, ITE 150 Desktop Database Software.

CAREER STUDIES CERTIFICATE

Network Security

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITN	260	Network Security Basics	4	0	4
ITN	267	Legal Topics in Network Security	4	0	4
ITN	275	Incident Response and Computer Forensics	4	0	4
		TOTAL	12	0	12
		Second Semester			
ITN	261	Network Attacks, Computer Crime and Hacking	4	0	4
ITN	262	Network Communication, Security and Authentication	4	0	4
ITN	263	Internet/Intranet Firewalls and E-Commerce Security	3	0	3
ITN	266	Network Security Layers	3	0	3
		TOTAL	14	0	14

Total Minimum Credits for the Career Studies Certificate in
Network Security 26

Pre-requisites or Co-Requisites:
Career Studies Certification Network Administration or
Associate Applied Science--Information Systems Technology or
ITN 101 Introduction to Network Concepts, ITN 115 Windows 2003 Server, ITN 116 Windows 2003 Network Infrastructure, ITN 118 Windows 2003 Active Directory or Division approval.

Oracle Associate Database Administrator

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITD	130	Database Fundamentals	3	0	3
ITD	132	Structured Query Language	3	0	3
ITN	113	Active Directory	3	0	3
ITN	101	Introduction to Network Concepts	3	0	3
		TOTAL	12	0	12
		Second Semester			
ITN	111	Server Administration	4	0	4
ITN	170	Linux System Administration	3	0	3
ITD	134	PL/SQL Programming	4	0	4
ITD	250	Database Architecture & Administration	3	0	3
		TOTAL	14	0	14

Total Minimum Credits for the Career Studies Certificate in
Oracle Associate Database Administrator..……………........….26

CAREER STUDIES CERTIFICATE

Oracle Specialist

Length: One Semester

Purpose: A relational datadase management system is the core component for an organization's information management system, the most popular of which is Oracle. This program will provide students with the knowledge and experience to work with an Oracle database. The student will be exposed to the theory and practice of basic databases, SQL and PL/SQL, enabling them to manage enterprise critical resources.

Occupational Objectives:
Adds a Skill Set for Existing IT works
Datebase Administrator
SQL Developer
Applicaiton Developer
DBA

Admission Requirements: Admission to the program is governed by the established admission requirements to the College.

Program Requirements: The student will complete course work in SQL, PL/SQL, and database administration. The courses will emphasis the Oracle Certified Associate competencies. Students will complete assignments to broaden their understanding of Oracle database administration in a networked environment. Upon satisfactory completion of the one-semester program, the graduate will be awarded a Career Studies Certificate in Oracle Specialist certificate. In addition, they will have been exposed to the competencies for the Oracle Certified Associate in the Database Administrator and PL/SQL Developer certification paths.

Delivery Modes: Program is available through web-based, traditional or on-site courses.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
ITD	130	Database Fundamentals	3	0	3
ITD	132	Structured Query Language	3	0	3
ITD	134	PL/SQL Programming	4	0	4
ITD	250	Database Architecture and Administration	3	0	3
		TOTAL	13	0	13

Total Minimum Credits for the Career Studies Certificate in
Oracle Specialist 13

CAREER STUDIES CERTIFICATE

Pharmacy Technician

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
HLT	143	Medical Terminology I	3	0	3
HLT	240	Consumer Health Education	3	0	3
HLT	261	Basic Pharmacy I	3	0	3
AST	232	Microcomputer Office App.	3	0	3
		TOTAL	12	0	12
		Second Semester*			
HLT	144	Medical Terminology II	3	0	3
HLT	195	Topics in Gen. Pharm. Lab	0	2	1
HLT	250	General Pharmacology	3	0	3
HLT	290	Coordinated Internship in Pharmacy Technician	1	6	4
MTH	126	Mathematics for Allied Health	2	0	2
		TOTAL	9	8	13

Total Credits for the Career Studies Certificate in
Pharmacy Technician 25

* Students are required to have a background check from the Department of State Police by the completion of the first semester.

Phlebotomy

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
MDL	105	Phlebotomy	2	3	3
AST	232	Microcomputer Office App.	3	0	3
		TOTAL	5	3	6
		Second Semester*			
MDL	190**	Coord. Prac. in Phlebotomy	0	15	3
MDL	198	Seminar & Project in Phlebotomy	3	0	3
		TOTAL	3	15	6

Total Minimum Credits for the Career Studies Certificate
in Phlebotomy 12

* Students are required to have a background check from the Department of State Police by the completion of the first semester.
** Students must complete MDL 190 within one year of taking MDL 105.

CAREER STUDIES CERTIFICATE

Plumbing

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
BLD	110	Intro. to Construction	3	0	3
BLD	111	Blueprint Reading and the Building Code	2	2	3
BLD	193	Studies in Plumbing Technologies I	3	2	4
BLD	195	Topics in Plumbing Technologies II	3	0	3
ENV	193	Studies in Your Role in the Green Environment	1	0	1
		TOTAL	12	4	14
Second Semester					
BLD	143	Plumbing and Blueprint Reading	3	0	3
BLD	199	Topics in Plumbing Technologies III	3	0	3
SDV	106	Preparation for Employment	1	0	1
MTH	103	Applied Technical Math I	3	0	3
BLD	295	Topics in Plumbing Technologies IV	3	0	3
		TOTAL	13	0	13

Total Minimum Credits for the Career Studies Certificate in Plumbing.......................27

CAREER STUDIES CERTIFICATE

Registered Nurse to Paramedic Bridge

Length: Two semesters

Purpose: This program is designed to address areas of the National Paramedic Curriculum not clearly addressed in RN curricula. Concentration will be placed on advanced airway management, pre-hospital patient assessment, trauma and medical emergency management. Pediatrics, hazardous material incidents, rescue and ambulance operations are also covered. The program will prepare the RN for the National Registry paramedic examination.

Program Goals: At the completion of the program the graduate will be able to demonstrate:

- the ability to comprehend, apply, and evaluate the clinical information relative to his role as an entry- level paramedic;
- technical proficiency in all skills necessary to fulfill the role of an entry-level paramedic; and
- personal behaviors consistent with professional and employer expectations for the entry-level paramedic.

Admission Requirements: Prior to the starting program courses, the applicant must:

1. Meet eligibility requirements as stipulated by the Virginia Office of EMS
2. Meet the college's general admission requirements.
3. Have a current Registered Nurse License
4. Have current EMT or higher EMS certification
5. Be currently "active" as an RN or EMS provider

Accreditation: This program is accredited nationally by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP).

Selection Process: To be eligible for admission to the program, interested persons should complete the following:
1. Submit a college admission application.
2. Submit an application to the program (separate document) with required attachments.
3. Submit proof of RN licensure and EMT certification
4. Have transcripts of previous college courses sent to the college.

Program Requirements:

Physical Requirements: An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description.

http://www.vdh.virginia.gov/OEMS/Training/TPAM/Appendix/ALS%20Part%20II.pdf

Academic Requirements: Students must make a "C" or better in all program core courses. Any student receiving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated once, with a written contract drafted containing the requirements of the remediation. Remediated courses must be completed with a final grade of "C" or better. Dismissal from the program shall result if the student does not meet the requirements of the contract.

Clinical and Behavioral Requirements: Selected and supervised student experience is required by the program and will be accomplished at selected, regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips. Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.

Other Requirements: Applicants accepted to the program are required to submit a health certificate signed by a licensed physician, physician's assistant or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of Hepatitis B inoculation; Tuberculosis testing; and overall general health of the applicant.

The purchase of items such as uniforms, liability insurance and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.

Program Contact: Bill Akers Jr., MS, NREMTP, Program Director
276-964-7729   Bill.Akers@sw.edu

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
First Semester					
EMS	193	Studies in RN to Paramedic I	4	0	4
EMS	290	Coord. Intern. RN to P Clinical I	0	3	2
		TOTAL	4	3	6
Second Semester					
EMS	293	Studies in RN to Paramedic II	3	0	3
EMS	290	Coord. Intern. RN to P Clinical II	0	3	2
		TOTAL	3	3	5

Total Minimum Credits for the Career Studies Certificate in Registered Nurse to Paramedic Bridge..11

NOTE: This program is offered biannually until demand dictates otherwise.

CAREER STUDIES CERTIFICATE

Renewable Energy and Energy Efficiency

Length: Two semesters

Purpose: The Renewable Energy and Energy Efficiency Career Studies Certificate is designed to prepare students for employment upon graduation as technicians in the energy sector with emphasis on installation of solar, wind, and geothermal power generation systems.

Occupational Objectives:

Solar Power Technician
Wind Energy Technician
Power System Service Technician

Admission Requirements: A student eligible for admission to the college (see appropriate section of college catalog) will normally be considered for admission into this program.

Program Requirements: The Renewable Energy and Energy Efficiency Career Studies Certificate is a two-semester programs consisting of courses in mathematics, electrical, energy technology, solar thermal tehcnology, wind power generation, electrical codes, conventional and alternative energy systems and geothermal applications.

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
MTH	103	Applied Technical Math I	3	0	3
ENV	170	Fundamentals of Energy Technology	2	0	2
ENE	100	Conventional and Alternative Energy Systems	3	3	4
ENV	193	Topics in: Your Role in the Green Environment	1	0	1
ELE	140	Basic Electricity & Machinery	3	2	4
		TOTAL	12	5	14
		Second Semester			
ENE	105	Solar Thermal Active and Passive Technology	3	3	4
ECO	115	Understanding our Environment - An Economic Introduction	3	0	3
ENE	220	Wind Power Generation	3	3	4
ENE	230	Geothermal Applications	3	3	4
		TOTAL	12	9	15

Total Minimum Credits for the Career Studies Certificate in
Renewable Energy and Energy Efficiency..29

CAREER STUDIES CERTIFICATE

Residential Electrical Codes

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ELE	115	Basic Electricity	3	0	3
ELE	131	National Electric Code I	3	0	3
ELE	127	Residential Wiring Methods	2	2	3
SDV	107	Career Education	3	0	3
		TOTAL	11	2	12

Total Minimum Credits for the Career Studies Certificate in
Residential Electrical Codes...12

Software Development

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITP	100	Software Design	3	0	3
ITD	110	Web Page Design	4	0	4
ITN	170	Linux System Administration or			
ITN	113	Active Directory	3	0	3
		TOTAL	10	0	10
		Second Semester			
ITP	132	C++ Programming I	4	0	4
ITP	120	Java Programming I	4	0	4
ITD	132	Structured Query Language	3	0	3
ITP	140	Client Side Scripting	3	0	3
		TOTAL	14	0	14

Total Minimum Credits for the Career Studies Certificate in
Software Development.. 24

CAREER STUDIES CERTIFICATE

Traditional Music

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
MUS 193	Studies in Traditional Music I**		3 repeatable for up to 12	
	Second Semester			
MUS 293	Studies in Traditional Music II**		3 repeatable for up to 12	

Total Minimum Credits for the Career Studies Certificate in Traditional Music..........24
**Sections of Traditional Music include: Fiddle, Bluegrass Banjo, Clawhammer Banjo, Mandolin, Traditional Guitar, Flatpicking Guitar, Acoustic Bass and Bluegrass String Band.
Courses may be repeated for credit.

Web Professional

Course Number	Course Title	Lecture Hours	Lab Hours	Course Credits
	First Semester			
ITN 101	Intro. to Network Concepts	3	0	3
ITD 110	Web Design I	4	0	4
ITE 115	Intro. to Computer Apps and Concepts	3	0	3
ITD 112	Designing Web Page Graphics	3	0	3
ITD 220	E-Commerce Administration	3	0	3
	TOTAL	16	0	16
	Second Semester			
ITD 132	Structural Query Language	3	0	3
ITD 212	Interactive Web Design	3	0	3
ITN 224	Web Server Management	3	0	3
ITD 210	Web Page Design II	3	0	3
	TOTAL	12	0	12

Total Minimum Credits for the Career Studies Certificate in
Web Professional...28

CAREER STUDIES CERTIFICATE

Web Programming

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
ITD	210	Web Page Design II	3	0	3
ITP	136	C# Programming I	4	0	4
ITP	112	Visual Basic.NET I	4	0	4
ITP	140	Client Side Scripting	3	0	3
		TOTAL	14	0	14
		Second Semester			
ITP	215	XML Web Services	3	0	3
ITP	244	ASP.NET--Server Side Programming	4	0	4
ITP	240	Server Side Programming	3	0	3
ITN	224	Web Server Management	3	0	3
		TOTAL	13	0	13

Total Minimum Credits for the Career Studies Certificate in
Web Programming...27

Prerequisites or Co-Requisites:
Career Studies Certification Software Development or
Associate Applied Science--Information Systems Technology or
ITD 110 Web Page Design, ITP 100 Software Design, ITP 120 Java Programming I, ITP 220 Java Programming II,
ITD 132 Structured Query Language and ITN 115 Windows 2003 Server or
Division approval.

Welding

Course Number		Course Title	Lecture Hours	Lab Hours	Course Credits
		First Semester			
WEL	150	Welding Drawing and Interpretation	3	0	3
BLD	110	Intro. to Construction	3	0	3
WEL	117	Oxyacetylene Welding & Cutting	2	3	3
WEL	123	Arc Welding I	2	3	3
		TOTAL	10	6	12
		Second Semester			
WEL	126	Pipe Welding I	2	3	3
WEL	130	Inert Gas Welding	3	0	3
WEL	141	Welder Qualification Test	3	0	3
WEL	160	Semi-Auto. Weld. Processes	2	3	3
ENV	193	Your Role in the Green Environment	1	0	1
		TOTAL	11	6	13

Total Minimum Credits for the Career Studies Certificate in Welding 25

DESCRIPTION OF COURSES

Course Numbers

Courses numbered 01-09 are Developmental Studies Courses (Preparatory). The credits earned in these courses are not applicable toward associate degree programs; however, upon approval of the Vice President of Instruction, some developmental courses may provide credit applicable in basic occupational certificate programs. Students may re-register for these courses in subsequent semesters as necessary (special permission required after the first repeat) until the course objectives are completed.

Courses numbered 10-99 are courses for certificate programs. The credits earned in these courses are applicable toward certificate programs, but are not applicable toward an associate degree.

Courses numbered 100-199 are courses applicable toward an associate degree and/or certificate and diploma programs.

Courses numbered 200-299 are sophomore level courses applicable toward an associate degree and/or certificate and diploma programs.

Course Credits

The credit for each course is indicated after the title in the course description. One credit is equivalent to one collegiate semester hour credit.

Course Hours

The number of lecture hours in class each week (lecture, seminar and discussion hours) and/or the number of laboratory hours in class each week (including laboratory, shop, supervised practice, and cooperative work experience) are indicated for each course in the course description. The number of lecture and laboratory hours in class each week are also called "contact" hours because this is time spent under the direct supervision of a faculty member. In addition to the lecture and laboratory hours in class each week, as listed in the course description, each student also must spend some time on out-of-class assignments under his/her own direction. Usually, each credit per course requires an average of three hours of in-class and out-of-class study each week.

Course Prerequisites

If any prerequisites are required before enrolling in a course, they will be identified in the course description. Courses in special sequences (usually identified by the numerals I-II) require that prior courses or their equivalent be completed before enrolling in the advanced courses in the sequence. When corequisites are required for a course, usually the corequisites must be taken at the same time. The prerequisites or their equivalent must be completed satisfactorily before enrolling in a course unless special permission is obtained from the Dean of Instruction and instructional department.

General Usage Courses

A number of general usage courses, with variable credits of 1 to 5, are available for use in most curricula and prefix sections. These courses may be applied and used as shown below:

(Insert Appropriate Prefix) 90, 190, 290 COORDINATED INTERNSHIP IN (Insert Appropriate Discipline)
(Insert Appropriate Prefix) 93, 193, 293 STUDIES IN (Insert Appropriate Studies)
(Insert Appropriate Prefix) 95, 195, 295 TOPICS IN (Insert Appropriate Topic)
(Insert Appropriate Prefix) 96, 196, 296 ON-SITE TRAINING IN (Insert Appropriate Discipline)
(Insert Appropriate Prefix) 97, 197; 297 COOPERATIVE EDUCATION IN (Insert Appropriate Discipline)
(Insert Appropriate Prefix) 98, 198, 298 SEMINAR & PROJECT IN (Insert Appropriate Discipline)
(Insert Appropriate Prefix) 99, 199, 299 SUPERVISED STUDY IN (Insert Appropriate Descipline)

Refer to the "General Usage Courses" section in the course description portion of *The Catalog* for further information regarding the intended content and use of these courses.

GENERAL USAGE COURSES

( ) 90,190, 290 COORDINATED INTERNSHIP IN ( ) (1-5 cr.)—Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/Practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours per week.

( ) 93,193, 293 STUDIES IN ( ) (1-5 cr.)—Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Variable hours.

( ) 95, 195, 295 TOPICS IN ( ) (1-5 cr.)—Provides an opportunity to explore topical areas of an evolving nature or of short-term importance in the discipline.   Variable hours.

( ) 96, 196, 296 ( ) ON-SITE TRAINING IN (1-5 cr.)—Offers opportunities for career orientation and training without pay in selected businesses and industry. Supervised and coordinated by the College. Credit/work ratio not to exceed 1:5 hours. Variable hours per week.

( ) 97, 197, 297 COOPERATIVE EDUCATION IN ( ) (1-5 cr.)—Provides on-the-job training for pay in approved business, industrial and service firms. Applies to all occupational-technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. Variable hours per week.

(   ) 98, 198, 298 SEMINAR AND PROJECT IN ( ) (1-5 cr.)—Requires completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field.   Variable hours per week.

( ) 99, 199, 299 SUPERVISED STUDY IN ( ) (1-5 cr.)—Assigns problems for independent study outside the normal classroom setting under the guidance and direction of an instructor. Incorporates prior experience and instruction in the discipline. Variable hours per week.

ACCOUNTING (ACC)

ACC 100 INTRODUCTION TO BOOKKEEPING (5 cr.)—Presents the accounting cycle, focusing on the routine recording of data journals and ledgers. Includes payroll preparation and practical procedures. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

ACC 105 SECRETARIAL ACCOUNTING (3 cr.)—Presents practical accounting for secretaries. Covers the accounting cycle—journals, ledgers, working papers, closing of books—payrolls, financial statements, accounting forms and practical procedures. Lecture 3 hours per week.

ACC 111 ACCOUNTING I (3-4 cr.)—Presents fundamental accounting concepts and principles governing the accounting cycle, journals, ledgers, working papers, and preparation of financial statements for sole proprietorships. A laboratory co-requisite (ACC 113) may be required as identified by the college. Lecture 3-4 hours per week.

ACC 112 ACCOUNTING II (3-4 cr.)—Continues Accounting 111. Presents the analysis of financial statements for sole proprietorships, partnerships and corporations. A laboratory co-requisite (ACC 114) may be required as identified by the college. Lecture 3-4 hours per week.

ACC 124 PAYROLL ACCOUNTING (2-3 cr.)—Presents accounting systems and methods used in computing and recording payroll to include payroll taxes and compliance with federal and state legislation. Prerequisite ACC 211 or Division approval. Lecture 2-3 hours per week.

ACC 134 SMALL BUSINESS TAXES (2-3 cr.)—Introduces taxes most frequently encountered in business. Includes payroll, sales, property, and income tax. Lecture 2-3 hours per week.

ACC 211 PRINCIPLES OF ACCOUNTING I (3-4 cr.)—Presents accounting principles and their application to various businesses. Covers the accounting cycle, income determination, and financial reporting. Studies services, merchandising, and includes internal controls. A laboratory co-requisite (ACC 213) may be required as identified by the College. Lecture 3-4 hours per week.

ACC 212 PRINCIPLES OF ACCOUNTING II (3-4 cr.)—Continues Accounting Principles 211 with emphasis on the application to partnerships, corporations and the study of financial analysis. Includes an introduction to cost managerial accounting concepts. Prerequisite ACC 211. A laboratory co-requisite (ACC 214) may be required as identified by the college. Lecture 3-4 hours per week.

ACC 213 PRINCIPLES OF ACCOUNTING LABORATORY I (1 cr.)—Provides problem-solving experience to supplement instruction in ACC 211. Should be taken concurrently with ACC 211, in appropriate curricula, as identified by the college. Co-requisite ACC 211 may be required. Laboratory 2 hours per week.

ACC 214 PRINCIPLES OF ACCOUNTING LABORATORY II (1cr.)—Provides problem-solving experience to supplement instruction in ACC 212. Co-requisite ACC 212 may be required. Laboratory 2 hours per week.

ACC 215 COMPUTERIZED ACCOUNTING (3-4 cr.)—Introduces the computer in solving accounting problems. Focuses on operation of computers. Presents the accounting cycles and financial statement preparation in a computerized system and other applications for financial and managerial accounting. Prerequisite or corequisite ACC 212 or equivalent. Lecture 3-4 hours per week.

ACC 217 ANALYZING FINANCIAL STATEMENTS (3 cr.)—Explains the generation and limitations of data, techniques for analyzing the flow of a business's funds, and the methods of selecting and interpreting financial ratios. Offers analytical techniques through the use of comprehensive case studies. Prerequisite ACC 211. Lecture 3 hours per week.

ACC 221 INTERMEDIATE ACCOUNTING I (3-4 cr.)—Covers accounting principles and theory, including a review of the accounting cycle and accounting for current assets, current liabilities and investments. Introduces various accounting approaches and demonstrates the effect of these approaches on the financial statement users. Prerequisite ACC 212 or equivalent. Lecture 3-4 hours per week.

ACC 222 INTERMEDIATE ACCOUNTING II (3-4 cr.)—Continues accounting principles and theory with emphasis on accounting for fixed assets, intangibles, corporate capital structure, long-term liabilities, and investments. Prerequisite ACC 212 or equivalent. Lecture 3-4 hours per week.

ACC 225 MANAGERIAL ACCOUNTING (3 cr.)—Presents the preparation, analysis and interpretation of accounting data for managerial decision making. Includes cost control, capital budgeting and pricing decisions. Prerequisite ACC 212 or equivalent. Lecture 3 hours per week.

ACC 231 COST ACCOUNTING I (3 cr.)—Studies cost accounting methods and reporting as applied to job order, process, and standard cost accounting systems. Includes cost control, and other topics. Prerequisite ACC 212 or equivalent or Division approval. Lecture 3 hours per week.

ACC 232 COST ACCOUNTING II (3 cr.)—Studies profit analysis and other topics. Prerequisite ACC 231 or equivalent. Lecture 3 hours per week.

ACC 241 AUDITING I (3 cr.)—Presents techniques of investigating, interpreting, and appraising accounting records and assertions. Studies internal control design and evaluation, evidence-gathering techniques and other topics. Prerequisite or co-requisite ACC 222 or equivalent. Lecture 3 hours per week.

ACC 242 AUDITING II (3 cr.)—Studies advanced sampling concepts, audit reports, controls, evidence, auditing standards, ethics, and legal liability. Prerequisite or co-requisite ACC 241 or equivalent. Lecture 3 hours per week.

ACC 261 PRINCIPLES OF FEDERAL TAXATION I (3 cr.)—Presents the study of federal taxation as it relates to individuals and related entities. Includes tax planning, compliance and reporting. Prerequisite ACC 211 or Division approval. Lecture 3 hours per week.

ACC 262 PRINCIPLES OF FEDERAL TAXATION II (3 cr.)—Presents the study of federal taxation as it relates to partnerships, corporations, and other tax entities. Includes tax planning, compliance, and reporting. Prerequisite ACC 261 or Division approval. Lecture 3 hours per week.

ADMINISTRATION OF JUSTICE (ADJ)

ADJ 100 SURVEY OF CRIMINAL JUSTICE (3 cr.)—Presents an overview of the United States criminal justice system; introduces the major system components—law enforcement, judiciary, and corrections. Lecture 3 hours per week .

ADJ 105 THE JUVENILE JUSTICE SYSTEM (3 cr.)—Presents the evolution, philosophy, structures and processes of the American juvenile delinquency system; surveys the right of juveniles, dispositional alternatives, rehabilitation methods and current trends. Lecture 3 hours per week.

ADJ 111-112 LAW ENFORCEMENT ORGANIZATION & ADMINISTRATION I-II (3 cr.) (3 cr.)—Teaches the principles of organization and administration of law enforcement agencies. Studies the management of line operations, staff and auxiliary services, investigative and juvenile units. Introduces the concept of data processing; examines policies, procedures, rules, and regulations pertaining to crime prevention. Surveys concepts of protection of life and property, detection of offenses, and apprehension of offenders. Prerequisite ADJ 111 for ADJ 112 or Divisional approval. Lecture 3 hours per week.

ADJ 115 PATROL PROCEDURES (3 cr.)—Describes, instructs and evaluates street-level procedures commonly employed by patrol officers in everyday law enforcement operations. Lecture 3 hours per week.

ADJ 120 INTRODUCTION TO COURTS (3 cr.)—Presents an overview of the American judiciary— the federal and 50 state judicial systems with emphasis on criminal court structures, functions, and personnel; surveys the judicial system in Commonwealth of Virginia. Lecture 3 hours per week.

ADJ 127 FIREARMS AND MARKSMANSHIP (3 cr.)—Surveys lethal weapons in current use and current views on weapon types and ammunition design. Examines the legal guidelines as to use of deadly force, safety in handling of weaponry, and weapon care and cleaning; marksmanship instruction under standard range conditions. Prerequisite permission of instructor. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ADJ 131 LEGAL EVIDENCE (3 cr.)—Surveys the identification, degrees, and admissibility of evidence for criminal prosecution; examines pre-trial and trial procedures as they pertain to the rules of evidence. Lecture 1-2 hours. Studio instruction 4 hours. Total 5-6 hours per week.

ADJ 139 PRIVATE DETECTIVES/INVESTIGATORS (3-5 cr.)—Instructs the student in investigative techniques, criminal law and procedure, rules of evidence, the techniques and mechanics of arrest. Meets state certification requirements for private investigators licensing. Lecture 3-5 hours per week.

ADJ 140 INTRODUCTION TO CORRECTIONS (3 cr.)—Focuses on societal responses to the offender. Traces the evolution of practices based on philosophies of retribution, deterrence, and rehabilitation. Reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system. Lecture 3 hours per week.

ADJ 147 LOCAL ADULT DETENTION FACILITIES (3 cr.)—Studies security procedures in adult detention facilities, the criteria for effective supervision of inmates, the correctional aspects of inmate discipline, and the handling of "special inmates." Presents concepts, programs, and planning considerations for jail management and the operation of adult detention facilities. Lecture 3 hours per week.

ADJ 166 FISH AND GAME REGULATIONS (3 cr.)—Surveys state and federal laws regulating inland fishing, water fowl and game animals. Lecture 3 hours per week.

ADJ 171-172 FORENSIC SCIENCE I-II (4 cr.) (4 cr.)—Introduces student to crime scene technology, procedures for sketching, diagramming and using casting materials. Surveys the concepts of forensic chemistry, fingerprint classification/identification and latent techniques, drug identification, hair and fiber evidence, death investigation techniques, thin-layer chromatographic methods, and arson materials examination. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ADJ 201 CRIMINOLOGY I (3 cr.)—Studies current and historical data pertaining to criminal and other deviant behavior. Examines theories that explain crime and criminal behavior in human society. Lecture 3 hours per week.

ADJ 211-212 CRIMINAL LAW, EVIDENCE AND PROCEDURES I-II (3 cr.) (3 cr.)—Teaches the elements of proof for major and common crimes and the legal classification of offenses. Studies the kinds, degrees and admissibility of evidence and its presentation in criminal proceedings with emphasis on legal guidelines for methods and techniques of evidence acquisition. Surveys the procedural requirements from arrest to final disposition in the various American court systems with focus on the Virginia jurisdiction. Lecture 3 hours per week.

ADJ 215 REPORT WRITING (3 cr.)—Introduces the basic mechanics and procedures of report writing; emphasizes clear, concise and accurate writing of communications as they relate to law enforcement records, investigations, and research. Lecture 3 hours per week.

ADJ 227 CONSTITUTIONAL LAW FOR JUSTICE PERSONNEL (3 cr.)—Surveys the basic guarantees of liberty described in the U.S. Constitution and the historical development of these restrictions on government power, primarily through U.S. Supreme Court decisions. Reviews rights of free speech, press, assembly, as well as criminal procedure guarantees (to counsel, jury trial, habeas corpus, etc.) as they apply to the activities of those in the criminal justice system. Lecture 3 hours per week.

ADJ 228 NARCOTICS AND DANGEROUS DRUGS (3 cr.)—Surveys the historical and current usage of narcotics and dangerous drugs. Teaches the identification and classification of such drugs and emphasizes the symptoms and effects on their users. Examines investigative methods and procedures utilized in law enforcement efforts against illicit drug usage. Lecture 3 hours per week.

ADJ 236 PRINCIPLES OF CRIMINAL INVESTIGATION (3 cr.)—Surveys the fundamentals of criminal investigation procedures and techniques. Examines crime scene search, collecting, handling and preserving of evidence. Lecture 3 hours per week.

ADJ 237 ADVANCED CRIMINAL INVESTIGATION (3 cr.)—Introduces specialized tools and scientific aids used in criminal investigation. Applies investigative techniques to specific situations and preparation of trial evidence. Prerequisite ADJ 236 or divisional approval. Lecture 3 hours per week.

ADJ 245 MANAGEMENT OF CORRECTIONAL FACILITIES (3 cr.)—Describes management options and operational implications for staffing, security, safety, and treatment. Considers impact of changes in public policy on corrections. Lecture 3 hours per week.

ADJ 247 CRIMINAL BEHAVIOR (3 cr.)—Introduces and evaluates the concepts of normal and abnormal behavior. Focuses on the psychological and sociological aspects of criminal and other deviant behavior patterns. Lecture 3 hours per week.

ADJ 248 PROBATION, PAROLE, AND TREATMENT (3 cr.)—Surveys the philosophy, history, organization, personnel and functioning of traditional and innovative probation and parole programs; considers major treatment models for clients. Lectures 3 hours per week.

AGRICULTURE (AGR)

AGR 141 INTRODUCTION TO ANIMAL SCIENCE AND TECHNOLOGY (4 cr.)---Introduces the science and technology involved in sustainable animal production and management practices. Includes beef, sheep, horses, dairy, swine, goats, and poultry, with emphasis on practical experiences in laboratory and farm settings. Lecture 3 hours. Laboratory 2-3 hours. Total 5-6 hours per week.

AGR 142 INTRODUCTION TO PLANT SCIENCE AND TECHNOLOGY (3 cr.)---Introduces students to plant science, ecology, plant morphology, plant and soil relations and energy conversions. Includes surveying agricultural crops and their importance in the economy. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 143 INTRODUCTION TO AGRIBUSINESS AND FINANCIAL MANAGEMENT (3 cr.)---Introduces agriculture's importance to society and ways to start a farm or agribusiness. Evaluates forms of business including cooperatives and create financial statements and reports necessary for routine accounting and tax preparation. Utilizes financial tools for decision making, budgets and time value of money. Explores retirement, transition planning, personal financial management, and capital acquisition techniques. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 144 AGRICULTURE HUMAN RESOURCE MANAGEMENT (3 cr.)---Covers principles and management practices utilized to attract, retain and motivate agricultural employees. Emphasizes interviewing techniques, employer/ employee relationships, motivation theory, legal issues, safety, and environmental concerns. Includes development of team building and interpersonal skills through activities and cases. Explores diversity and cultural differences at they apply to human resource compliance and performance issues. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 205 SOIL FERTILITY AND MANAGEMENT (3 cr.)—Studies the factors influencing soil productivity with emphasis upon fertilizer materials from production to application. Discusses time, sources, and soil acidity. Presents soil testing techniques, interpretation of soil tests, and the addition of nutrients to correct or prevent deficiencies. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

AGR 231 AGRIBUSINESS MARKETING, RISK MANAGEMENT, AND ENTREPRENEURSHIP (3 cr.)— Covers marketing techniques required to create an effective marketing plan addressing product, price, place, promotion, and people considerations of an agribusiness. Emphasizes unique aspects of agricultural products and risk management including price fluctuations and biosecurity. Projects explore entrepreneurship and creative marketing plans for a proposed farm or agribusiness. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 232 PROFESSIONAL SELLING FOR AGRIBUSINESS (3 cr.)—Explores sales and marketing careers in the agricultural industry. Analyzes customer's personality profile and needs to formulate an effecive value-based sales presentation. Covers psychology of personality styles, buyer motivation, and conflict resolution. Researches agriculture customers and products to make a realistic sales call with actual sales professionals. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 233 FOOD PRODUCTION, SAFETY, BIOSECURITY, AND QUALITY CONTROL (3 cr.)— Explores food production practices and their influence on food product quality, nutrition, and safety. Covers processing techniques for reducing spoilage, increasing farmer's share of the food dollar, and diversifying farm incomes. Includes analytical methods for tracking and reporting quality control practices. Explores equipment, packaging, laws, regulations, standards, and financial sources for on farm and small-scale processing. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours.

AGR 234 CHEMICAL APPLICATION AND PEST MANAGEMENT (3 cr.)—Covers proper application of pesticides and other agricultural chemicals used in landscape and turf management and in production agriculture; including application methods, equipment calibration and configuration, occupational health and safety, and pesticide laws and regulations. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 241 AGRICULTURAL POLICY, LEADERSHIP, AND PROFESSIONAL SERVICE (3 cr.)—Enhances personal and professional leadership skills to build consensus and collaboratively solve agricultural issues. Partifipates in the Virginia legislative process to track and influence relevant policy. Partners with stakeholders and key agricultural groups to advocate agriculture's importance to society and remove barriers that prevent farm/agribusiness acquisition and transition. Indentifies relevant professional service and leaderships opportunities that will affect changes for the benefit of agricultural and rural communities. Covers current policy and public programs related to taxation, land use, environmental protection, water quality, population changes, water conservation, climate change and quality of rural life will be explored. Reinforces written and oral communication skills. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 242 ANIMAL PRODUCTION, PRODUCTS AND EMERGING TECHNOLOGIES (3 cr.)—Covers science-based animal production and management systems; principles of nutrition, reproduction, economics, and breeding and selection of beef cattle, swine, sheep, poultry, goats, fish and other speciality animal enterprises. Includes managment practices, marketing, houseing, and mitigation of environmental impacts with emphasis on profitable business enterprises for small to medium sized producters and collaborative opportunities to expand profitability for traditional enterprises. Introduces emerging technologies influencing production practices and new products. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 244 AGRICULTURAL ALTERNATIVE ENERGY SOLUTIONS (3 cr.)—Explores agricultural animals, plants, and speciality enterprises that produce energy as well as wind and solar energy solutions. Encourages students to assess current energy use of an existing residential or commercial site and implement energy reduction strategies, and student's proposals implement current technology solutions for on-site energy production. Provides the foundation for discovering new ways to help farm and agribusinesses through basic electrical and chemical concepts and to reduce costs and research new opportunities for enhancing profitability. Includes field trips to active energy conservation and production sites, reinforcing classroom instruction. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

AGR 297 COOPERATIVE EDUCATION (1-5 cr.)—Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

AIR CONDITIONING AND REFRIGERATION (AIR)

AIR 121-122 AIR CONDITIONING AND REFRIGERATION I-II (3-4 cr.) (3-4 cr.)—Studies refrigeration theory, characteristics of refrigerants, temperatue, and pressure, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, and metering devices. Presents charging and evaluation of systems and leak detection. Explores servcing the basic system. Explains use and care of oils and additives and troubleshooting of small commercial systems. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

AIR 134-135 CIRCUITS AND CONTROLS I-II (3-4 cr.) (3-4 cr.)—Presents circuit diagrams for air conditioning units, reading and drawing of circuit diagrams, types of electrical controls. Includes analysis of air conditioning circuits, components, analysis and characteristics of circuits and controls, testing and servicing. Introduces electricity for air conditioning which includes circuit elements, direct current circuits and motors, single and three-phase circuits and motors, power distribution systems, and protective devices. Studies the electron and its behavior in passive and active circuits and components. Demonstrates electronic components and circuits as applied to aid conditioning system. Lecture 2-3 hours. Laboratory 2-6 hours. Total 4-9 hours per week.

AIR 136 CIRCUITS AND CONTROLS III (3-4 cr.)—Introduces types of circuits and controls used in home, commercial and industrial air conditioning systems. Includes servicing and installation procedures for electrical unloading of compressors, single- and two-stage thermostats, and electrical regulaiton of fan speed for air volume control. Explains operational and safety control and how schematic and pictorial diagrams are used in these systems. Lecture 2-3 hours. Laboratory 3-6 hours. Total 4-9 hours per week.

AIR 154-155 HEATING SYSTEMS I-II (3-4 cr.) (3-4 cr.)—Introduces types of fuels and their characteristics of combustion; types, components and characteristics of burners, and burner efficiency analyzers. Studies forced air heating systems including troubleshooting, preventative maintenance and servicing. Lecture 2-3 hours. Laboratory 2-6 hours. Total 4-8 hours per week.

AIR 161-162 HEATING, AIR AND REFRIGERATION CALCULATIONS I-II (3-4 cr.)(3-4 cr.)—Introduces fractions, decimals, sign of operations, equations, Ohm's Law, subtraction, multiplication and division of signed numbers. Teaches fundamentals of algebra, expression of stated problems in mathematical form, and solutions of equations. Lecture 2-3 hours. Laboratory 0-3 hours. Total 3-6 hours per week.

AIR 165-166 AIR CONDITIONING SYSTEMS I-II (3-4 cr.)(3-4 cr.)—Introduces comfort survey, house construction, load calculations, types of distribution systems, and equipment selection. Introduces designing, layout, installing and adjusting of duct systems, job costs, and bidding of job. Lecture 2-3 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

AIR 235 HEAT PUMPS (3-4 cr.)—Studies theory and operation of reverse cycle refrigeration including supplementary heat as applied to heat pump systems, including service, installation and maintenance. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

ARCHITECTURE (ARC)

ARC 121 ARCHITECTURAL DRAFTING I (3 cr.)—Introduces techniques of architectural drafting, including lettering, dimensioning, and symbols. Requires production of plans, sections, and elevations of a simple building. Studies use of common reference material and the organization of architectural working drawings. Requires development of a limited set of working drawings, including a site plan, related details, and pictorial drawings. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ART 100 ART APPRECIATION (3 cr.)—Introduces art from prehistoric times to the present day. Describes architectural styles, sculpture, photography, printmaking, and painting techniques. Lecture 3 hours per week.

ART 101-102 HISTORY AND APPRECIATION OF ART I-II (3 cr.) (3 cr.)—Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. Lecture 3 hours per week.

ART 111-112 INTRODUCTION TO THE ARTS I-II (3 cr.) (3 cr.)—Parallels studio classes and provides a general survey of the arts. Emphasizes perception, using major monuments of painting, sculpture, and architecture as examples. Lecture 3 hours per week.

ART 114 GENERAL ART (3 cr.)—Introduces art to the student without previous training. Provides studio exercises in drawing, painting, and two- and three-dimensional design. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ART 121-122 DRAWING I-II (3-4 cr.) (3-4 cr.)—Develops basic drawing skills and understanding of visual language through studio instruction/lecture. Introduces concepts such as proportion, space, perspective, tone and composition as applied to still life, landscape and the figure. Uses drawing media such as pencil, charcoal, ink wash and color media. Includes field trips and gallery assignments as appropriate. Lecture 1-2 hours. Studio instruction 4 hours. Total 5-6 hours per week.

ART 125 INTRODUCTION TO PAINTING (3 cr.)—Introduces study of color, composition and painting techniques. Places emphasis on experimentation and enjoyment of oil and/or acrylic paints and the fundamentals of tools and materials. Lecture 2 hours. Studio instruction 3 hours. Total 5 hours per week.

ART 131-132 FUNDAMENTALS OF DESIGN I-II (3-4 cr.) (3-4 cr.)—Explores the concepts of two-and three-dimensional design and color. May include field trips as required. Lecture 1-2 hours. Studio instruction 4 hours. Total 5-6 hours per week.

ART 133 VISUAL ARTS FOUNDATION (4 cr.)--Covers tools and techniques, design concepts and principles, color theory and an introduction to the computer for graphic use. Applies to all field of Visual Art. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

ART 171-172 AIRBRUSH I-II (3-4 cr.) (3-4 cr.)—Teaches concepts and use of the airbrush in a variety of applications. Prerequisites ART 121, ART 131, ART 140, or divisional approval. Lectures 2 hours. Studio instruction 2-4 hours. Total 4-8 hours per week.

ART 201-202 HISTORY OF ART I-II (3 cr.) (3 cr.)—Studies the historical conflict of art of the ancient, medieval, Renaissance and modern worlds. Includes research project. Lecture 3 hours per week.

ART 221-222 DRAWING III-IV (3-4 cr.) (3-4 cr.)—Introduces advanced concepts and techniques of drawing as applied to the figure, still life and landscape. Gives additional instruction in composition, modeling, space and perspective. Encourages individual approaches to drawing. Lecture 1-2 hours. Studio instruction 4 hours. Total 5-6 hours per week.

ART 231-232 SCULPTURE I-II (3-4 cr.) (3-4 cr.)—Introduces sculptural concepts and methods of production in traditional and contemporary media. Includes clay, plaster, wood, stone, metal, plastics and terra cotta. May include field trips. Prerequisite ART 131. Lecture 1-2 hours. Studio instruction 4 hours. total 5-6 hours per week.

ART 243-244 WATERCOLOR I-II (3-4 cr.) (3-4 cr.)—Presents abstract and representational painting in watercolor with emphasis on design, color, composition, technique and value. Prerequisite ART 131, or divisional approval. Lecture 1-2 hours. Studio instruction 2-4 hours. Total 4-6 hours per week.

ART 271-272 PRINTMAKING I-II (3 cr.) (3 cr.)—Introduces the student to the full range of printmaking techniques. Includes woodcut, silkscreen, etching, and lithography. Provides historical perspective on printmaking. Lecture 2 hours. Studio instruction 3 hours. Total 5 hours per week.

ART 283-284 COMPUTER GRAPHICS I-II (3-4 cr.) (3-4 cr.)—Utilizes microcomputers and software to produce computer graphics. Employs techniques learned to solve studio projects which reinforce instruction and are appropriate for portfolio use. Lecture 1-2 hours. Studio instruction 3-4 hours. Total 5- 6 hours per week.

ART 286 COMMUNICATION ARTS WORKSHOP (3 cr.)—Requires special project and/or research focusing on career opportunities. Teaches resume and portfolio preparation and interview techniques. May include internship with a professional design firm. Requires instructor's approval. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 287 PORTFOLIO AND RESUME PREPARATION (1-4 cr.)—Focuses on portfolio preparation, resume writing, and job interviewing for students. Recommended for final semester program students. Requires instructor's approval. Lecture 1-2 hours. Studio instruction 0-4 hours. Total 1-6 hours per week.

ART 290 COORDINATED INTERNSHIP (1 cr.)--Provides hands-on learning and offers experience in arts display, presentation, packaging, branding, marketing, promotion, and operations management. Lab 2 hours per week.

ART 291-292 COMPUTERIZED GRAPHIC DESIGN I-II (4 cr.) (4 cr.)—Introduces students to using the computer as a publishing system. Examines stages of a publication from typesetting, laying out, creating and digitizing of illustrations and photographs, to the final printing. Requires students to write, design, illustrate and print pamphlets on the computer, including one full-color publication. Lecture 2 hours. Studio instruction 4 hours. Total 6 hours per week.

AMERICAN SIGN LANGUAGE (ASL)

ASL 101-102 AMERICAN SIGN LANGUAGE I-II (3-4 cr.)—Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, fingerspelling, and grammatical nonmanual signals. Focuses on communicative competence. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases understanding of the Deaf Community. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

ADMINISTRATIVE SUPPORT TECHNOLOGY (AST)

AST 100 OFFICE SKILLS REVIEW (3-4 cr.)—Reviews office skills such as keyboarding, shorthand, machine transcription, and other selected office topics based on individual needs. Lecture 3-4 hours per week.

AST 101 KEYBOARDING I (2-4 cr.)—Teaches the alpha/numeric keyboard with emphasis on correct techniques, speed, and accuracy. Teaches formatting of basic personal and business correspondence, reports, and tabulation. A laboratory co-requisite (AST 103) may be required. Lecture 2-4 hours per week.

AST 102 KEYBOARDING II (2-4 cr.)—Develops keyboarding and document production skills with emphasis on preparation of specialized business documents. Continues skill-building for speed and accuracy. Prerequisite AST 101. A laboratory co-requisite (AST 104) may be required. Lecture 2-4 hours per week.

AST 107 EDITING/PROOFREADING SKILLS (3 cr.)—Develops skills essential to creating and editing business documents. Covers grammar, spelling, diction, punctuation, capitalization, and other usage problems. Pre-requisite or co-requisite AST 101 or equivalent. Lecture 3 hours per week.

AST 108 TELEPHONE TECHNIQUES (1cr.)--Provides guidelines and techniques for communicating effectively on the telephone and for handling telephone problems efficiently, pleasantly, and constructively. Lecture 1 hour per week.

AST 114 KEYBOARDING FOR INFORMATION PROCESSING (1-2 cr.)—Teaches the alphabetic and numeric keys: develops correct techniques and competency in the use of computer keyboards. May include basic correspondence and report formats. A laboratory co-requisite (AST 115) may be required. Lecture 1-2 hours per week.

AST 115 KEYBOARDING FOR INFORMATION PROCESSING LABORATORY (1 cr.)—Provides supplemental instruction in AST 114. Should be taken concurrently with AST 114, in appropriate curricula, as identified by the College. Laboratory 2 hours per week.

AST 117 KEYBOARDING FOR COMPUTER USAGE (1 cr.)--Teaches the alphabetic keyboard and 10-key pad. Develops correct keying techniques. Lecture 1 hour per week.

AST 130 OFFICE PROCEDURES (3 cr.)—Introduces general functions and duties performed in the office. Prerequisite AST 101. Lecture 3 hours per week.

AST 132 WORD PROCESSING I (SPECIFY SOFTWARE) (1 cr.)—Introduces students to a word processing program to create, edit, save, and print documents. Must demonstrate typing proficiency. Lecture 1 hour per week.

AST 133 WORD PROCESSING II (SPECIFY SOFTWARE) (1 cr.)—Presents formatting and editing features of a word processing program. Prerequisite AST 132 or equivalent. Lecture 1 hour per week.

AST 134 WORD PROCESSING III (SPECIFY SOFTWARE) (1 cr.)—Continues work with formatting features and text enhancements of a word processing program. Prerequisite AST 133 or equivalent. Lecture 1 hour per week.

AST 136 OFFICE RECORD KEEPING (3 cr.)—Introduces types of record keeping duties performed in the office, such as financial, tax, payroll, and inventory. Utilizes specialized software where applicable. Lecture 3 hours per week.

AST 137 RECORDS MANAGEMENT (3 cr.)—Teaches filing and records management procedures for hard copy, electronic, and micrographic systems. Identifies equipment, supplies, and solutions to records management problems. Lecture 3 hours per week.

AST 140 INTRODUCTION TO WINDOWS (1-2 cr.)—Introduces students to windows and provides basic concepts and commands necessary in the Windows environment. Lecture 1-2 hours per week.

AST 141 WORD PROCESSING I (SPECIFY SOFTWARE) (2-4 cr.)—Teaches creating and editing documents, including line and page layouts, columns, fonts, search/replace, cut/paste, spell/thesaurus, and advanced editing and formatting features of word processing software. Prerequisite AST 101 or equivalent. A laboratory co-requisite (AST 144) may be required. Lecture 2-4 hours per week.

AST 142 WORD PROCESSING II (SPECIFY SOFTWARE) (2-4 cr.)—Teaches advanced software applications. Prerequisite AST 141 or equivalent. A laboratory co-requisite (AST 145) may be required. Lecture 2-4 hours per week.

AST 147 INTRODUCTION TO PRESENTATION SOFTWARE (SPECIFY SOFTWARE) (1-2 cr.)—Introduces presentation options including slides, transparencies, and other forms of presentations. Lecture 1-2 hours per week.

AST 150 DESKTOP PUBLISHING I (SPECIFY SOFTWARE) (1 cr.)—Presents desktop publishing features including page layout and design, font selection, and use of graphic images. Lecture 1 hour per week.

AST 151 DESKTOP PUBLISHING II (SPECIFY SOFTWARE) (1 cr.)—Presents software features for refining page layout and design, includes scaling and cropping graphics, and creating styles. Lecture 1 hour per week.

AST 152 DESKTOP PUBLISHING III (SPECIFY SOFTWARE) (1 cr.)—Continues work with page layout and design. Covers handling simple multi-page text documents with master pages and combining text and graphics. Lecture 1 hour per week.

AST 176 MEDICAL OFFICE/UNIT MANAGEMENT (3 cr.)—Develops administrative and support skills for a medical setting including effective communications, ethical and legal issues, research techniques, and insurance claims processing. Lecture 3 hours per week.

AST 171 INTRODUCTION TO CALL CENTER SERVICES (3 cr.)—Introduces concepts and skills needed to be an effective customer service representative for a telephone service operation. Covers call center theory and technology, interpersonal communication skills, customer relations attitudes, telecommunications techniques, and professional procedures to handle a variety of customer service sales requests. Lecture 3 hours per week.

AST 201 KEYBOARDING III (2-4 cr.)—Develops decision-making skills, speed, and accuracy in production keying. Applies word processing skills in creating specialized business documents. Prerequisite AST 102. A laboratory co-requisite (AST 202) may be required. Lecture 2-4 hours per week.

AST 202 Keyboarding III Laboratory (1 CR)--Provides supplemental instruction in AST 201. Should be taken concurrently with AST 201, in appropriate curricula, as identified by the college.Laboratory 2 hours per week.

AST 205 BUSINESS COMMUNICATIONS (3 cr.)—Teaches techniques of oral and written communications. Emphasizes writing and presenting business-related materials. Prerequisite AST 114-115 or equivalent. Lecture 3 hours per week.

AST 206 PROFESSIONAL DEVELOPMENT (3 cr.)—Develops professional awareness in handling business and social situations. Emphasizes goal setting, critical thinking, decision-making, and employment skills. Lecture 3 hours per week.

AST 232 MICROCOMPUTER OFFICE APPLICATIONS (2-4 cr.)—Teaches production of business documents using word processing, databases, and spreadsheets. Emphasizes document production to meet business and industry standard. Prerequisite AST 101 or equivalent. A laboratory co-requisite (AST 233) may be required. Lecture 2-4 hours per week.

AST 234 RECORDS AND DATABASE MANAGEMENT (2-4 cr.)—Teaches filing and records management procedures using microcomputer database software. Incorporates both manual and electronic methods for managing information. A laboratory co-requisite (AST 235) may be required. Lecture 2-4 hours per week.

AST 238 WORD PROCESSING ADVANCED OPERATIONS (2-4 cr.)—Teaches advanced word processing features including working with merge files, macros, and graphics; develops competence in the production of complex documents. Pre-requisite or co-requisite AST 102 or equivalent. A laboratory co-requisite (AST 239) may be required. Lecture 2-4 hours per week.

AST 240 MACHINE TRANSCRIPTION (2-4 cr.)—Develops proficiency in the use of transcribing equipment to produce business documents. Emphasizes listening techniques, business English, and proper formatting. Includes production rates and mailable copy requirements. A laboratory co-requisite (AST 241) may be required. Corequisite AST 102 or equivalent. Lecture 2-4 hours per week.

AST 243 OFFICE ADMINISTRATION I (3 cr.)—Develops an understanding of the administrative support role and the skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes the development of critical-thinking, problem-solving, and job performance skills in a business office environment. Prerequisite AST 101. Lecture 3 hours per week.

AST 244 OFFICE ADMINISTRATION II (3 cr.)—Enhances skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes administrative and supervisory role of the office professional. Includes travel and meeting planning, office budgeting and financial procedures, international issues, and career development. Prerequisite AST 243 or equivalent. Lecture 3 hours per week.

AST 295 TOPICS IN MEDICAL AND LEGAL PROCEDURES (3 cr.)---Introduces general office procedures used in law offices and courts and develops skills in the performance of administrative and support services in a medical setting. Prerequisite: AST 102/104; Co-requisite: AST 244 or equivalent. Lecture 3 hours per week.

BROADCASTING (BCS)

BCS 110 FUNDAMENTALS IN VIDEO PRODUCTION (4 cr.)—Studies the use of video equipment and the application of production techniques and aesthetics in electronic media, and develops fundamental production skills through hands on experience with cameras, video tape records, video seitcher, graphic computers, and lighting instruments. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BCS 115 AUDIO PRODUCTION FOR ELECTRONIC MEDIA (4 cr.)—Studies the use of audio equipment and the application of production techniques and aesthetics in electronic media, and develops production skills through hands-on experience with mixing boards, tape recorders, compact disc players, cart machines and microphones. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BCS 126 MEDIA EQUIPMENT OPERATION AND MAINTENANCE (3 cr.)—Provides an introduction to audio/visual equipment and its use. Teaches operation of the various projection and magnetic recording media, as well as the new optical media. Includes basic field maintenance and troubleshooting, with an emphasis on preventive maintenance. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

BCS 130 MEDIA PERFORMANCE (3 cr.)—Studies electronic media announcing techniques, including phonetics, pronunciation, enunciation, and modes of articulatory expression. Provides practical experience through performance exercises. Prerequisite: BCS 115. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

BIOLOGY (BIO)

BIO 20 INTRODUCTION TO HUMAN SYSTEMS (3 cr.)—Presents basic principles of human anatomy and physiology. Discusses cells, tissues, and selected human systems. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

BIO 101-102 GENERAL BIOLOGY I-II (4 cr.) (4 cr.)—Explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Introduces the diversity of living organisms, their structure, function and evolution. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

BIO 141-142 HUMAN ANATOMY AND PHYSIOLOGY I-II (4 cr.) (4 cr.)—Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology. Prerequisites include one year high school biology and one year high school chemistry, or their equivalents. A grade of C or better in BIO 141 is required for entry into BIO 142. Lecture 3 hours. Laboratory 2-3 hours. Total 5-6 hours per week.

BIO 145 HUMAN ANATOMY AND PHYSIOLOGY FOR THE HEALTH SCIENCES (4-5 cr.)—Introduces human anatomy and physiology primarily to those planning to pursue an AAS degree in nursing. Covers basic chemical concepts, cellular physiology, as well as the anatomy and physiology of human organ systems. Lecture 3-4 hours. Laboratory 3 hours. Total 6-7 hours per week.

BIO 205 GENERAL MICROBIOLOGY (4 cr.)—Examines morphology, genetics, physiology, ecology, and control of microorganisms. Emphasizes application of microbiological techniques to selected fields. Prerequisites one year of college biology and one year of college chemistry or divisional approval. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

BUILDING (BLD)

BLD 101 CONSTRUCTION MANAGEMENT I (3 cr.)—Presents overviews of all phases of construction project management. Introduces students to philosophy, responsibilities, methodology, and techniques of the construction process. Introduces topics related to the construction and design industries, organizations, construction contracts, bidding procedures, insurance, taxes, bonding, cost accounting, business methods, including basic computer usage, safety and general project management procedures. Lecture 3 hours per week.

BLD 108 CONSTRUCTION LEADERSHIP AND MOTIVATION (2 cr.)—Includes the role of the construction supervisor; helping employees perform better; training, motivating and leading others; teams and team building; leadership skills in action. This course does not meet general education requirements. Lecture 2 hours per week.

BLD 109 UNDERSTANDING AND MANAGING PROJECT COSTS (2cr.)—Includes construction estimates, who controls project costs, labor cost control, reporting and analyzing actual costs, loss prevention, cost control strategies, and post-project evaluation. Lecture 2 hours per week.

BLD 110 INTRODUCTION TO CONSTRUCTION (3 cr.)— Covers basic knowledge and requirements needed in the construction trades. Introduces use of tools and equipment, with emphasis on construction safety, including personal and tool safety. Provides a working introduction to basic blueprint reading and fundamentals of construction mathematics. Total 3 hours per week.

BLD 111 BLUEPRINT READING AND THE BUILDING CODE (3cr.)— Introduces reading and interpreting various kinds of blueprints and working drawings with references to local, state, and national building codes. Lecture 2 hours per week. Laboratory 2 hours. Total 4 hours per week.

BLD 117 CONTRACT DOCUMENTS AND CONSTRUCTION LAW (2 cr.)— Covers contractual relationships; contract forms and documents; managing general conditions; good documentation processes; differing site conditions; time impacts; negotiation of resolutions. Lecture 2 hours per week.

BLD 118 PROBLEM SOLVING AND DECISION MAKING (2 cr.)— Covers the problem identification process; solving human performance problems; the decision-making process; labor costs and subcontractors; problem prevention; risk, emergencies and crisis. Lecture 2 hours per week.

BLD 131 CARPENTRY FRAMING I (5 cr.)—Presents an introduction to carpentry with emphasis on residential construction. Covers safety on the job, appropriate use of power tools, basic construction techniques, an introduction to working drawings, and the team approach to residential buildings. Presents an introduction to selection and use of ladders amd scaffolds, basic form removal and demolition, and use of basic first aid. Includes the concepts of carpentry framing for floors, walls, ceilings, porches and decks. Includes theoretical and practical application as well as the concepts of carpentry framing for roof, truss installation and door and window installation. Part I of II. Lecture 3 hours. Laboratory 4 hours. Total 7 hours per week.

BLD 132 CARPENTRY FRAMING II (5 cr.)—Presents an introduction to carpentry with emphasis on residential construction. Covers safety on the job, appropriate use of power tools, basic construction techniques, an introduction to working drawings, and the team approach to residential buildings. Presents an introduction to selection and use of ladders amd scaffolds, basic form removal and demolition, and use of basic first aid. Includes the concepts of carpentry framing for floors, walls, ceilings, porches and decks. Includes theoretical and practical application as well as the concepts of carpentry framing for roof, truss installation and door and window installation. Part II of II. Lecture 3 hours. Laboratory 4 hours. Total 7 hours per week.

BLD 133 CARPENTRY FRAMING III (5 cr.)—Continues the study of carpentry with emphasis on residential constuction. Covers safety on the job, appropriate use of power tools, basic construction techniques, an introduction to working drawings, and the team approach to residential buildings. Continues the study of selection and use of ladders and scaffolds, basic form removal and demolition, and use of basic first aid. Includes the concepts pf carpentry framing for floors, walls, ceilings, porches and decks. Includes theoretical and practical application as well as the concepts of carpentry frming for roof, truss installation and door and window installation. Part I of II. Lecture 3 hours. Laboratory 4 hours. Total 7 hours per week.

BLD 143 PLUMBING BLUEPRINT READING (3 cr.)—Focuses on blueprint reading, plan reviews, schematic drawing, isometric view drawing and architectual blueprint reading on single-, two-family and multi-story dwelling for drainage, vents and water piping design. Lecture 3 hours per week.

BLD 144 PLUMBING CODE AND CERTIFICATION PREPARATION (3 cr.)—Teaches the use of the plumbing code standard book (BOCA), references standards, the reading and use of charts and tables, and preparation for the journeyman's certification and the cross-connection control certification test. Lecture 3 hours per week.

BLD 165 CONSTRUCTION FIELD OPERATIONS (2 cr.)— Introduces areas of construction field management with relate directly to on-the-job requirements of construction operations viewed from the construction superintendent's standpoint. Includes theories of project management and field supervision; utilization of equipment, labor and material; construction site development; requirements of field scheduling; management input requirements; job recording and documentation; supervision responsibility. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

BLD 166 CONSTRUCTION LAW (2 cr.)—Presents general principles of construction law pertaining to contract documents, general conditions, changes in specifications, pricing of claims, arbitration, design responsibility, mechanic's liens, delays, and construction management. Prerequisite divisional approval. Lecture 2 hours per week.

BLD 168 CONTRACT DOCUMENTS (2 cr.)—Interprets and integrates specifications and drawings into the construction supervision process. Identifies interrelationships of authority and legal and social implications of supervisor's role as an agent of the contractor. Lecture 2 hours per week.

BLD 188 INTRODUCTION TO CONSTRUCTION SUPERVISION (3 cr.)— Teaches an appreciation for the demanding job of construction supervision, covering such topics as scheduling, motivation, poor and subordinate relations, and working with other trades. Lecture 3 hours per week.

BLD 200 SUSTAINABLE CONSTRUCTION (3 cr.)—Teaches students the specialized construction management best practices that must be utilized when managing a sustainable project. Includes industry standards for green construction as identified by popular building rating systems. Lecture 2-3 hours per week.

BLD 215 OSHA 30 CONSTRUCTION SAFETY (2 cr.)— Covers all topics included in the OSHA 30-hour course. Prerequisite: OSHA 10 Certification. Lecture 2 hours per week.

BLD 217 MANAGING THE CONSTRUCTION PROJECT (2 cr.)— Introduces project delivery systems; managing and understanding risk; planning the work; working the plan; managing methods and materials; understanding finances; working with project partners; understanding people involved in the process. Prerequisites: BLD 247 and BLD 109. Lecture 2 hours per week.

BLD 231 CONSTRUCTION ESTIMATING I (3 cr.)— Focuses on materials take-off and computing quantities from working drawins and specifications. Includes methods for computing quantities of concrete, steel, masonry, roofing, excavation. Deals with pricing building components, materials and processes, as well as transportation and handling costs, mark-up discount procedures, equipment cost and labor rates. Lecture 3 hours per week.

BLD 247 CONSTRUCTION PLANNING AND SCHEDULING (3 cr.)— Introduces principles of planning and scheduling of a construction project. Includes sequence of events and processes on a construction site. Studies scheduling techniques including the critical path method. Lecture 3 hours per week.

BUSINESS MANAGEMENT AND ADMINISTRATION (BUS)

BUS 100 INTRODUCTION TO BUSINESS (3 cr.)—Presents a broad introduction to the functioning of business enterprise within the U.S economic framework. Introduces economic systems, essential elements of business organization, finance, marketing, production, and risk and human resource management. Lecture 3 hours per week.

BUS 106 SECURITY AWARENESS FOR MANAGERS (3 cr.)--Information security is an extremely confusing and complex topic. This confusion can be reduced with a better understanding of security issues and related terminology. This course will cover concepts and terminology related to information security and risk assessment. The topics will be covered from a managers and end-users perspective and will include the identification of security threats, types of hardware/software solutions available and identifying policies and procedures to reduce the severity of security attacks. The student will complete a risk assessment and security plan for an organization and/or department. Lecture 3 hours per week.

BUS 111 PRINCIPLES OF SUPERVISION I (3-4 cr.)—Teaches the fundamentals of supervision, including the primary responsibilities of the supervisor. Introduces factors relating to the work of supervisor and subordinates. Covers aspects of leadership, job management, work improvement, training and orientation, performance evaluation, and effective employee/supervisor relationships. Lecture 3-4 hours per week.

BUS 116 ENTREPRENEURSHIP (3 cr.)—Presents the various steps considered necessary when going into business. Includes areas such as product service analysis, market research evaluation, setting up books, ways to finance startup, operations of the business, development of business plans, buyouts versus starting from scratch, and franchising. Uses problems and cases to demonstrate implementation of these techniques. Lecture 3 hours per week.

BUS 117 LEADERSHIP DEVELOPMENT (2-3 cr.)—Covers interpersonal relationships with heirarchical structures. Examines the dynamics of teamwork, motivation, handling change and conflict and how to achieve positive results through others. Lecture 3 hours per week.

BUS 121 BUSINESS MATHEMATICS I (3 cr.)—Applies mathematics to business processes and problems such as checkbook records and bank reconciliation, simple interest notes, present value, bank discount notes, wage and payroll computations, depreciation, sales and property taxes, commercial discounts, markup and markdown, and inventory turnovers and valuation. Lecture 3 hours per week.

BUS 122 BUSINESS MATHEMATICS II (3 cr.)—Applies mathematical operations to business processes and problems. Reviews basic statistics, distribution of profit and loss in partnerships, distribution of corporate dividends, simple interest, present value, bank discount notes, multiple payment plans, compound interest, annuities, sinking funds, and amortization. Lecture 3 hours per week.

BUS 160 LEGAL ASPECTS OF SMALL BUSINESS OPERATIONS (1 cr.)--- Covers the functional areas of business law, specifically as it applies to small business. Provides the students with a working knowledge of business contracts, agency relationships, and product liability. Provides a knowledge base for small business owners to overcome problems that are individually within their abilities. Covers selection of professional assistance for problems of a more serious nature. Lecture 1 hour per week.

BUS 165 SMALL BUSINESS MANAGEMENT (3 cr.)—Identifies management concerns unique to small businesses. Introduces the requirements necessary to initiate a small business, and identifies the elements comprising a business plan. Presents information establishing financial and administrative controls, developing a marketing strategy, managing business operations, and the legal and government relationships specific to small businesses. Lecture 3 hours per week.

BUS 200 PRINCIPLES OF MANAGEMENT (3 cr.)—Teaches management and the management functions of planning, organizing, leading, and controlling. Focuses on application of management principles to realistic situations managers encounter as they attemp to achieve orgnizational objectives. Lecture 3 hours per week.

BUS 201 ORGANIZATIONAL BEHAVIOR (3 cr.)—Presents a behaviorally oriented course combining the functions of management with the psychology of leading and managing people. Focuses on the effective use of human resources through understanding human motivation and behavior patterns, conflict management and resolution, group functioning and process, the psychology of decisionaking, and the importance of recognizing and managing change. Lecture 3 hours per week.

BUS 204 PROJECT MANAGEMENT (3 cr.)—Provides students with knowledge of essential skills and techniques necessary to lead or participate in projects assigned to managerial personnel. Covers time and task scheduling, resource management, problem-solving strategies and other areas related to managing a project. Lecture 3 hours per week.

BUS 205 HUMAN RESOURCE MANAGEMENT (3 cr.)—Introduces employment, selection, and placement of personnel, forecasting, job analysis, job descriptions, training methods and programs, employee evaluation systems, compensation, benefits, and labor relations. Lecture 3 hours per week.

BUS 209 - CONTINUOUS QUALITY IMPROVEMENT (3 cr.)—Presents the different philosophies in Quality Control. Introduces students to Process Improvement, Team Development, Consensus Building, and Problem-Solving strategies. Identifies methods for Process Improvement in manufacturing and service organizations which includes Statistical Process Control when used in the quality control function of business and industry. Lecture 3 hours per week.

BUS 211 MANAGING TECHNOLOGY RESOURCES--Managing information technology and staff in today's fast paced and constantly evolving environment can be overwhelming and frustrating. This course covers basic technology concepts, selection of vendors, evaluation of hardware/software solutions, identification and establishment of technology standards, and basic project management. Emphasis will be placed on the development of policies and procedures to effectively and efficiently manage information technology. The student will learn to leverage technology to benefit the organization. Each student will complete a detailed technology plan for an organization and/or department. Lecture 3 hours per week.

BUS 212 DISASTER RECOVERY PLANNING FOR MANAGERS--Covers developing a plan for an organization to get computer operations back to their pre-existing state as soon as possible after a disaster. Covers documenting existing technology and the complete steps in the disaster recovery process. Emphasis on policies and procedures to prevent the loss of data and elimination of system downtime. Includes the completion of a disaster recovery plan for an organization and/or department. Lecture 3 hours per week.

BUS 221 BUSINESS STATISTICS I (3 cr.)—Focuses on statistical methodology in the collection, organization, presentation, and analysis of data; concentrates on measures of central tendency, dispersion, probability concepts and distribution, sampling, statistical estimation, normal and T distribution and hypotheses for means and proportions. Prerequisite MTH 163 or divisional approval. Lecture 3 hours per week.

BUS 241 BUSINESS LAW I (3 cr.)—Develops a basic understanding of the US business legal environment. Introduces property and contract law, agency and partnership liability, and government regulatory law. Students will be able to apply these legal principles to landlord/tenant disputes, consumer rights issues, employment relationships, and other business transactions. Lecture 3 hours per week.

BUS 242 BUSINESS LAW II (3 cr.)—Focuses on business organization and dissolution, bankruptcy and Uniform Commercial Code. Introduces international law and the emerging fields of E-Commerce and Internet Law. Lecture 3 hours per week.

BUS 251 COACHING AND DEVELOPMENT IN A CUSTOMER CARE CENTER (1 cr.)—Provides an understanding of the coaching skills necessary for attaining call center goals. Includes the coach's role in facilitating goals within a set timeframe. Teaches ways to identify focus areas to meet quality performance goals. Includes feedback and evaluation techniques for call center effectiveness. Lecture 1 hour per week.

BUS 252 CUSTOMER CARE CENTER OPERATIONS MANAGEMENT (3 cr.)—Examines key performance indicators, call center planning and management processes, and call center technology and facilities management. Examines planning and management processes upon which call center operations depend, including forecasting, staffing and scheduling. Site selection, call center design, health and safety issues, and disaster recovery principles are examined. Lecture 3 hours per week.

BUS 253 QUALITY ASSURANCE IN CUSTOMER CARE CENTER OPERATIONS (1 cr.)—Quality assurance in customer care centers teaches specific and measurable performance standards that are the cornerstone of a successful customer care center monitoring program. Encompasses the establishment of performance standards that lead to quality contacts. Teaches techniques for creating new performance objectives, revitalizing existing standards, and determining performance targets that will best communicate priorities. Lecture 1 hour per week.

BUS 254 CUSTOMER CARE CENTER TRAINER (1 cr.)—This course will focus on product knowledge and sales techniques including training methods used for new employees and on an ongoing basis. Includes the evaluating of current training programs, ways to improving the training process, and how to measure training effectiveness. Lecture 1 hour per week.

BUS 265 ETHICAL ISSUES IN MANAGEMENT (1 cr.)—Examines the legal, ethical, and social responsibilities of management. May use cases to develop the ability to think and act responsibly. Lecture 3 hours per week.

BUS 290 COORDINATED INTERNSHIP /299 SUPERVISED STUDY (1 cr.)—Lecture 1 hour per week.

BUS 298 SEMINAR AND PROJECT (1 cr.)—Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.

CHILD DEVELOPMENT (CHD)

CHD 117 INTRODUCTION TO READING METHODS (3 cr.)— Introduces current practices of teaching reading in the elementary school. Familiarizes students with materials currently in use, emphasizes observation of various reading techniques and trends in the classroom. Lecture 2 hours per week. Laboratory 2 hours. Total 4 hours per week.

CHD 118 LANGUAGE ARTS FOR YOUNG CHILDREN (3 cr.)—Presents techniques and methods for encouraging the development of language and preceptional skills in young children. Stresses improvement of vocabulary, speech and methods to stimulate discussion. Surveys children's literature, examines elements of quality story telling and story reading, and stresses the use of audio-visual materials. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week.

CHD 120 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3 cr.)—Introduces early childhood development through activities and experiences in nursery, pre-kindergarten, kindergarten, and primary programs. Investigates classroom organization and procedures, and use of classroom time and materials, approaches to education for young children, professionalism, and curricular procedures. Lecture 3 hours per week.

CHD 121-122 CHILDHOOD EDUCATIONAL DEVELOPMENT I-II (3 cr.) (3 cr.)—Focuses attention on the observable characteristics of children from birth through adolescence. Concentrates on cognitive, physical, social, and emotional changes that occur. Emphasizes the relationship between development and child's interactions with parents, siblings, peers, and teachers. Lecture 3 hours per week.

CHD 145 TEACHING ART, MUSIC, AND MOVEMENT TO CHILDREN (3 cr.)—Provides experiences in developing the content, methods, and materials for directing children in art, music, and movement activities. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 146 MATH, SCIENCE, AND SOCIAL STUDIES FOR CHILDREN (3 cr.)—Provides experiences in developing the content, methods, and materials for directing children in math, science, and social studies activities. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 165 OBSERVATION AND PARTICIPATION IN EARLY CHILDHOOD/PRIMARY SETTINGS (3 cr.)—Observes and participates in early childhood settings such as child care centers, pre-schools, Montessori schools or public school settings in Kindergarten through 3rd grade. Students spend one hour each week in a seminar session in addition to 60 clock hours in the field. May be taken again for credit. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

CHD 166 INFANT AND TODDLER PROGRAMS (3 cr.)—Examines the fundamentals of infant and toddler development, including planning and implementing programs in group care. Emphasizes meeting physical, social, emotional, and cognitive needs: scheduling, preparing age-appropriate activities, health and safety policies, record keeping, and reporting to parents. Lecture 3 hours per week.

CHD 205 GUIDING THE BEHAVIOR OF CHILDREN (3 cr.)—Explores positive ways to build self-esteem in children and help them develop self-control. Presents practical ideas for encouraging pro-social behavior in children and emphasizes basic skills and techniques in classroom management. Lecture 3 hours per week.

CHD 210 INTRODUCTION TO EXCEPTIONAL CHILDREN (3 cr.)—Reviews the history of education for exceptional children. Studies the characteristics associated with exceptional children. Explores positive techniques for managing behavior and adapting materials for classroom use. Lecture 3 hours per week.

CHD 215 MODELS OF EARLY CHILDHOOD EDUCATION PROGRAMS (3 cr.)—Studies and discusses the various models and theories of early childhood education programs including current trends and issues. Presents state licensing and staff requirements. Lecture 3 hours per week.

CHD 216 EARLY CHILDHOOD PROGRAMS, SCHOOL, AND SOCIAL CHANGE (3 cr.)— Explores methods of developing positive, effective relations between staff and parents to enhance the developmental goals of home and school. Reviews current trends and issues in education, describes symptoms of homes in need of support, investigates non-traditional family and cultural patterns, and lists community resources. Lecture 3 hours per week.

CHD 265 ADVANCED OBSERVATION AND PARTICIPATION IN EARLY CHILDHOOD/PRIMARY SETTINGS (3 cr.)—Observes and participates in early childhood settings such as child care centers, pre-school, Montessori schools, or public school settings (kindergarten through third grade). Emphasizes planning and implementation of appropriate activities and materials for children. Students will spend one hour each week in a seminar session in addition to 60 clock hours in the field. May be taken again for credit. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

CHD 270 ADMINISTRATION OF CHILDCARE PROGRAMS (3cr.)— Examines the skills needed for establishing and managing early childhood programs. Emphasizes professionalism and interpersonal skills, program planning, staff selection and development, creating policies, budgeting, and developing forms for record keeping. Lecture 3 hours per week.

CHEMISTRY (CHM)

CHM 05 DEVELOPMENTAL CHEMISTRY FOR HEALTH SCIENCES (1-5 cr.)—Introduces basic principles of inorganic, organic, and biological chemistry. Emphasizes applications to the health sciences. Laboratory optional. Lecture 1-4 hours. Laboratory 0-3 hours. Total 1-7 hours per week.

CHM 101-102 GENERAL CHEMISTRY I-II (4 cr.) (4 cr.)—Emphasizes experimental and theoretical aspects of inorganic, organic, and biological chemistry. Discusses general chemistry concepts as they apply to issues within our society and environment. Designed for the non-science major. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

CHM 111-112 COLLEGE CHEMISTRY I-II (4 cr.) (4 cr.)—Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Completion of CHM 111 with a grade of C to enter CHM 112. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

CHM 241-242 ORGANIC CHEMISTRY I-II (3 cr.) (3 cr.)—Introduces fundamental chemistry of carbon compounds, including structures, physical properties, syntheses, and typical reactions. Emphasizes reaction mechanisms. Prerequisite CHM 111-112 or Corequisite CHM 243-244 or CHM 245-246. Lecture 3 hours per week.

CHM 243-244 ORGANIC CHEMISTRY LABORATORY I-II (1 cr.) (1 cr.)—Is taken concurrently with CHM 241 and CHM 242. Laboratory 3 hours per week.

CIVIL ENGINEERING TECHNOLOGY (CIV)

CIV 115 CIVIL ENGINEERING DRAFTING (3 cr.)—Introduces terminology and drafting procedures related to civil engineering. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

CIV 171 SURVEYING I (3 cr.)—Introduces surveying equipment, procedures and computations including adjustment of instruments, distance measurement, leveling, angle measurement, traversing, traverse adjustments, area computations and introduction to topography. Prerequisite: Engineering Technical Math or divisional approval. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

CIV 172 SURVEYING II (3 cr.)—Introduces surveys for transportation systems including the preparation and analysis of topographic maps, horizontal and vertical curves, earthwork and other topcis related to transportation construction. Prerequisite: CIV 171 or equivalent. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

CIV 246 WATER RESOURCE TECHNOLOGY (3 cr.)—Introduces the elements of hydrology and hydraulic systems. Lecture 2-3 hours. Laboratory 0-3 hours. Total 2-5 hours per week.

CRAFTS (CRF)

CRF 100 SURVEY OF HAND CRAFTS (3 cr.)—Surveys traditional and contemporary American hand crafts. Lecture 2 hours. Studio instruction 3 hours. Total 5 hours per week.

CRF 101 HAND BUILT POTTERY (3 cr.)—Introduces fundamental concepts and skills related to hand crafted hand-built pottery. Lecture 1 hour**.** Studio instruction 4 hours. Total 5 hours per week.

CRF 102 WHEEL-THROWN POTTERY (3 cr.)—Introduces fundamental concepts and skills related to hand crafted wheel-thrown pottery. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

CRF 105 INTRODUCTION TO POTTERY (3 cr.)—Introduces art and design related to pottery. Teaches techniques of hand-building, throwing on the potter's wheel, glaze techniques and experimental firing. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

CRF 106 POTTERY GLAZING AND DECORATING (3 cr.)—Explores the various techniques of decorating and glazing pottery including the use of texture, colored slips and engobes, wax resist, sgraffito, and glaze experimentation. Prerequisite CRF 105. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

CRF 107 HAND CRAFTED LEATHER (3 cr.)—Introduces fundamental concepts and skills related to hand crafted leather work. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

CRF 110 INTRODUCTION TO CRAFTS (3 cr.)—Focuses on an understanding of art and design related to crafts, and of craft media other than the student's craft major. Provides practical training in combining two or more media to produce a good craft item. Lecture 3 hours per week.

COMMUNICATION STUDIES AND THEATRE (CST)

CST 100 PRINCIPLES OF PUBLIC SPEAKING (3 cr.)—Applies theory and principles of public address with emphasis on preparation and delivery. Lecture 3 hours per week.

CST 110 INTRODUCTION TO SPEECH COMMUNICATION (2-3 cr.)—Examines the elements affecting speech communication at the individual, small group, and public communication levels with emphasis on practice of commuication at each level. Lecture 2-3 hours per week.

CST 130 INTRODUCTION TO THE THEATRE (3 cr.)—Surveys the principles of drama, the development of theatre production, and selected plays to acquaint the student with various types of theatrical presentations. Lecture 3 hours per week.

DIETETICS (DIT)

DIT 125 CURRENT CONCEPTS IN DIET AND NUTRITION (3 cr.)—Studies the importance of diet to health and well-being in daily life. Addresses current controversies over food practices and information, food facts and fiction, fad diets, vegetarianism, diet and heart disease, and sound guidelines for maintaining good health with wise food choices. Applies computer technology for nutritional analysis. Intended especially for the non-dietetic major. Lecture 3 hours per week.

DIT 13 FOOD MANAGEMENT SYSTEMS (3 cr.)— Studies the principles of food service delivery systems in institutional and other health care facilities. Includes fundamentals of menu planning, recipe standardization, food preparation, equipment, sanitation and safety, role of computers in food service, and concepts of food service management. Lecture 3 hours per week.

DRAFTING (DRF)

DRF 111-112 TECHNICAL DRAFTING I-II (2-3 cr.) (2-3 cr.)—Introduces technical drafting from the fundamentals through advanced drafting practices. Teaches lettering, metric construction, technical sketching, orthographic projection, sections, intersections, development, fasteners, theory and applications of dimensioning and tolerances. Includes pictorial drawing, and preparation of working and detailed drawings. Lecture 1-2 hours. Laboratory 2-6 hours. Total 3-7 hours per week.

DRF 130 INTRODUCTION TO ELECTRICAL/ELECTRONICS DRAFTING (2 cr.)—Teaches applications of drafting procedures with emphasis on working and functional drawings and direct applications to electrical and electronic components and circuits. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

DRF 132-133 ELECTRICAL AND ELECTRONIC DRAFTING I-II (3 cr.) (3 cr.)—Teaches the design of block and logic, schematic and wiring diagrams, house wiring plans, printed circuit boards and card cages. Lecture 2 hours**.** Laboratory 3 hours. Total 5 hours per week.

DRF 160 MACHINE BLUEPRINT READING (3 cr.)—Introduces interpreting of various blueprints and working drawings. Applies basic principles and techniques such as visualization of an object, orthographic projection, technical sketching and drafting terminology. Requires outside preparation. Lecture 3 hours per week.

DRF 161 BLUEPRINT READING I (1-2 cr.)—Teaches the application of basic principles, visualization, orthographic projection, detail of drafting shop processes and terminology, assembly drawings and exploded views. Considers dimensioning, changes and corrections, classes of fits, tolerances and allowances, sections and convention in blueprint reading. Lecture 0-1 hour. Laboratory 0-3 hours. Total 1-4 hours per week.

DRF 162 BLUEPRINT READING II (2 cr.)—Emphasizes industrial prints, auxiliary views, pictorial drawings, simplified drafting procedures, production drawing, operation sheets, tool drawing, assembly drawings, and detailed prints. Prerequisite DRF 171. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

DRF 165 ARCHITECTURAL BLUEPRINT READING (3 cr.)—Emphasizes reading, understanding and interpreting standard types of architectural drawings including plans, elevation, sections and details. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

DRF 169 BLUEPRINT READING FOR HEAVY CONSTRUCTION (2 cr.)—Presents material for draftsmen, material estimators, construction workers, superintendents, and others involved in heavy construction. Includes site layout, foundations, reinforced concrete and steel construction, interior finishing and mechanical/ electrical systems. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

DRF 200 SURVEY OF COMPUTER AIDED DRAFTING (3-4 cr.)—Surveys computer-aided drafting equipment and concepts. Develops general understanding of components, operations and use of a typical CAD system. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

DRF 201 COMPUTER AIDED DRAFTING AND DESIGN I (3-4 cr.)—Teaches computer-aided drafting concepts and equipment designed to develop a general understanding of components of a typical CAD system and its operation. Prerequisite divisional approval. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

DRF 202 COMPUTER AIDED DRAFTING AND DESIGN II (3-4 cr.)—Teaches production drawings and advanced operations in computer aided drafting. Prerequisite DRF 201. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

DRF 203 COMPUTER AIDED DRAFTING AND DESIGN III (3-4)—Teaches advanced CAD applications. Includes customization and/or use of advanced software. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

DRF 211 ADVANCED TECHNICAL DRAFTING I (3 cr.)—Teaches use of drafting equipment and applications, emphasizing knowledge and skill required for industrial drawing. Includes piping, gearing, geometric and positional tolerances, and 2D/3D drawing layout. Prerequisite DRF 111. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

DRF 212 ADVANCED TECHNICAL DRAFTING II (3 cr.)—Teaches concepts of sheet metal fabrication including radii, fillets and tolerances, electrical and electronics symbols and drawing, and advanced design drafting techniques. Prerequisite DRF 211. Lecture 2 hours. Laboratory 2- 3 hours. Total 4-5 hours per week.

DIESEL (DSL)

DSL 131 DIESEL FUEL SYSTEMS AND TUNE-UP (4 cr.)—Teaches maintenance, adjustment, testing, and general repair of the typical fuel injection components used on non- automotive diesel engines. Includes engine and fuel system tune-up procedures and troubleshooting using current diagnostic equipment. Lecture 2-3 hours. Laboratory 4-6 hours. Total 6-9 hours per week.

DSL 141-142 TRANSPORTATION ELECTRICAL SYSTEMS I-II (2 cr.) (2 cr.)—Studies basic operational theory of electrical systems used in public transportation vehicles. Covers electrical symbols, schematics, troubleshooting procedures, as well as the function, construction, and operation of the electrical system and its components. Lecture 2 hours per week.

DSL 143 DIESEL TRUCK ELECTRICAL SYSTEMS (4 cr.)—Studies the theory and operation of various truck and tractor electrical systems. Covers preheating, starting, generating, and lighting systems. Uses modern test equipment for measurement, adjustment, and troubleshooting. Lecture 2 hours per week. Laboratory 4 hours. Total 6 hours per week.

DSL 152 DIESEL POWER TRAINS, CHASSIS, AND SUSPENSION (4 cr.)—Studies the chassis, suspension, steering and brake systems found on medium and heavy-duty diesel trucks. Covers construction features, operating principles and service procedures for such power train components as clutches, multi-speed transmissions, propeller shafts, and rear axles. Teaches operations of modern equipment to correct and adjust abnormalities. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

DSL 161-162 AIR BRAKE SYSTEMS I-II (2 cr.) (2 cr.)—Studies the basic operational theory of pneumatic and air brake systems used in public transportation vehicles. Covers various air control valves, air and test system components, and advanced air system schematics. Lecture 2 hours per week.

DSL 181-182 DIESEL MECHANICS I-II (6 cr.) (6 cr.)—Studies basic internal engines, including cylinder blocks, cylinder heads, crankshafts, and pistons. Studies fuel injection systems, fuel pumps, injectors and nozzles, preventive maintenance and troubleshooting. Lecture 4 hours. Laboratory 6 hours. Total 10 hours per week.

ECONOMICS (ECO)

ECO 110 CONSUMER ECONOMICS (3 cr.)—Fosters understanding of American economic system and the individual's role as a consumer. Emphasizes application of economic principles to practical problems encountered. Alerts students to opportunities, dangers, and alternatives of consumers. Lecture 3 hours per week.

ECO 115 UNDERSTANDING OUR ENVIRONMENT: AN ECONOMIC INTRODUCTION (3 cr.)—Explores basic economic theory as it relates to the issues of environmental problems and natural resource use. Examines the approaches to local, state, and national environmental policy. Investigates issues of sustainability with a global perspective. Lecture 3 hours per week.

ECO 120 SURVEY OF ECONOMICS (2-3 cr.)—Presents a broad overview of economic theory, history, development, and application. Introduces terms, definitions, policies, and philosophies of market economies. Provides some comparison with other economic systems. Includes some degree of exposure to microeconomic and macroeconomic concepts. Lecture 2-3 hours per week.

ECO 201 PRINCIPLES OF MACROECONOMICS (3 cr.)—Introduces macroeconomics including the study of Keynesian, classical, monetarist principles and theories, the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments. Lecture 3 hours per week.

ECO 202 PRINCIPLES OF MICROECONOMICS (3 cr.)—Introduces the basic concepts of microeconomics. Explores the free market concepts with coverage of economic models and graphs, scarcity and choices, supply and demand, elasticities, marginal benefits and costs, profits, and production and distribution. Lecture 3 hours per week.

ECO 231 PRINCIPLES OF MONEY AND BANKING I-II (3 cr.)— Discusses the functions of money in modern economy. Analyzes the evolution and operation of the commercial and central banking systems. Presents developments in monetary theory. Relates theory to policy considerations including government finance and debt management. Lecture 3 hours per week.

EDUCATION (EDU)

EDU 200 INTRODUCTION TO TEACHING AS A PROFESSION (3 cr.) — Provides an orientation to the teaching profession in Virginia, including historical perspectives, current issues, and future trends in education on the national and state levels. Emphasizes information about teacher licensure examinations, steps to certification, teacher preparation and induction programs, and attention to critical shortage areas in Vriginia. Includes supervised field placement (recommended: 40 clock hours) in a K-12 school. Prerequisite: Success completion of 24 credits of transfer courses. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ENGINEERING (EGR)

EGR 115 ENGINEERING GRAPHICS (2-3 cr.)—Applies principles of orthographic projection and multi-view drawings. Teaches descriptive geometry including relationships of points, lines, planes and solids. Introduces sectioning, dimensioning and computer graphic techniques. Includes instruction in Computer Aided Drafting. Lecture 1-2 hour. Laboratory 3 hours. Total 4-5 hours per week.

EGR 120 INTRODUCTION TO ENGINEERING (1-2 cr.)—Introduces the engineering profession, professional concepts, ethics, and responsibility. Reviews hand calculators, number systems, and unit conversions. Introduces the personal computer and operating systems. Includes engineering problem solving techniques using computer software. Lecture 0-2 hours per week. Laboratory 0-3. Total 1-4 hours per week.

EGR 125 INTRODUCTION TO ENGINEERING METHODS (3-4 cr.)—Applies problem-solving techniques to engineering problems utilizing computer programming and algorithms in a higher level computer language such as FORTRAN, PASCAL, or C++. Lecture 3 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

EGR 140 ENGINEERING MECHANICS - STATICS (3 cr.)—Introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units. Teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two- force and multi-force members and friction and internal forces. Lecture 3 hours per week.

EGR 206 ENGINEERING ECONOMICS (2-3 cr.)—Presents economic analysis of engineering alternatives. Studies economic and cost concepts, calculation of economic equivalence, comparison of alternatives, replacement economy, economic optimization in design and operation, depreciation, and after tax analysis. Lecture 2-3 hours per week.

EGR 245 ENGINEERING MECHANICS - DYNAMICS (3 cr.)—Presents approach to kinematics of particles in linear and curvilinear motion. Includes kinematics of rigid bodies in plane motion. Teaches Newton's second law, work-energy and power, impulse and momentum, and problem solving using computers. Lecture 3 hours per week.

EGR 246 MECHANICS OF MATERIALS (3 cr.)—Teaches concepts of stress, strain, deformation, internal equilibrium, and basic properties of engineering materials. Analyses axial loads, torsion, bending, shear and combined loading. Studies stress transformation and principal stresses, column analysis and energy principles. Lecture 3 hours per week.

EGR 251-252 BASIC ELECTRIC CIRCUITS I-II (3 cr.)(3 cr.)—Teaches fundamentals of electric circuits. Includes circuit quantities of charge, current, potential, power and energy. Teaches resistive circuit analysis; Ohm's and Kirchoff's laws; nodal and mesh analysis; network theorems; RC, RL, and RLC circuit transient response with constant forcing functions. Teaches AC steady-state analysis, power, three-phase circuits. Presents frequency domain analysis, resonance, Fourier series, inductively coupled circuits, Laplace transform applications, and circuit transfer functions. Introduces problem solving using computers. Lecture 3 hours per week.

ELECTRICAL TECHNOLOGY (ELE)

ELE 17 PROBLEMS IN ELECTRICITY (3 cr.)---Develops student skills insolving problems in electrical circuits. Lecture 3 hours per week.

ELE 115 BASIC ELECTRICITY (2-3 cr.)—Covers basic circuits and theory of fundamental concepts of electricity Presents a practical approach to discussion of components and devices. Prerequisite MTH 02 or equivalent. Lecture 2-3 hours per week.

ELE 116 ELECTRICAL CONSTRUCTION ESTIMATING (2 cr.)—Studies methods and techniques used to develop an estimate for electrical construction wiring and equipment installation. Pre or Corequisite ELE 127 or equivalent. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

ELE 127 RESIDENTIAL WIRING METHODS (2-3 cr.)—Studies wiring methods and standards used for residential dwellings. Provides practical experience in design, layout, construction, and testing of residential wiring systems by use of scaled mock-ups. Lecture 1-2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

ELE 131-132 NATIONAL ELECTRICAL CODE I-II (3-4 cr.) (3-4 cr.)—Provides comprehensive study of the purpose and interpretations of the National Electric Code as well as familiarization and implementation of various charts, code rulings and wiring methods including state and local regulations. Lecture 3-4 hours.

ELE 135 NATIONAL ELECTRICAL CODE - RESIDENTIAL (3-4 cr.)—Studies purposes and interpretations of the national electrical code that deals with single and multi-family dwellings, including state and local regulations. Lecture 2-3 hours. Laboratory 2-4 hours. Total 4-5 hours per week.

ELE 136 NATIONAL ELECTRICAL CODE - COMMERCIAL (3 cr.)—Provides comprehensive study of the purposes and interpretations of national electrical wiring methods, including state and local regulations. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ELE 137 NATIONAL ELECTRIC CODE - INDUSTRIAL (3 cr.)—Provides comprehensive study of the purposes and interpretations of the National Electric Code that deals primarily with industrial wiring methods, including state and local regulations. May include preparation of a report as an out-of-class activity. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 138 NATIONAL ELECTRICAL CODE REVIEW (2-3 cr.)—Covers purpose and interpretation of the National Electrical Code as well as various charts, code rulings and wiring methods. Prepares the student to take the journeyman-level exam. Lecture 2-3 hours per week. Total 2-3 hours per week.

ELE 140 BASIC ELECTRICITY AND MACHINERY (4 cr.)—Studies direct and alternating current principles, resistors, magnetism, capacitors, protection systems, switches, controls and power distribution for industrial machine shops. Emphasizes test procedures and safety. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

ELE 145 TRANSFORMER CONNECTIONS AND CIRCUITS (2 cr.)—Studies transformer theory, symbols, diagrams, connections, terminology and troubleshooting techniques. Prerequisite ELE 150 or equivalent. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

ELE 148 CONDUIT AND PIPE FITTING (2-3 cr.)—Studies raceway design, conductor fill, layout, cutting, reaming, bending, mounting, and fitting for various conduits, fluid, and air systems. Lecture 1-2 hours. Laboratory 3 hours. Total 4-5 hours per week.

ELE 149 WIRING METHODS IN INDUSTRY (3-4 cr.)—Studies the fundamentals of industrial power distribution, circuits, switches, enclosures, panels, fuses, circuit breakers, transformers, and wiring methods, using various charts and tables of the National Electrical Code. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

ELE 156 ELECTRICAL CONTROL SYSTEMS (3 cr.)—Includes troubleshooting and servicing electrical controls, electric motors, motor controls, motor starters, relays, overloads, instruments and control circuits. May include preparation of a report as an out-of-class activity. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 211-212 ELECTRICAL MACHINES I-II (3-5 cr.) (4-5 cr.)—Studies the construction, theory of operations and applications of DC and AC machines. Prerequisite ETR 114 or equivalent. Lecture 3-4 hours per week. Laboratory 3 hours per week. Total 6-7 hours per week.

ELE 225 ELECTRICAL CONTROL SYSTEMS (4 cr.)—Studies components, equipment and circuits that are used to control the operation of electric machines. Explains the physical and operating characteristics of various electromagnetic, static, and programmable control devices. Investigates control schemes used to accomplish specific control objectives. Prerequisite ELE 217 or equivalent. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ELE 233-234 PROGRAMMABLE LOGIC CONTROLLER SYSTEMS I-II (3-4 cr.)(3-4 cr.)—Teaches operating and programming of programmable logic controllers. Covers analog and digital interfacing and communication schemes as they apply to system. Prerequisite ETR 156 and ETR 211 or equivalent. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ELE 238 CONTROL CIRCUITS (3 cr.)—Deals with the principles and applications of electrical controllers which serve as an introduction to automation, devices for differentation, integration and proportioning. Includes hardware and circuitry for AC and DC control devices as well as contactors, starters, speed controllers, time delays, limit switches, and pilot devices. Demonstrates applications in the control of industrial equipment motors, servo units, and motor-driven actuators. Prerequisite ELE 211 or equivalent. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ELE 239 PROGRAMMABLE CONTROLLERS (2-3 cr.)—Deals with installation, programming, interfacing, and concepts of troubleshooting programmable controllers. Co/Prerequisite ETR 156 and ELE 211 or equivalent, or permission of instructor. Lecture 1-2 hours. Laboratory 2 hours. Total 3-4 hours per week.

ELE 245 INDUSTRIAL WIRING (3 cr.)—Teaches the practical applications of industrial and commercial wiring. Includes the principles essential to the understanding of conduit applications and other raceway installations. Includes conduit sizing, cutting, bending, and threading. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EMERGENCY MEDICAL SERVICES (EMS)

EMS 100 CPR FOR HEALTHCARE PROVIDERS (1 cr.)—Provides instruction in Cardiopulmonary Resuscitation that meets current Emergency Cardiac Care (ECC) guidelines for Cardiopulmonary Resuscitation education for Healthcare Providers. Equivalent to HLT 105. Lecture: 1 hour per week. Total 1 hour per week.

EMS 101 EMS FIRST RESPONDER (3 cr.)—Provides education in the provision of emergency medical care for persons such as Police, non-EMS Fire personnel, industrial personnel and the general public who are likely to be the first medically trained personnel on the scene of an injury or illness. Meets current Virginia Office of Emergency Medical Services curriculum for First Responder. Equivalent to HLT 119. Lecture: 3 hours. Total 3 hours per week.

EMS 102 EMS FIRST RESPONDER REFRESHER (1 cr.)—Provides 18 clock hours of instruction to meet Virginia Office of EMS requirements for recertification at the First Responder Level. Lecture: 1 hour. Total 1 hour per week.

EMS 111 EMERGENCY MEDICAL TECHNICIAN-BASIC (6 cr.)—Prepares student for certification as a Virginia and National Registry EMT-Basic. Includes all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Co-requisite: EMS 120. Prerequisite: CPR certification at the Health Care Provider level. Lecture: 4 hours. Lab: 4 hours. Total 8 hours per week.

EMS 112-113 EMERGENCY MEDICAL TECHNICIAN- BASIC- Iand II (3cr.) (3 cr.)—Prepares student for certification as a Virginia and/or National Registry EMT-Basic. Includes all aspects of pre-hospital basic life support as defined by the Virginia office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Co-requisite to EMS 120. Prerequisite: CPR certification at the Health Care Provider level. Lecture: 2 hours. Lab: 2 hours. Total 4 hours per week.

EMS 115 EMERGENCY MEDICAL TECHNICIAN- BASIC REFRESHER (2 cr.)—Provides 36 clock hours of instruction to meet Virginia Office of EMS requirements for recertification at the EMT-Basic level. Lecture 2 hours per week.

EMS 120 EMERGENCY MEDICAL TECHNICIAN-BASIC CLINICAL (1 cr.)—Observes in a program approved clinical/field setting. Includes topics for both EMS 111 and EMS 113, dependant upon the program in which the student is participating and is a co-requisite to both EMS 111 and EMS 113. Lecture 1 hour per week.

EMS 151 INTRODUCTION TO ADVANCED LIFE SUPPORT (4 cr.)—Prepares the student for Virginia Enhanced certification eligibility and begins the sequence for National Registry Intermediate and/or Paramedic certification. Includes the theory and application of the following: foundations, human systems, pharmacology, overview of shock, venous access, airway management, patient assessment, respiratory emergencies, allergic reaction, and assessment based management. Conforms at a minimum to the Virginia Office of Emergency Medical Services curriculum. Co-requisite: EMS 170. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 153 BASIC ECG RECOGNITION (2 cr.)—Focuses on the interpretation of basic electrocardiograms (ECG) and their significance. Includes an overview of anatomy and physiology of the cardiovascular system including structure, function and electrical conduction in the heart. Covers advanced concepts that build on the knowledge and skills of basic dyshythmia determination and introduction to 12 lead ECG. Lecture 2 hours per week.

EMS 155 ALS – MEDICAL CARE (4 cr.)—Continues the Virginia Office of Emergency Medical Services Intermediate and /or Paramedic curricula. Includes ALS pharmacology, drug and fluid administration with emphasis on patient assessment, differential diagnosis and management of multiple medical complaints. These include, but are not limited to conditions relating to cardiac, diabetic, neurological, non-traumatic abdominal pain, environmental, behavioral, gynecology, and toxicological disease conditions. Prerequisites include current EMT-B certification, EMS 151 and EMS 153. Lecture 3 hours per week. Lab: 2 hours per week. Total 5 hours per week.

EMS 157 ALS – TRAMA CARE (3 cr.)—Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Utilizes techniques which will allow the student to utilize the assessment findings to formulate a field impression and implement the treatment plan for the trauma patient. Prerequisites: Current EMT-B certification and EMS 151. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EMS 159 ALS – SPECIAL POPULATIONS (2 cr.)—Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Focuses on the assessment and management of specialty patients including obstetrical, neonates, pediatric, and geriatrics. Prerequisites include EMS 151 and EMS 153. Pre or corequisites include EMS 155. Lecture: 1 hour per week. Lab: 2 hours per week. Total 3 hours per week.

EMS 161 BASIC TRAMA LIFE SUPPORT (BTLS) (1 cr.)—Offers instruction for students in current topics of care for trauma patients and offers certification as a Basic Trauma Life Support Provider (BTLS) as defined by the American College of Emergency Physicians. Prerequisites: Current certification/ licensure as an EMS provider or other allied healthcare provider. Lecture: 1 hour per week. Total 16 hours.

EMS 162 PEDIATRIC BASIC TRAUMA LIFE SUPPORT (PBTLS) (1 cr.)—Offers instruction for students in current topics of care for trauma patients and offers certification as a Pediatric Basic Trauma Life Support Provider (PBTLS) as defined by the American College of Emergency Physicians. Prerequisites: Current certification/ licensure as an EMS provider or other allied healthcare provider. Lecture: 1 hour per week. Total 16 hours.

EMS 163 PREHOSPITAL TRAUMA LIFE SUPPORT (PHTLS) (1 cr.)—Prepares for certification as an Prehospital Trauma Life Support provider as defined by the American College of Surgeons. Prerequisites: Current certification/ licensure as an EMS provider or other allied healthcare provider. Lecture: 1 hour. Total 1 hour.

EMS 165 ADVANCED CARDIAC LIFE SUPPORT (ACLS) (1 cr.)—Prepares for certification as an Advanced Cardiac Life Support Provider. Follows course as defined by the American Heart Association. Prerequisites: EMS 100, 153 or equivalent. Lecture: 1 hour per week. Total 1 hour.

EMS 167 NEONATAL RESUSCITATION PROGRAM (NRP) (1 cr.)—Provides the student information in current topics in the care of newborn patients to current AAP/American Heart Association- Neonatal Resuscitation Program guidelines. Prerequisite-Current certification/ licensure as an advanced EMS provider or other allied healthcare provider. Lecture: 1 hour. Total 1 hour.

EMS 168 EMERGENCY PEDIATRIC CARE (PEPP) (1 cr.)—Prepares the student for certification as a prehospital pediatric care provider as defined by the American Academy of Pediatrics. Covers primary assessment and emergency care of infants and children. Lecture: 1 hour per week. Total 1 hour per week.

EMS 169 PEDIATRIC ADVANCED LIFE SUPPORT (PALS) (1 cr.)—Prepares the student for certification as a pediatric advanced life support provider as defined by the American Heart Association. Covers primary assessment and emergency care of infants and children. Lecture: 1 hour per week. Total 1 hour per week.

EMS 170 ALS INTERNSHIP I (1 cr.)—Begins the first in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma centers and various advanced life support units. Laboratory 3-6 hours per week.

EMS 172 ALS CLINICAL INTERNSHIP II (1-2 cr.)—Continues with the second in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. Co-requisite: EMS 151. Laboratory 3-6 hours per week.

EMS 173 ALS FIELD INTERNSHIP I (1 cr.)—Continues with the second in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. Laboratory 3 hours per week.

EMS 201 EMS PROFESSIONAL DEVELOPMENT (2 cr.)—Prepares students for Paramedic certification at the National Registry Level by fulfilling community activism, personal wellness, resource management, ethical considerations in leadership and research objectives in the Virginia Office of Emergency Medical Services Paramedic curriculum. Lecture: 2 hours per week. Total 2 hours per week.

EMS 205 ADVANCED PATHOPHYSIOLOGY (3 cr.)—Focuses on the pathological processes of disease with emphasis on the anatomical and physiological alterations of the human body by systems. Includes diagnosis and management appropriate to the advanced health care provider in and out of the hospital environment. Lecture: 3 hours per week.

EMS 207 ADVANCED PATIENT ASSESSMENT (3 cr.)—Focuses on the principles of normal and abnormal physical exam. Emphasizes the analysis and interpretation of physiological data to assist in patient assessment and management. Applies principles during the assessment and management of trauma, medical, and specialty patients in laboratory environment. Lecture: 2 hours per week. Lab: 2 hours per week. Total 4 hours per week.

EMS 209 ADVANCED PHARMACOLOGY (4 cr.)—Focuses on the principles of pharmacokinetics, pharmacodynamics and drug administration. Includes drug legislation, techniques of medication administration, and principles of math calculations. Emphasizes drugs used to manage respiratory, cardiac, neurological, gastrointestinal, fluid and electrolyte and endocrine disorders and includes classification, mechanism of action, indications, contra-indications, precautions, and patient education. Incorporates principles related to substance abuse and hazardous materials. Applies principles during the assessment and management of trauma, medical, and specialty patients in laboratory environment. Lecture: 3 hours per week. Lab: 2 hours per week. Total 5 hours per week.

EMS 211 OPERATIONS (2 cr.)—Prepares the student in the theory and application of the following: medical incident command, rescue awareness and operations, hazardous materials incidents, and crime scene awareness. (Conforms to the current Virginia Office of Emergency Medical Services curriculum for EMT-Paramedics.) Lecture: 1 hour per week. Lab: 2 hours per week. Total 3 hours per week.

EMS 213 ALS SKILLS DEVELOPMENT (1-2 cr.)—Utilizes reinforcement and remediation of additional advanced life support skills, as needed. Laboratory 2-4 hours per week.

EMS 215 PARAMEDIC REVIEW (1-2 cr.)—Reviews material covered in the intermediate/paramedic program. Prepares the student for National Registry testing. Lecture 1 hour per week.

EMS 240 ALS INTERNSHIP II (1 cr.)—Continues clinical and/or field experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and various advanced life support units. Laboratory 3 hours per week.

EMS 242 ALS CLINICAL INTERNSHIP III (1 cr.)—Continues with the third in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and various advanced life support units. Laboratory 3-6 hours per week.

EMS 243 ALS FIELD INTERNSHIP II (1 cr.)—Continues with the third in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. Laboratory 3-6 hours per week.

EMS 244 ALS CLINICAL INTERNSHIP IV (1 cr.)—The fourth in a series of clinical experiences providing direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. May be repeated as necessary. Laboratory 3-6 hours per week.

EMS 245 ALS FIELD INTERNSHIP IV (1-2 cr.)—Continues with the fourth in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. May be repeated as necessary. Laboratory 3-6 hours per week.

EMS 251 ALS REQUIRED TOPICS (3 cr.)—Reviews material covered in the ALS programs. Covers all category 1 content required for Advanced Life Support recertification. Lecture: 3 hours per week.

EMS 253 ALS REFRESHER – 72 hours (4 cr.)—Reviews material covered in the ALS programs. Meets all required criteria for recertification eligibility. Lecture: 3 hours per week. Lab: 2 hours per week. Total 5 hours per week.

EMS 255 CONCEPTS IN CRITICAL CARE (5 cr.)—Prepares the paramedic or RN to become a critical care specialist, capable of managing the care of a critical care patient both in a hospital setting or during a high risk inter-facility transfer. Includes advanced concepts that build on the knowledge and skills of the paramedic and/or nursing curricula, as well as topics needed to trouble shoot complex monitoring devices and equipment. Topics include anatomy and physiology based clinical assessment, advanced airway management to include mechanical ventilators, diagnostics data interpretation, bedside hemodynamic monitoring, 12 lead EKG interpretation and hemodialysis care. Lecture: 4 hours. Lab: 2 hours. Total 6 hours per week.

EMS 261 EMS LEADERSHIP AND SUPERVISION I (3 cr.)—Discusses EMS system design, components, and funding sources. Presents leadership and supervision topics for first level EMS managers including planning, decision making, interpersonal communications, time and stress management, critical incident debriefing. Prerequisites: Placement into ENG 111 or with permission of the instructor. Lecture: 3 hours per week.

EMS 262 EMS LEADERSHIP AND SUPERVISION II (3 cr.)—Explores EMS leadership and supervision topics including performance evaluation, health and safety regulations, current legal-medical issues, concepts of public education, recruiting and attrition procedures. Also introduces multiple casualty incident management. Prerequisites: Placement into ENG 111 or with permission of the instructor. Lecture: 3 hours per week.

EMS 263 EMS INSTRUCTOR TRAINING (3 cr.)—Develops skills in instructional design, delivery and evaluation. Includes: principles of adult learning and student learning styles; development of instructional objectives; preparation of lesson plans, preparation and use of instructional aids, class participation techniques, practical skill instruction, providing student feedback and evaluating performance. Lecture: 3 hours per week.

ENERGY TECHNOLOGY (ENE)

ENE 100 CONVENTIONAL AND ALTERNATE ENERGY APPLICATION (4 cr.)—Provides an overview of hydroelectric, coal, and nuclear energy production methods and renewable solar, geothermal, wind, and fuel cell technology. A complete system breakdown of conventional power production methods, efficiency, and sustainability when compared with solar, geothermal, wind, and fuel cell applications. Lecture 3 hours. Laboratory 3 ours. Total 6 hours per week.

ENE 105 - Solar Thermal Active and Passive Technology (4 cr.)—Provides a comprehensive study of thermal technology as it applies to collegector types and ratings, open-loop versus closed-loop and system sizing. Introduces hydronics, hot water, and pool heating applications. Provides an introduction to fluid dynamics and chemistry as it applies to system installation and maintenance. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ENE 220 - Wind Power Generation (4 cr.)—Studies wind turbines, their location, efficiency, and cost. Covers power generation with wind turbines, storage, conversion to established values, use of batteries, invertors, grid tie systems, and all necessary wiring installations. Prerequisite: ELE 157. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ENE 230 - Geothermal Applications (4 cr.)—Studies the use of geothermal energy for large and small scale production. Covers the feasibility of heat pump applications for local use on an individual basis. Prerequisite: ELE 157. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ENGLISH (ENG)

ENG 01 PREPARING FOR COLLEGE WRITING I (1-6 cr.)—Helps students discover and develop writing processes needed to bring their proficiency to the level necessary for entrance into their respective curricula. Guides students through the process of starting, composing, revising, and editing. Variable hours per week.

ENG 03 PREPARING FOR COLLEGE WRITING II (1-6 cr.)—Emphasizes strategies within the writing process to help students with specific writing situations. Develops techniques to improve clarity of writing and raise proficiency to the level necessary for entrance into particular curricula. Variable hours per week.

ENG 04 READING IMPROVEMENT I (1-6 cr.)—Helps students improve their reading processes to increase their understanding of reading materials. Includes word forms and meanings, comprehension techniques, and ways to control reading pace. Variable hours per week.

ENG 05 READING IMPROVEMENT II (1-6 cr.)—Helps students read critically and increase appreciation of reading. Guides students in making inferences, drawing conclusions, detecting relationships between generalizations and supporting details. Includes interpreting graphic aids and basic library skills. Variable hours per week.

ENG 100 BASIC OCCUPATIONAL COMMUNICATION (3 cr.)—Develops ability to communicate in occupational situations. Involves writing, reading, speaking, and listening. Builds practical skills such as handling customer complaints, writing various types of letters, and preparing for a job interview. (Intended for certificate and diploma students.) Lecture 3 hours per week.

ENG 101-102 PRACTICAL WRITING I-II (3 cr.) (3 cr.)—Develops writing ability for study, work, and other areas of life with emphasis on occupational correspondence and reports. Guides students in learning writing as a process: understanding audience and purpose, exploring ideas and information, composing, revising, and editing. Supports writing by integrating experiences in thinking, reading, listening, and speaking. Prerequisite ENG 101 prior to ENG 102. Lecture 3 hours per week.

ENG 111 COLLEGE COMPOSITION I (3 cr.)—Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics: develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay. Lecture 3 hours per week.

ENG 112 COLLEGE COMPOSITION II (3 cr.)—Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. Prerequisite: Students must successfully complete ENG 111 or its equivalent, and must be able to use word processing software. Lecture 3 hours per week.

ENG 115 TECHNICAL WRITING (3 cr.)—Develops ability in technical writing through extensive practice in composing technical reports and other documents. Guides students in achieving voice, tone, style, and content in formatting, editing, and graphics. Introduces students to technical discourse through selected reading. Prerequisite ENG 111 or divisional approval. Lecture 3 hours per week.

ENG 120 SURVEY OF MASS MEDIA (3 cr.)—Examines radio, television, newspapers, magazines, books and motion pictures. Emphasizes the nature of change in, and the social implications of, communications media today. Lecture 3 hours per week.

ENG 121-122 INTRODUCTION TO JOURNALISM I-II (3 cr.) (3 cr.)—Introduces students to all news media, especially news gathering and preparation for print. Prerequisite ENG 111 or 112 or divisional approval. Lecture 3 hours per week.

ENG 210 ADVANCED COMPOSITION (3 cr.)—Helps students refine skills in writing non-fiction prose. Guides development of individual voice and style. Introduces procedures for publication. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 211-212 CREATIVE WRITING I-II (3 cr.) (3 cr.)—Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama, and essays. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 241-242 SURVEY OF AMERICAN LITERATURE I-II (3 cr.) (3 cr.)—Examine American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 243-244 SURVEY OF ENGLISH LITERATURE I-II (3 cr.) (3 cr.)—Studies major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 251-252 SURVEY OF WORLD LITERATURE I-II (3 cr.) (3 cr.)—Examines major works of world literature. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 268 THE MODERN DRAMA (3 cr.)—Studies the modern drama. Emphasizes the understanding and enjoyment of dramatic literature. Requires critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 278 APPALACHIAN LITERATURE (3 cr.)—Examines selected works of outstanding authors of the Appalachian region. Involves critical reading and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 279 FILM AND LITERATURE (3 cr.)—Examines the translation of literature into film viewing and writing. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENVIRONMENTAL SCIENCE (ENV)

ENV 121 GENERAL ENVIRONMENTAL SCIENCE I (4 cr.)—Explores fundamental components and interactions that make up the natural systems of the earth. Introduces the basic science concepts in the discipline of biological, chemical, and earth sciences that are necessary to understand and address environmental issues. Lecture 3 hours. Recitation and Laboratory 3 hours. Total 6 hours per week. Part I of II.

ENV 170 FUNDAMENTALS OF ENERGY TECHNOLOGY (4 cr.)—Gives the student an overview of the field of energy conservation and use and provides descriptions of job functions typical to energy technicians. Lecture 2 hours per week.

ENV 193 STUDIES IN YOUR ROLE IN THE GREEN ENVIRONMENT (1 cr.)—Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Total 1 to 5 hours per week.

ENV 220 ENVIRONMENTAL PROBLEMS (3 cr.)—Studies the relationship of man to his environment; ecological principles, population dynamics, topics of current importance including air, water, and noise pollution; poisoning and toxicity, radiation, conservation and management of natural resources. Lecture 3 hours per week.

ENV 221 NATURAL RESOURCE MANAGEMENT (4 cr.)---Examines environmental aspects of mining and petroleum exploration, management of forest resources, surface and groundwater resource management and alternative energy systems. Familiarizes students with the regulatory environment in mining and exploration and examine case histories of reclamation and remediation projects in both hard rock and fossil fuels. Includes applications such as high yield forestry and renewable energy and examines in light of global sustainability issues and changing economics of oil.

ENV 227 ENVIRONMENTAL LAW (2-3 cr.)—Introduces environmental law including the history of environmental laws, the National Environment Policy Act, state environmental acts, hazardous wastes, endangered species, pollution, and surface mine reclamation. Lecture 2-3 hours per week.

ENV 231 ENVIRONMENTAL CODES I (3 cr.)—Introduces the regulations, their intent, interpretation of the RESOURCES CONSERVATION AND RECOVERY LIABILITY ACT (RCRA) and the COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) and similar environmental legislation. Studies their impact on industry. Lecture 3 hours per week.

EQUINE MANAGEMENT (EQU)

EQU 110 FUNDAMENTALS OF HORSE MANAGEMENT (3 cr.)—Surveys horse breeds, their functions and uses. Addresses horse conformation facilities, and basic feeds and feedings. Includes study of principles of horse nutrition. Lecture 3 hours per week.

EQU 137 EQUINE FACILITIES MANAGEMENT (3 cr.)—Introduces the design and maintenance of horse facilities to include construction considerations in the areas of equipment selection, pasture management, and breeding. Introduces stable building and maintenance, as well as jump construction. Lecture 2 hours per week. Laboratory 2 hours per week.

ELECTRONICS SERVICING (ESR)

ESR 105 VIDEO TECHNIQUES (3 cr.)—Studies systems and hardware associated with electronic imaging. Includes video cameras, monitors, receivers, VCR's and camcorders. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ESR 150 SOFTWARE CONFIGURATION AND DIAGNOSTICS (3-4 cr.)—Teaches use and configuration of personal computer operating systems and applications programs, with emphasis on solving software-induced problems. Includes use of system utilities and selected diagnostic software. Includes use of a programming language. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ESR 158 ELECTRONIC CIRCUITS FOR COMPUTERS (3-4 cr.)—Studies the basic circuit principles used in repair and troubleshooting of computer systems. Use of laboratory equipment is stressed. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ESR 236 CERTIFICATION/LICENSE PREPARATION (2-3 cr.)—Provides a broad review of the materials relating to consumer electronics that may be encountered on certification exams. Lecture 1-2 hours. Laboratory 3 hours. Total 4-5 hours per week.

ELECTRONICS TECHNOLOGY (ETR)

ETR 100 ELECTRONIC PROBLEM SOLVING LABORATORY (1 cr.)— Focuses on enabling the student to improve skills in various areas of study. Includes electronic measurements, circuit assembly, troubleshooting circuits, and computer applications to problem solving. Lecture 0-1 hour. Laboratory 3 hours per week. Total 3 hours per week.

ETR 101 ELECTRICAL/ELECTRONIC CALCULATIONS I (3-4 cr.)—Teaches calculations methods and fundamental applications and processes to electrical and electronic problems. Stresses basic calculations required in circuit analysis. Includes problem solving utilizing calculators or computers. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ETR 102 ELECTRICAL/ELECTRONIC CALCULATIONS II (3-4 cr.)—Teaches calculation methods and advanced applications and processes to electrical and electronic problems. Stresses basic calculations required in circuit analysis. Includes problem solving using calculators or computers. Prerequisite ETR 101. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ETR 106 PROGRAMMING METHODS FOR ELECTRICAL/ELECTRONIC CALCULATIONS (2-3 cr.)— Teaches the application of a high-level language to electrical and electronic problem solving and circuit analysis. Introduces an operating system. Prerequisites: MTH 115 and ETR 113. Lecture 1-2 hours. Laboratory 3-6 hours. Total 4-5 hours per week.

ETR 113-114 D.C. AND A.C. FUNDAMENTALS I-II (3-4 cr.) (3-4 cr.)—Studies D.C. and A.C. circuits, basic electrical components, instruments, network theorems, and techniques used to predict, analyze and measure electrical quantities. Co-requisite MTH 115 or equivalent and ETR 112 equivalent. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ETR 115 D.C. AND A.C. CIRCUITS (3-4 cr.)—Studies current flow in direct and alternating current circuits with emphasis upon practical problems. Reviews mathematics used in circuit calculations. Introduces concepts of resistance, capacitance, inductance and magnetism. Focuses on electronics/circuits application. Lecture 3-4 hours. Total 3-4 hours per week.

ETR 121-122 ELECTRONIC DEVICES I-II (3-4 cr.) (3-4 cr.)—Provides laboratory verification of the theory of active devices and circuits such as diodes, power supplies, transistors (BJT's), amplifiers and their parameters, FETs, and operational amplifiers. May also include UJTs, oscillators, RF amplifiers, thermionic devices, and other devices. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

ETR 131-132 ELECTRICAL CIRCUITS I-II (4-5 cr.) (4-5 cr.)—Studies D. C. and A.C. circuits, basic electrical components, instruments, laws and techniques used to predict, analyze and measure electrical quantities. Co-requisite MTH 113 or equivalent. Lecture 3-4 hours. Laboratory 3 hours. Total 6-7 hours per week.

ETR 141-142 ELECTRONICS I-II (3 cr.) (3 cr.)—Introduces electronic devices as applied to basic electronic circuits and systems. Lecture 3 hours per week.

ETR 143-144 DEVICES AND APPLICATIONS I-II (3-4 cr.) (3-4 cr.)—Teaches theory of active devices and circuits such as diodes, power supplies, transistors (BJT'S), amplifiers and their parameters, FETs, and operational amplifiers. May include UJT'S, oscillators, RF amplifiers, thermionic devices, and others. Prerequisites: ETR 158, knowledge of D. C./A. C. theory or permission of instructor. Lecture 2-3 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

ETR 149 PC REPAIR (3 cr.)—Teaches the maintenance, troubleshooting and repair of personal computer systems. Uses IBM or compatible computer systems to provide fault isolation drill and practice. Lecture 1-2 hours per week. Laboratory 2-6 hours per week. Total 3-7 hours per week.

ETR 151-152 ELECTRONIC CIRCUITS AND TROUBLESHOOTING I-II (2 cr.) (2 cr.)—Studies analog and digital circuits and systems with standard circuit test and troubleshooting procedures. Lecture 2 hours per week.

ETR 156 DIGITAL CIRCUITS AND MICROPROCESSOR FUNDAMENTALS (4 cr.)—Introduces characteristics and applications of digital logic elements including gates, counters, registers, displays and pulse generators. Applies microprocessor theory and applications, including internal architecture of the micro- processor, interfacing, input/output, and memory. Prerequisites: ETR 158 and MTH 115. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 158 ELECTRONIC CIRCUITS FOR COMPUTERS (4 cr.)—Studies the basic electrical and electronic principles used in repair and troubleshooting of computer systems. Includes Ohm's and Kirchoff's laws, capacitor and diode circuit analysis, power supply circuits, and transistor fundamentals. Use of laboratory equipment (oscilloscope and DMM) is stressed. Co-requisite: MTH 115 or equivalent. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 159 MICROCOMPUTERS PERIPHERALS (4 cr.)—Covers basic knowledge of typical peripheral devices found in a microcomputer system. Includes devices such as printer, disk drive, CRT monitor, and keyboard. Emphasizes troublesooting techniques. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 160 SURVEY OF MICROPROCESSORS (4 cr.)—Provides an overview of microprocessor architecture, basic machine language programming, and I/O devices. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 164 UPGRADING AND MAINTAINING PC HARDWARE (3 cr.)—Teaches upgrading of the system CPU, memory, drives, multimedia components, modem, and video card in a microcomputer. Covers hardware as well as software related maintenance issues. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

ETR 166 FUNDAMENTALS OF COMPUTER TECHNOLOGY (3-4 cr.)—Introduces computer use and literacy. Includes operating systems, high level language programming, word processors, spreadsheets and other generic software. Uses engineering terms, standards and methods. Lecture 2-3 hours. Laboratory 0-3 hours. Total 3-6 hours per week.

ETR 168 DIGITAL CIRCUIT FUNDAMENTALS (2-3 cr.)—Covers the fundamentals of digital logic and the study of digital circuits and their applications. Lecture 2-3 hours per week.

ETR 193 STUDIES IN (FIBER OPTIC INSTALLATION) (1-5 cr.)—Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Variable hours per week.

ETR 202 CALCULUS FOR ELECTRONICS (3 cr.)—Teaches differential and integral calculus as applied to the solution of electrical problems involving instantaneous rates of change and the determination of output values with changing inputs. Emphasizes electrical circuits and their operations. Prerequisite: MTH 115 and 116 or equivalent. Lecture 3 hours per week.

ETR 231 PRINCIPLES OF LASERS AND FIBER OPTICS (3-4 cr.)—Teaches the theory and application of lasers and fiber optics. Includes optics, fiber optic cables and connectors, photo detectors, optical pulse generation, sensors, multiplexers, lasers, gas lasers, semiconductor lasers, laser safety and laser test instruments. May include preparation of a report as an out-of-class activity. Lecture 2-3 hours. Laboratory 2-4 hours. Total 4-6 hour per week.

ETR 232 PRINCIPLES OF LASERS AND FIBER OPTICS II (3-4 cr.)—Continues to study the theory and application of lasers and fiber optics. Includes optics, fiber optic cables and connectors, photo detectors, optical pulse generation, sensors, multiplexers, and laser safety. Lecture 2-3 hours. Laboratory 2-4 hours. Total 4-6 hours per week.
ETR 235 OPTICAL ELECTRONICS (2-3 cr.)—Teaches basic optical theory for use with optical fibers. Includes discussion of LEDs, Photodetectors, and other devices for interfacing optical fibers to electronic circuits. Lecture 1-2 hours. Laboratory 2 hours. Total 3-4 hours per week.

ETR 237-238 INDUSTRIAL ELECTRONICS I-II (3-4 cr.) (3-4 cr.)—Studies linear integrated circuits for industrial applications, motors, industrial control devices, power control circuits, transducers, industrial process control, and sequential process control. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ETR 240 PRINCIPLES OF COMMUNICATIONS (3-4 cr.)—Introduces the concepts of electronic communications and includes noise, modulation, de-modulation and signal propagation. Includes circuits and equipment to implement the above communication concepts. Prerequisites: knowledge of D.C./A.C. theory and devices and ETR 114 and MTH 116. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ETR 261-262 MICROPROCESSOR APPLICATION I-II (3-4 cr.) (3-4 cr.)—Teaches the fundamentals of microprocessors including architecture, internal operations, memory, I/O devices, machine level programming and interfacing. Emphasizes instrumentation and microprocesor. Prerequisite: ETR 156. Lecture 2-3 hour. Laboratory 3 hours. Total 5-6 hours per week.

ETR 284 DIGITAL COMMUNICATION (4 cr.)—Covers information theory, pulse communication A/D and D/A conversion, coding and error detection and interconnection requirements of digital techniques to voice, video and data communication. Prerequisite ETR 167. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 294 TECHNICAL CERTIFICATION (1-2 cr.)—Reviews materials on various options of certification exams to prepare students for taking the certification exam. Addresses any one option of certification and may be repeated for credit. Lecture 1-2 hours per week.

FINANCIAL SERVICES (FIN)

FIN 110 PRINCIPLES OF BANKING (3 cr.)—Presents nearly every aspect of banking, providing a comprehensive introduction to the diversified services and operations of the banking industry. Focuses on new trends gaining attention in banking circles. Recommended for all banking students. AIB approved. Lecture 3 hours per week.

FIN 119 BANK CONTROL AND AUDIT (3 cr.)—Designed for the non-auditor, this course clearly explains the auditing function in banks. Discusses the role, duties, and responsibilites of the auditor. Develops understanding of why bank controls are needed and how to evaluate those controls within a bank. Highlighted are audit organization, risk exposure, and auditing in the security, compliance, and training areas. Lecture 3 hours per week.

FIN 157 CONSUMER LENDING (2-3 cr.)—Examines consumer credit and lending activities in financial institutions, various forms of consumer loans, consumer credit insurance, computation of installment payment, process in loan documents and evaluation and effect of bankruptcies on lending institutions. AIB approved. Lecture 2-3 hours per week.

FIN 205 CONSUMER CREDIT ANALYSIS (3 cr.)—Provides advanced knowledge about many tasks associated with making a consumer loan. Gives an in-depth understanding of legal and regulatory issues, credit decision considerations and loan interviewing. Focuses on credit applications, scoring fundamentals, loan closing and review. Lecture 3 hours per week.

FIN 215 FINANCIAL MANAGEMENT (3 cr.)—IIntroduces basic financial management topics including statement analysis, working capital; capital budgeting, and long-term financing. Focuses on Net Present Value and Internal Rate of Return techniques, lease vs. buy analysis, and Cost of Capital computations. Uses problems and cases to enhance skills in financial planning and decision making. Lecture 3 hours per week.

FORESTRY (FOR)

FOR 105 FOREST AND WILDLIFE ECOLOGY (4 cr.)—Studies the interrelationships of organisms and the natural and cultural environments with emphasis on human influences, ecological structures, survey of populations, communities and ecosystems. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

FOR 115 DENDROLOGY (4 cr.)—Studies trees and shrubs botanically and commercially important to the forests of eastern United States. Emphasizes field characteristics of trees and common shrubs of the eastern United States. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

FOR 125 FOREST FIRE CONTROL (1 cr.)—Examines forest fire behavior. Includes factors causing ignition and spread, methods of fire prevention and presuppression, and forest fire control organizations. Lecture 1 hour per week.

FOR 135 WILDLIFE AND FISHERIES MANAGEMENT (4 cr.)—Introduces the prinicples of wildlife and fisheries management. Emphasizes practices in the eastern United States. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

FOR 211 WILDLIFE INVESTIGATIONAL TECHNIQUES I (3 cr.)—Teaches techniques used in wildlife management research including the capturing, sexing, aging and marking of wild animals. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

FOR 245 FOREST PRODUCTS I (3 cr.)—Introduces forest products. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

FRENCH (FRE)

FRE 101-102 BEGINNING FRENCH I-II (4-5 cr.) (4-5 cr.)—Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. Lecture 4-5 hours per week. May include one additional hour of oral practice per week.

FRE 201-202 INTERMEDIATE FRENCH I-II (3-4 cr.) (3-4 cr.)—Continues to develop understanding, speaking, reading, and writing skills. French is used in the classroom. Prerequisite French 102 or equivalent.Lecture 3-4 hours per week. May include one additional hour of oral practice per week.

FIRE SCIENCE TECHNOLOGY (FST)

FST 100 PRINCIPLES OF EMERGENCY SERVICES (3 cr.)—Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function to public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics. Lecture 3 hours per week.

FST 110 FIRE BEHAVIOR AND COMBUSTION (3 cr.) --Explores the theories and fundamentals of how and why fires start, spread, and how they are controlled. Lecture 3 hours per week.

FST 112 HAZARDOUS MATERIALS CHEMISTRY (3 cr.)--Provides basic fire chemistry relating to the categories of hazardous materials including problems of recognition, reactivity, and health encountered by firefighters. Lecture 3 hours per week.

FST 115 FIRE PREVENTION (3 cr.)--Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education. Lecture 3 hours per week.

FST 120 OCCUPATIONAL SAFETY AND HEALTH FOR THE FIRE SERVICE (3 cr.)--Introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Includes risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials and technical rescue. (Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization. Lecture 3 hours per week.

FST 205 FIRE PROTECTION HYDRAULICS AND WATER SUPPLY (3 cr.)--Provides a foundation of theoretical knowledge in order to understand the principles to analyze and to solve water supply problems. Lecture 3 hours per week.

FST 220 BUILDING CONSTRUCTION FOR FIRE PROTECTION (3 cr.)--Provides the components of building construction that relate to fire and life safety. Focuses on firefighter safety. Covers the elements of construction and design of structures and how they are key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Lecture 3 hours per week.

FST 235 STRATEGY AND TACTICS (3 cr.)--Provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground. Lecture 3 hours per week.

GEOGRAPHY (GEO)

GEO 200 INTRODUCTION TO PHYSICAL GEOGRAPHY (3 cr.)—Studies major elements of the natural environment including early sun relationship, land forms, weather and climate, natural vegetation and soils. Introduces the student to types and uses of maps. Lecture 3 hours per week.

GEO 205 SURVEY OF PHYSICAL GEOGRAPHY (4 cr.)—Presents a survey of major elements of the natural environment, including land forms, weather and climate, natural vegetation and soils. Introduces the student to types and uses of maps. Lecture 3 hours per week. Laboratory 2 hours. Total 5 hours per week.

GEO 210 PEOPLE AND THE LAND: AN INTRODUCTION TO CULTURAL GEOGRAPHY (3 cr.)—Focuses on the relationship between culture and geography. Presents a survey of modern demographics, landscape modification, material and non-material culture, language, race and ethnicity, religion, politics, and economic activities. Introduces the student to types and uses of maps. Lecture 3 hours per week.

GEO 220 WORLD REGIONAL GEOGRAPHY (3 cr.)—Studies physical and cultural characteristics of selected geographical regions of the world. Focuses upon significant problems within each of the regions,and examines the geographical background of those problems. Introduces the student to types and uses of maps. Lecture 3 hours per week.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

GIS 200 GEOGRAPHICAL INFORMATION SYSTEMS I (4 cr)—Provides hands-on introduction to a dynamic desktop GIS (Geographic Information System). Introduces the components of a desktop GIS and their functionality. Emphasizes manipulation of data for the purpose of analysis, presentation, and decision-making. Prerequisite: ITE 115 or ITE 119 or equivalent. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

GIS 201 GEOGRAPHICAL INFORMATION SYSTEMS II (4 cr)—Provides a continuation of GIS 200, with emphasis on advanced topics in problem solving, decision-making, modeling, programming, and data management. Covers map projections and data formats, and methods for solving the problems they create. Prerequisite: GIS 200. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

GIS 205 GIS 3-DIMENSIONAL ANALYSIS (4 cr)—Introduces GIS 3D (three-dimensional) concepts and practices with a concentration on displaying, creating and analyzing spatial GIS data using 3D. Covers 3D shape files, 3D data formats such s Tins, DEMs, grids and controlling the perspective and scale of 3D data through rotating, panning and zooming. Prerequisite: GIS 201. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

GIS 210 UNDERSTANDING GEOGRAPHIC DATA (4 cr)—Provides the student an introduction to geographic data and the principles behind their construction. Introduces the concepts for measuring locations and characteristics of entities in the real world. Exposes the student to the limitations and common characteristics of geographic data. Prerequisite: GIS 201. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

GEOLOGY (GOL)

GOL 105 PHYSICAL GEOLOGY (4 cr.)—Introduces the composition and structure of the earth and modifying agents and processes. Investigates the formation of minerals and rocks, weathering, erosion, earthquakes, and crustal deformation. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

GOL 106 HISTORICAL GEOLOGY (4 cr.)—Traces the evolution of the earth and life through time. Presents scientific theories of the origin of the earth and life and interprets rock and fossil record. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

GOL 111-112 OCEANOGRAPHY I-II (4 cr.) (4 cr.)—Examines the dynamics of the oceans and ocean basins. Applies the principles of physical, chemical, biological, and geological oceanography. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

GOL 225 ENVIRONMENTAL GEOLOGY (4 cr.)—Explores the interaction between man and his physical environment. Stresses geologic hazards and environmental pollution utilizing case histories. Prerequisite GOL 105. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

HEALTH CARE TECHNICIAN (HCT)

HCT 100 INTRODUCTION TO HEALTH CARE OCCUPATIONS (2-3 cr.)—Explores various career opportunities in health care field and the relationships between various health-related occupations. Encourages career planning and decision making. Lecture 2-3 hours per week.

HCT 101 HEALTH CARE TECHNICIAN I (3-4 cr.)—Teaches basic care skills with emphasis on physical, social, emotional, and spiritual needs of patients. Covers procedures, communications and interpersonal relations; observation, charting and reporting; care planning, safety and infection control; anatomy and physiology, nutrition and patient feeding; ethics, death and dying. Prepares multi-skilled health care workers to care for patients of various ages with special emphasis on geriatric nursing, home health, long and short term care facilities. Lecture 3-4 hours per week.

HCT 102 HEALTH CARE TECHNICIAN II (3-4 cr.)—Applies theory through laboratory experience for health care technicians to work in home health, long and short term facilities. Prerequisite: HCT 101. Lecture 1-2 hours. Lab 2-6 hours. Total 4-8 hours per week.

HCT 115 MEDICATION ADMINISTRATION TRAINING (2-3 cr.)—Prepares students to safely administer, or to assist in client self-administration of medications in specific settings. Includes practice. Meets curriculum requirements of the State Board of Nursing. Lecture 1-2 hours per week. Laboratory 2-6 hours per week. Total 4-8 hours per week.

HCT 117 COMMON CAUSES OF PROBLEM BEHAVIOR (3 cr.)—Introduces the importance of understanding causes of behavior problems and the role emotions play in our lives. Identifies assessments and intervention methods that may be used by the care giver. Enables students to understand their own as well as client behavior. Lecture 3 hours per week.

HCT 119 ADVANCED HEALTH CARE TECHNICIAN (4 cr.)—Applies advanced theory through practical experience for health care technicians in home health, long and short term health care facilities. Teaches care of clients with emphasis on charting, infection control, activities,nutrition, speech, occupational, and physical therapy. Prerequisite: HCT 102 or equivalent. Lecture 3 hours. Lab 2 hours. Total 5 hours per week.

HCT 195 ELECTROCARDIOGRAM RECOGNITION (3 cr.)—Focuses on interpretation of normal electrocardiogram, recognition and management of basic dysrhythmias. Also covers basic anatomy and physiology of cardiovascular system and pathophysiology and management of a cardiovascular dysfunction. Lecture 3 hours per week.

HEALTH INFORMATION MANAGEMENT (HIM)

HIM 100 INTRODUCTION TO THE HEALTH CARE DELIVERY SYSTEM (1 cr.)—Introduces the organization of health care delivery system with emphasis on types of providers and the role that accrediting and licensing bodies play in the delivery of health care. Lecture 1 hour per week.

HIM 111 MEDICAL TERMINOLOGY I (3 cr.) —Introduces the student to the language used in the health record. Includes a system-by-system review of anatomical disease, and operative terms, abbreviations, radiography procedures, laboratory tests, and pharmacology terms. Part I of II. Lecture 2-3 hours per week.

HIM 112 MEDICAL TERMINOLOGY II (3 cr.) —Continues with focus on the language used in the health record. Includes a system-by-system review of anatomic disease, and operative terms, abbreviations, radiography procedures, laboratory tests, and pharmacology terms. Part II of II. Lecture 2-3 hours per week.

HIM 130 HEALTHCARE INFORMATION SYSTEMS (3 cr.) —Teaches basic concepts of microcomputer software (to include operating systems, word processing, spreadsheets, and database applications. Focuses on microcomputer applications and information systems in the Healthcare environment. Provides a working introduction to electronic health information systems for allied health, teaching students how the adoption of electronic health records affects them as future healthcare professionals. Lecture 3 hours per week.

HIM 150 HEALTH RECORDS MANAGEMENT (3 cr.) —Presents documentation format and content of the medical record relevant to the coding function. Introduces application of standard techniques for filing, maintenance, and acquisition of health information. Examines the processes of collecting, computing, analyzing, interpreting, and presenting data related to health care services. Includes legal and regulatory guidelines for the control and use of health information data. Lecture 3 hours per week.

HIM 230 INFORMATION SYSTEMS AND TECHNOLOGY IN HEALTH CARE (3 cr.) —Explores computer technology and system application in health care. Introduces the information systems life cycle. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

HIM 233 ELECTRONIC HEALTH RECORDS MANAGEMENT (3 cr.) —Studies new trends in management and processing of health information with emphasis on the electronic health record (EHR). Covers the definition, benefits, standards, functionality, confidentiality and security, and impact of the EHR in the healthcare environment. Explores implementation of the EHR including infrastructure required, project management techniques, information technology systems, workflow processes and redesign in various health care settings. Discusses legal issues created by implementation of the EHR. Prerequisites: HIM 130 and HIM 230. Lecture 3 hours per week.

HIM 295 TOPICS IN: VENDER SPECIFIC SYSTEMS (4 cr.) —Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours per week.

HISTORY (HIS)

HIS 101-102 HISTORY OF WESTERN CIVILIZATION I-II (3 cr.) (3 cr.)—Examines the development of western civilization from ancient times to the present. Lecture 3 hours per week.

HIS 121-122 UNITED STATES HISTORY I-II (3 cr.) (3 cr.)—Surveys United States history from its beginning to the present. Lecture 3 hours per week.

HIS 266 MILITARY HISTORY OF THE CIVIL WAR (3 cr.)—Analyzes military campaigns of the Civil War, including factors contributing to the defeat of the Confederacy and problems created by the war. May include field trips to Civil War sites in the region. Lecture 3 hours per week.

HIS 269 CIVIL WAR AND RECONSTRUCTION (3 cr.)—Studies factors that led to the division between the States. Examines the war, the home fronts, and the era of Reconstruction. Lecture 3 hours per week.

HIS 277 THE AMERICAN EXPERIENCE IN VIETNAM (3 cr.)—Analyzes American involvement in Vietnam from World War II with emphasis on the presidencies of Johnson, Nixon and Ford. Lecture 3 hours per week.

HEALTH INFORMATION TECHNOLOGY (HIT)

HIT 253 HEALTH RECORDS CODING (4-5 cr.)—Examines the development of coding classification systems. Introduces ICD-9-CM coding classification system, its format and conventions. Stresses basic coding steps and guidelines according to body systems. Provides actual coding exercises in relation to each system covered. Lecture 3-4 hours. Laboratory 0-3 hours. Total 3-7 hours per week.

HIT 254 ADVANCED CODING AND REIMBURSEMENT (3-4 cr.)—Stresses advanced coding skills through practical exercises using actual medical records. Introduces CPT-4 coding system and guidelines for out-patient/ambulatory surgery coding. Introduces prospective payment system and its integration with ICD-9-CM coding. Lecture 3-4 hours. Laboratory 0-3 hours. Total 3-6 hours per week.

HEALTH (HLT)

HLT 100 FIRST AID AND CARDIOPULMONARY RESUSCITATION (2-3 cr.)—Focuses on the principles and techniques of safety, first aid, and cardiopulmonary resuscitation. Lecture 2-3 hours per week.

HLT 104 TRAINING FOR INSTRUCTOR TRAINERS (1 cr.)—Provides training in instructional activities, recordkeeping, legal aspects and research activities relevant to CPR instruction. Evaluates CPR performance skills, teaching skills and knowledge base. Required for Instructor trainer certification by American Heart Association. Prerequisite - current BLS Provider certification which has been in effect at least one year. Lecture 1 hour per week.

HLT 105 CARDIOPULMONARY RESUSCITATION (1 cr.)—Provides training in coordinated mouth-to-mouth artificial ventilation and chest compression, choking, life-threatening emergencies, and sudden illness. Lecture 1 hour per week.

HLT 110 CONCEPTS OF PERSONAL AND COMMUNITY HEALTH (2-3 cr.)—Studies the concepts related to the maintenance of health, safety, and the prevention of illness at the personal and community level. Lecture 2-3 hours per week.

HLT 116 INTRODUCTION TO PERSONAL WELLNESS CONCEPTS (2-3 cr.)—Introduces students to the dimensions of wellness, including the physical, emotional, environmental, spiritual, occupational and social components. Lecture 2-3 hours per week.

HLT 130 NUTRITION DIET THERAPY (1-2 cr.)--Studies nurtrients, sources, functions, and requirements with an introduction to diet therapy. Lecture 0-1 hours. Laboratory 0-2 hours. Total 1-2 hours per week.

HLT 135 CHILD HEALTH AND NUTRITION (3 cr.)—Focuses on the physical needs of the preschool child and the methods by which these are met. Emphasizes health routines, hygiene, nutrition, feeding and clothing habits, childhood diseases, and safety as related to health growth and development. Lecture 3 hours per week.

HLT 140 ORIENTATION TO HEALTH RELATED PROFESSIONS (2 cr.)—Explores the interrelated roles and functions of various members of the health team. Lecture 2 hours per week.

HLT 141 INTRODUCTION TO MEDICAL TERMINOLOGY (1-2 cr.)—Focuses on medical terminology for students preparing for careers in the health professions. Lecture 1-2 hours per week.

HLT 143-144 MEDICAL TERMINOLOGY I-II (3 cr.) (3 cr.)—Provides an understanding of medical abbreviations and terms. Includes the study of prefixes, suffixes, word stems, and technical terms with emphasis on proper spelling, pronunciation, and usage. Emphasizes more complex skills and techniques in understanding medical terminology. Lecture 3 hours per week.

HLT 145 ETHICS FOR HEALTH CARE PERSONNEL (2 cr.)—Focuses on ethical concepts of health care. Emphasizes confidentiality, maintaining patient records, personal appearance, professionalism with patients/clients, associates, and an awareness of health care facilities. Lecture 2 hours per week.

HLT 195 TOPICS IN GENERAL PHARMACOLOGY LAB I (1 cr.)—Provides practical experience to supplement instruction in HLT 250. Should be taken concurrently with HLT 250. Lab 2 hours per week.

HLT 206 EXERCISE SCIENCE (3 cr.)—Surveys scientific principles, methodologies, and research as applied to exercise and physical fitness. Emphasizes physiological responses and adaptions to exercise. Addresses basic elements of kinesiology, biomechanics, and motor learning. Presents an introduction to the physical fitness industry. Prerequisite: BIO 141-142. Lecture 3 hours per week.

HLT 230 PRINCIPLES OF NUTRITION AND HUMAN DEVELOPMENT (3 cr.)—Teaches the relationship between nutrition and human development. Emphasizes nutrients, balanced diet, weight control, and the nutritional needs of an individual. Lecture 3 hours per week.

HLT 240 CONSUMER HEALTH EDUCATION (3 cr.)—Focuses on health fads, myths, misunderstandings, quackeries, deceptions, and fraudulent health practices. Includes selecting and purchasing health products, services, consumer protections, and in the planning and financing of medical care. Lecture 3 hours per week.

HLT 250 GENERAL PHARMACOLOGY (2-3 cr.)—Emphasizes general pharmacology for the health related professions covering general principles of drug actions/reactions, major drug classes, specific agent within each class, and routine mathematical calculations needed to determine desired dosages. Lecture 2-3 hours per week.

HLT 261-262 BASIC PHARMACY I-II (3 cr.) (3 cr.)—Explores the basics of general pharmacy, reading prescriptions, symbols, packages, pharmacy calculations. Teaches measuring compounds of drugs, dosage forms, drug laws, and drug classifications. Lecture 3 hours per week.

HLT 290 COORDINATED INTERNSHIP IN PHARMACY TECHNICIAN (4 cr.)—Introduces the role of the student in the clinical setting. Supervised practice in selected clinical settings coordinated by the college. Lecture 1 hour per week. Lab 6 hours per week.

HUMAN SERVICES (HMS)

HMS 100 INTRODUCTION TO HUMAN SERVICES (3 cr.)—Introduces human service agencies, roles and careers. Presents an historical perspective of the field as it relates to human services today. Additional topics include values clarification and needs of target populations. Lecture 3 hours per week.

HMS 121 BASIC COUNSELING SKILLS I (3 cr.)—Develops skills needed to function in a helping relationship. Emphasizes skills in attending, listening and responding. Clarifies personal skill strengths, deficits and goals for skill improvement. Lecture 3 hours per week.

HMS 122 BASIC COUNSELING SKILLS II (3 cr.)—Expands the development of counseling skills needed to function effectively in a helping relationship. Emphasizes skills in responding, personalizing, summarizing and initiating. Clarifies personal skill strengths, deficits and goals for skill improvement. Develops plans for achieving personal and program goals. Lecture 3 hours per week.

HMS 145 EFFECTS OF PSYCHOACTIVE DRUGS (3 cr.)—Provides information on the biochemical, physiological, and behavioral aspects of substance addiction and will review the symptoms of addiction. Emphasizes areas of chemical dependency, medical epidemiology, physiological threats of addiction and methods of identifying multiple drug abusers. Lecture 3 hours per week.

HMS 225 FUNCTIONAL FAMILY INTERVENTION (3 cr.)—Provides an understanding of functions and dysfunctions within the family. Emphasizes the development of effective skills through an interpersonal/interactional approach to family intervention. Lecture 3 hours per week.

HMS 231-232 GERONTOLOGY I-II (3 cr.) (3 cr.)—Examines characteristics of the aging process and problems for the elderly. Considers both theoretical and applied perspectives on the following issues: biological, psychological, sociological, economic and political. Lecture 3 hours per week.

HMS 260 SUBSTANCE ABUSE COUNSELING (3 cr.)—Provides an understanding of the skills of guidance of clients and those associated with being an advocate. Examines the dynamics of the client/counselor relationship in developing treatment plans and empowerment skills. Lecture 3 hours per week.

HMS 261-262 HUMAN BEHAVIOR I-II (3 cr.) (3 cr.)—Develops skills in working with individuals, families, groups, organizations and communities within the socio-cultural context. Emphasizes historical development of various social systems and how these systems affect the whole person. Lecture 3 hours per week.

HOTEL-RESTAURANT-INSTITUTIONAL MANAGEMENT (HRI)

HRI 115 FOOD SERVICE MANAGERS SANITATION CERTIFICATION (1 cr.)— Presents and accelerated survey of principles and applications of sanitary food service, designed to promote the skills of managers in food service establishments licensed by the Commonwealth of Virginia. (Upon successful cmpletion of the course, a certificate of achievement is awarded by the Educational Foundation of the National Restaurant Association and the student's name is entered in the Foundation Registry.) Lecture 1 hour per week.

HRI 235 MARKETING OF HOSPITALITY SERVICES (3 cr.)—Studies principles and practices of marketing the services of the hotel and restaurant industry. Emphasizes the marketing concept with applications leading to customer satisfaction. Reviews methods of external and internal stimulation of sales. May include a practical sales/marketing exercise and computer applications. Lecture 3 hours per week.

HRI 255 HUMAN RESTAURANT MANAGEMENT AND TRAINING FOR HOSPITALITY AND TOURISM (3 cr.)—Prepares the students for interviewing, training and developing employees. Covers management skills (technical, human, and conceptual) and leadership. Covers the establishment and use of effective training and evaluative tools to improve productivity. Emphasizes staff and customer relations. Lecture 3 hours per week.

HRI 265 HOTEL FRONT OFFICE OPERATIONS (3 cr.)—Analyzes hotel front office positions and the procedures involved in reservation registration, accounting for and checking out guests, and principles and practices of night auditing. Covers the complete guest operation in both traditional and computerized operations. Lecture 3 hours per week.

HRI 266 TOURISM AND THE HOSPITALITY INDUSTRY (3 cr.)—Studies tourism, its principles, practices, and philosophies. Includes tourism's importance, background, components and organization; motivation for travel; cultural, sociological, psychological aspects; measuring demand and increasing demand through marketing; tourism supply, and development and research. Lecture 3 hours per week.

HORTICULTURAL MANAGEMENT (HRT)

HRT 110 PRINCIPLES OF HORTICULTURE (3 cr.)—Introduces concepts of plant growth and development. Covers horticultural practices, crops and environmental factors affecting plant growth. Lecture 3 hours per week.

HRT 115 PLANT PROPAGATION (3 cr.)—Teaches principles and practices of plant propagation. Examines commercial and home practices. Provides experience in techniques using seed-spores, cuttings, grafting, budding, layering and division. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 121-122 GREENHOUSE CROP PRODUCTION I-II (3cr.) (3 cr.)—Covers commercial practices related to production of floriculture crops. Considers production requirements, environmental control and management, and cultural techniques. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week**.**

HRT 205 SOILS (3 cr.)—Teaches theoretical and practical aspects of soils and other growing media. Examines media components, chemical and physical properties, and soil organisms. Discusses management and conservation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 207 PLANT PEST MANAGEMENT (3 cr.)—Teaches principles of plant pest management. Covers morphology and life cycles of insects and other small animal pests and plant pathogens. Lab stresses diagnosis, chemical and non-chemical control of specific pests, and pesticide safety. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 226 GREENHOUSE MANAGEMENT (3 cr.)—Discusses the theoretical and applied practices of managing a greenhouse facility. Emphasizes greenhouse construction and design, environmental control, energy conservation, and related topics. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 227 PROFESSIONAL LANDSCAPE MANAGEMENT (3 CR.)—Focuses on basic practices and techniques involving landscape management. Includes development of a year-round management calendar and preparation of bid and contract proposals. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HUM 165 CONTROVERSIAL ISSUES IN CONTEMPORARY AMERICAN CULTURE (3 cr.)—Introduces students to selected issues in contemporary American culture. Includes topic areas ranging from welfare reform, economic development, privacy, environmental protection and conservation, evolution vs. creation, to family values, and special interest lobbying in our state and national governments. Focuses on the development of the student's critical thinking skills by analyzing, evaluating, and reflecting on opposit sides of the same issue as expressed by public leaders, special interest groups and academicians. Lecture 3 hours per week.

HUM 201 SURVEY OF WESTERN CULTURE I (3 cr.)—Studies thought, values, and arts of Western culture, integrating major developments in art, architecture, literature, music, and philosophy. Covers the following periods: Ancient and Classical, Early Christian and Byzantine, Medieval, and Early Renaissance. Lecture 3 hours per week.

HUM 202 SURVEY OF WESTERN CULTURE II (3 cr.)—Studies thought, values, and arts of Western culture, integrating major developments in art, architecture, literature, music, and philosophy. Covers the following periods: Renaissance, Baroque, Enlightenment, Romantic, and Modern. Lecture 3 hours per week.

HUM 241-242 INTERDISCIPLINARY PRINCIPLES OF THE HUMANITIES I-II (3 cr.) (3 cr.)—Integrates unifying principles of the humanities and related fields of study. Emphasizes the expansion of student's intellectual perspective and development of concepts enabling the integration of knowledge from diverse fields into a unified whole. Lecture 3 hours per week.

HEAVY EQUIPMENT TECHNOLOGY (HVE)

HVE 106 HEAVY EQUIPMENT SERVICING AND PREVENTIVE MAINTENANCE (3 cr.)—Presents proper preventive maintenance and servicing principles, practices, and procedures used on heavy equipment. Requires lab preventive maintenance inspections and general servicing procedures as recommended by equipment manufacturers. Teaches proper pre- and post-operational inspections, and basic operation procedures of selected heavy equipment. Emphasizes the efficient and professional operation of a heavy equipment service facility. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

HVE 161 HEAVY EQUIPMENT OPERATION (7 cr.)—Concentrates on supervised operation of heavy terrain equipment. Emphasizes student command of the various controls and respect for the capabilities and dangers inherent in the operation of the machines. Lecture 2 hours. Laboratory 15 hours. Total 17 hours per week.

INDUSTRIAL ENGINEERING TECHNOLOGY (IND)

IND 110 MATERIALS OF INDUSTRY (2 cr.)—Studies nature, structures, proper ties and common applications of metallic, polymeric, ceramic, and composite materials. Includes applications of materials, as well as predicting the behavior of materials when subjected to external forces and adverse environmental conditions. Lecture 2 hours per week.

IND 140 QUALITY CONTROL (2 cr.)—Studies history, structure, and organization of the quality control unit. May include incoming material control, product and process control, and cost control. Lecture 2 hours per week.

IND 146 STATISTICAL QUALITY CONTROL (3 cr.)—Studies essentials and application of statistics in quality control function. May include definitions and uses of averages, standard deviations, ranges, and sampling plans. May discuss dependent and independent variables, and distribution probabilities. Prerequisite IND 102 or IND 140. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

IND 158 INDUSTRIAL DYNAMICS (3 cr.)—Studies industry as a functioning system. May include analyzing management processes, dynamics of industrial and economic behavior, and evaluation of the interaction between management functions. Lecture 3 hours per week.

INSTRUMENTATION (INS)

INS 121 INTRODUCTION TO MEASUREMENT AND CONTROL (3-4 cr.)—Introduces applications of modern sensors, measurement equipment, and control systems, including operation and functions of components. Includes computer data acquisition and control with programming languages. Prerequisite: Divisional approval. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

INS 210 PRINCIPLES OF INSTRUMENTATION (3-4 cr.)—Introduces the basic concepts and terminology of process control systems. Presents types of control systems, applicable component elements, basic control analysis, and documentation requirements for measuring instruments and signal conditioning. Prerequisites: ETR 114 and MTH 116. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

INS 213 SENSORS AND ACTUATORS (3 cr.)—Introduces the basic concepts, types and terminology of sensors and actuators for process control applications. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

INS 216 PRINCIPLES OF CALIBRATION AND STANDARDIZATION (3 cr.)—Covers techniques and principles of calibrating instruments used in the manufacturing process. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

INFORMATION TECHNOLOGY ESSENTIAL (ITE)

ITE 100 INTRODUCTION TO INFORMATION SYSTEMS (3-4 cr.)—Covers the fundamentals of computers and computing and topics which include impact of computers on society, ethical issues, and terminology. Provides discussion about available hardware and software as well as their application. Lecture 3-4 hours per week.

ITE 101 INTRODUCTION TO MICROCOMPUTERS (1-2 cr.)—Examines concepts and terminology related to microcomputers and introduces specific uses of microcomputers. Lecture 1-2 hours per week.

ITE 102 COMPUTERS AND INFORMATION SYSTEMS (1-2 cr.)—Introduces terminology, concepts and methods of using computers in information systems. This course teaches computer literacy, not intended for Information Technology majors. Lecture 1-2 hours per week.

ITE 109 INFORMATION SYSTEMS FOR LEGAL ASSISTANTS (3-4 cr.)—Presents terminology and concepts of computer-based systems and introductory coverage of operating systems and business application software to conduct legal research for litigation and other application programs traditionally used in the practice of law. Lecture 3-4 hours per week.

ITE 115 INTRODUCTION TO COMPUTER APPLICATIONS AND CONCEPTS (3-4 cr.)—Covers computer concepts and internet skills and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skill. Recommend prerequisites keyboarding skills. Lecture 3-4 hours per week.

ITE 116 SURVEY OF COMPUTER SOFTWARE APPLICATIONS (1-2 cr.)—Reviews current business software applications for microcomputers emphasizing comparison of a variety of software packages. Provides experience with multiple operating system commands, database, spreadsheet, and word processing programs. Lecture 1-2 hours per week.

ITE 126 OPERATING SYSTEM FUNDAMENTALS (1-2 cr.)—Includes instruction in commonly used internal and external commands including the use of subdirectories and creating basic batch files. Lecture 1-2 hours per week.

ITE 127 MICROCOMPUTER SOFTWARE: BEGINNING WINDOWS (1-2 cr.) – Imparts first-time users with sufficient information to make practical use of the Windows software package. Presents the basics of the features and applications included in the Windows operating system package. Lecture 1-2 hours.

ITE 130 INTRODUCTION TO INTERNET SERVICES (3-4 cr.)—Provides students with a working knowledge of Internet terminology and services including e-mail, WWW browsing, search engines, ftp, file compression and other services using a variety of software packages. Provides instruction for basic web page construction. Lecture 3-4 hours.

ITE 131 SURVEY OF INTERNET SERVICES (1-2 cr.)—Introduces students to basic Internet terminology and services including e-mail, WWW browsing, search engines, ftp telnet, and other services. Lecture 1-2 hours per week.

ITE 140 SPREADSHEET SOFTWARE (3-4 cr.)—Covers the use of spreadsheet software to create spreadsheets with formatted cells and cell ranges, control pages multiple sheets, charts, and macros. Topics include type and edit text in a cell, enter data on multiple worksheets work with formulas and functions, create charts, pivot tables, and styles insert headers and footers, and filter data. Covers MOS Excel objectives. Lecture 3-4 hours per week.

ITE 141 MICROCOMPUTER SOFTWARE: SPREADSHEETS (1-2 cr.)—Provides first-time users with sufficient information to make practical use of spreadsheet software using the basics of building spreadsheets. Lecture 1-2 hours per week.

ITE 150 DESKTOP DATABASE SOFTWARE (3- 4 cr.)—Incorporates instruction in planning, defining, and using a database; performing queries; producing reports; working with multiple files; and concepts of database programming. Includes database concepts, principles of table design and table relationships,

ITE 151 MICROCOMPUTER SOFTWARE: DATABASE MANAGEMENT (1-2 cr.)—Presents first-time users with sufficient information to make practical use of database management software using the basics of building databases. Covers specific business applications. Lecture 1-2 hours per week.

ITE 160 INTRODUCTION TO E-COMMERCE (3-4 cr.)—Studies the culture and demographics of the Internet, on-line business strategies and the hardware and software tools necessary for Internet commerce. Includes the identification of appropriate target segments, the development of product opportunities, pricing structures, distribution channels over the Internet, and the execution of marketing strategy in computer-mediated environments. Presents case histories of successful Web applications. Lecture 3-4 hours.

ITE 170 MULTIMEDIA SOFTWARE (3-4 cr.)—Explores technical fundamentals of creating multimedia projects with related hardware and software. Students will learn to manage resources required for multimedia production and evaluation and techniques for selection of graphics and multimedia software. Lecture 3-4 hours per week.

ITE 180 HELP DESK SUPPORT SKILLS (3-4 cr.)—Emphasizes instruction in customer support techniques required for analyzing and coordinating software and hardware solutions for end-user. Includes evaluation and communication techniques required to provide help desk support necessary to transfer knowledge and enable implementation of a solution. Lecture 3-4 hours per week.

ITE 182 USER SUPPORT/HELP DESK PRINCIPLES (3-4 cr.)—Introduces a variety of tools and techniques that are used to provide a user support in help desk operations. Includes help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations, and software, needs analysis, facilities management, and other topics related to end user support. Lecture 3-4 hours per week.

ITE 215 ADVANCED COMPUTER APPLICATIONS AND INTEGRATION (3-4 cr.)—Incorporates advanced computer concepts including the integration of a software suite. Lecture 3-4 hours per week.

ITE 221 PC HARDWARE AND OS ARCHITECTURE (3-4 cr.)—Covers instruction about processors, internal functions, peripheral devices, computer organization, memory management, architecture, instruction format, and basic OS architecture. Lecture 3-4 hours per week.

ITE 226 ADVANCED OPERATING SYSTEM AND SOFTWARE UTILITIES (1-2 cr.)—Includes instruction in partitioning, formatting, installing software, system configuration and memory management, backup and restore concepts. Lecture 1-2 hours per week.

ITE 227 MICROCOMPUTER SOFTWARE: INTERMEDIATE WINDOWS (1-2 cr.)—Imparts more in-depth instruction into the Windows package software with software installation, PIF file overview, and object linking and embedding. Lecture 1-2 hours per week.

INFORMATION TECHNOLOGY DATABASE (ITD)

ITD 55 CERTIFICATION PREPARATION (1 cr.)— Serves as a review of objectives for a specific Certification. Uses vertification test preparation software, when available, in conjunction with a faculty resource person. May be repeated for credit. Lecture 1 hour per week.

ITD 110 WEB PAGE DESIGN (3-4 cr.) — Stresses a working knowledge of web site designs, construction, and management using HTML or XHTML. Includes headings, lists, links, images, image maps, tables, forms, and frames. Lecture 3-4 hours per week.

ITD 112 DESIGNING WEB PAGE GRAPHICS (3-4 cr.)—Explores the creation of digital graphics for web design. Includes basic design elements such as color and layout will be explored utilizing a computer graphics program(s). Lecture 3-4 hours per week.

ITD 130 DATABASE FUNDAMENTALS (3-4CR.)—Introduces the student to Relational Database and Relational Database theory. Includes planning, defining and using a database; table design, linking, and normalization; types of databases, database description and definition. Lecture 3-4 hours per week.

ITD 132 STRUCTURED QUERY LANGUAGE (3-4 cr.)— Incorporates a working introduction to commands, functions and operators used in SQL for extracting data from standard databases. Lecture 3-4 hours per week.

ITD 134 PL/SQL PROGRAMMING (3-4 cr.)—Presents a working introduction to PL/SQL programming within the Oracle RDBMS environment. Course content includes PL/SQL fundamentals of block program structure, variables, cursors and exceptions, and creation of program units of procedures, functions, triggers and packages. Co-requisites or prerequisites ITD 132. Lecture 3-4 hours per week.

ITD 136 DATABASE MANAGEMENT SOFTWARE (3-4 cr.)—Covers an introduction to relational database theory and how to administer and query databases using multiple commercial database systems. Recommended prerequisite ITE 115. Lecture 3-4 hours per week.

ITD 152 ORACLE FORMS DEVELOPER (3-4 cr.)—Provides a working introduction to building and testing interactive Oracle applications. Includes customizing forms with user input items such as check boxes, list items, and radio groups for use in a graphical user interface (GUI) environment. Includes modification of data access by creating event-related triggers. Lecture 3-4 hours per week.

ITD 210 WEB PAGE DESIGN II (3-4 cr.)—Incorporates advanced techniques in web site planning design, usability, accessibility, advanced site management and maintenance utilizing web editor software(s). Co-requisites or prerequisites ITD 110. Lecture 3-4 hours per week. Total 3-5 hours per week.

ITD 212 INTERACTIVE WEB DESIGN (3-4 cr.)—Provides techniques in interactive design concepts to create cross-platform, low-bandwidth animations utilizing a vector based application. Emphasizes the importance of usability, accessibility, optimization and performance. Co-requisites or prerequisites ITD 110. Lecture 3-4 hours per week.

ITD 220 E-COMMERCE ADMINISTRATION (3-4 cr.)—Emphasizes techniques to plan and to design a platform-independent commerce Web site. Course content focuses on web business strategies and the hardware and software tools necessary for Internet commerce, including comparison and selection of commerce architecture, installation and configuration, security considerations, and planning of a complete business-to-consumer and business-to-business site. Co-requisites or prerequisites is ITD 110. Lecture 3-4 hours per week.

ITD 250 DATABASE ARCHITECTURE AND ADMINISTRATION (3-4 cr.)—Involves in-depth instruction about the underlying architecture of databases and the handling of database administration. Lecture 3-4 hours per week.

ITD 252 DATABASE BACKUP AND RECOVERY (3-4 cr.)—Concentrates instruction in the key tasks required to plan and implement a database backup and recovery strategy. Includes instruction in multiple strategies to recover from multiple types of failure. Lecture 3-4 hours per week.

ITD 258 Database Performance and Tuning (3-4 cr.)—Emphasizes instruction to optimize the performance of a database management system. Includes methods for tuning data access and storage and discussions of resolving data performance problems. Lecture 3-4 hours per week.

INFORMATION TECHNOLOGY NETWORKING (ITN)

ITN 100 INTRODUCTION TO TELECOMMUNICATIONS (3-4 cr.)—Surveys, data transmission systems, communication lines, data sets, network, modes of transmission, protocols, and interfacing. Emphasizes network structure and operation. Lecture 3-4 hours per week.

ITN 101 INTRODUCTION TO NETWORK CONCEPTS (3-4 cr.)—Provides instruction in networking media, physical and logical topologies, common networking standards and popular networking protocols. Emphasizes the TCP/IP protocol suite and related IP addressing schemes, including CIDR. Includes selected topics in network implementation, support and LAN/WAN connectivity. Lecture 3-4 hours per week.

ITN 110 CLIENT OPERATING SYSTEM (Specify Version) (3-4 cr.)—Introduces an overview of instruction in installation, configuration, administration, and troubleshooting of Client Operating System (Specify Version) in a networked data communications environment. Lecture 3-4 hours per week.

ITN 111 SERVER ADMINISTRATION (Specify Version) (3-4 cr.)—Covers basic instruction in various network protocols, name resolution services, remote access, security, and print installation, configuration, administration,monitoring, and troubleshooting of Server Administration software (Specify Version) in an Active Directory domain environment. Lecture 3-4 hours per week.

ITN 112 NETWORK INFRASTRUCTURE (Specify Version) (3-4 cr.)—Provides extensive instruction for the technical knowledge required for installation, configuration, administration, monitoring and troubleshooting of Network Infrastructure services (Specify Version) such as NDS DHCP WINS RRAS NAT and Certificate Authority to support the network infrastructure. Lecture 3-4 hours per week.

ITN 113 ACTIVE DIRECTORY (Specify Version) (3-4 cr.) --Emphasizes instruction in installation and adminstration, monitoring and troubleshooting of Active Directory (Specify Version) components, DNS, Group Policy objects, RIS, and security. Lecture 3-4 hours per week.

ITN 120 WIRELESS – NETWORK ADMINISTRATION (W-NA) (3-4 cr.)—Provides instruction in fundamentals of wireless information systems. Course content includes terms, standards, components, and operating requirements in the design and implementation of wireless networks. Lecture 3-4 hours per week.

ITN 154 NETWORK FUNDAMENTALS, ROUTER BASICS, AND CONFIGURATION (ICND1) - CISCO (3-4 cr.)—Provides instruction in the fundamentals of networking environments, the basics of router operations, and basic router configuration. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

ITN 155 SWITCHING, WIRELESS, AND WAN TECHNOLOGIES (ICND2) - CISCO (3-4 cr.)—Provides the skills and knowledge to install, operate, and troubleshoot a small-to-medium sized branch office enterprise network, including configuring several switches and routers, configuring wireless devices, configuring VLANS, connecting to a WAN, and implementing network security. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

ITN 156 BASIC SWITCHING AND ROUTING - CISCO (3-4 cr.)—Centers instruction in LAN segmentation using bridges, routers, and switches. Includes fast Ethernet, access lists, routing protocols, spanning tree protocol, virtual LANS and network management. Lecture 3-4 hours per week.

ITN 157 WAN TECHNOLOGIES - CISCO (3-4 cr.)—Concentrates on an introduction to Wide Area Networking (WANs). Includes WAN design, LAPB, Frame Relay, ISDN, HDLC, and PPP. Lecture 3-4 hours per week.

ITN 170 LINUX SYSTEM ADMINISTRATION (3-4 cr.)—Focuses instruction on the installation, configuration and administration of the Linux operating system and emphasizes the the use of Linux as a network client and workstation. Lecture 3-4 hours per week.

ITN 171 UNIX I (3-4 cr.)—Provides an introduction to the UNIX operating system. Teaches login procedures, file creation, UNIX file structure, input/output control and the UNIX shell. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

ITN 209 VOICE OVER INTERNET PROTOCOL (3-4 cr.)—Discusses in depth the concept, theory and principles of Voice over Internet Protocol technology. Reviews the existing PSTN architecture. Examines VOIP Quality of Service, various speech coding techniques, the H.323 architecture, Session Initiation Protocol, Media Gateway Protocol and the relationship between VOIP and SS7. Lecture 3-4 hours per week.

ITN 216 DATABASE SERVER ADMINISTRATION (Specify Version) (3-4 cr.)—Provides instruction in planning, installing, configuring, administering, maintaining, optimizing, auditing, and trouble shooting Database Servers. Lecture 3-4 hours per week.

ITN 224 WEB SERVER MANAGEMENT (3-4 cr.)—Focuses on the Web Server as a workhorse of the World Wide Web (WWW). Teaches how to set up and maintain a Web server and provides in-depth instruction in Web server operations and provides hands-on experience in installation and maintenance of a Web server. Lecture 3-4 hours per week.

ITN 260 NETWORK SECRUITY BASICS (3-4 cr.)—Provides instruction in the basics of network security in depth. Course content includes security objectives, security architecture, security models and security layers; risk management, network security policy, and security training. Includes the give security keys, confidentiality integrity, availability, accountability and auditability. Lecture 3-4 hours per week.

ITN 261 NETWORK ATTACKS, COMPUTER CRIME AND HACKING (3-4CR)—Encompasses in-depth exploration of various methods for attcking and defending a network. Explores network security concepts from the viewpoint hackers and their attack methodologies. Includes topics about hackers, attacks, Intrusion Detection Systems (IDS) malicious code, computer crime and industrial espionage. Lecture 3-4 hours per week.

ITN 262 NETWORK COMMUNICATION, SECURITY, AND AUTHENTICATION (3-4 cr.)—Covers an in-depth exploration of various communication protocols with a concentration on TCP/IP. Explores communication protocols from the point of view of the hacker in order to highlight protocol weaknesses. Includes Internet architecture, routing, addressing, topology, fragmentation and protocol analysis, and the use of various utilities to explore TCP/IP.

ITN 263 INTERNET/INTRANET FIREWALLS AND e-COMMERCE SECURITY (3-4 cr.)—Gives an in-depth exploration of firewall, Web security, and e-commerce security. Explores firewall concepts, types, topology and the firewall's relationship to the TCP/IP protocol. Includes client/server architecture, the Web server, HTML and HTTP in relation to Web Security, and digital certification, D.509, and public key infrastructure (PKI). Lecture 3-4 hours per week.

ITN 266 NETWORK SECURITY LAYERS (3-4 cr.)—Provides an in-depth exploration of various security layers needed to protect the network. Explores Network Security from the viewpoint of the environment i which the network operates and the necessity to secure that environment to lower the security risk to the network. Includes physical security, personnel security, operating system security, software, software security and database security. Lecture 3-4 hours per week.

ITN 267 LEGAL TOPICS IN NETWORK SECURITY (3-4 cr.)—Conveys an in-depth exploration of the civil and common law issues that apply to network security. Explores statutes, jurisdictional, and constitutional issues related to computer crimes and privacy. Includes rules of evidence, seizure and evidence handling, court presentation and computer privacy in the digital age. Lecture 3-4 hours per week.

ITN 270 ADVANCED LINUX NETWORK ADMINISTRATION (3-4 cr.)—Focuses instruction on the configuration and administration of the Linux operating system as a network server. Emphasizes the configuration of common network services such as routing, http, DNS, DHCP, ftp, telnet, SMB, NFS, and NIS.   Lecture 3-4 hours per week.

ITN 275 INCIDENT RESPONSE AND COMPUTER FORENSICS (3-4 cr.)—Prepares the student for a role on an organizational IT support staff where the need for resolving computer incidents is becoming increasingly common. Includes legal and ethical issues of search and seizure of computer and periheral storage media leading to laboratory exercises examining computers configured with mix of both simulated criminal and other activities which are not criminal in nature, but do violate scenario-driven organizational policy. Requires the student to make choices/recommendations for further pursuit of forensics evidence gathering and analysis. Students will select and gather the utilities and procedures necessary for a court-acceptable forensics toolkit which will then be used to gather and examine specially configured desktop computers. Students will then participate in a mock court proceeding using the collected evidence. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

INFORMATION TECHNOLOGY PROGRAMMING (ITP)

ITP 100 SOFTWARE DESIGN (3-4 cr.)—Introduces principles and practices of software development. Includes instruction in critical thinking, problem solving skills, and essential programming logic in structured and object oriented design using contemporary tools. Co-requisites or prerequisites requisite high school algebra. Lecture 3-4 hours per week.

ITP 110 VISUAL BASIC PROGRAMMING I (3-4 cr.)—Involves instruction in fundamentals of event-driven programming using Visual Basic. Emphasizes program construction, algorithm development, coding, debugging and documentation of graphical user interface applications. Co-requisites or prerequisites ITP 100. Lecture 3-4 hours per week.

ITP 112 VISUAL BASIC.NET I (3-4 cr.)—Concentrates instruction in fundamentals of object-oriented programming using Visual Basic.NET and the .NET framework. Emphasizes program construction algorithm development, coding, debugging, and documentation of graphical user interface applications. Co-requisites or prerequisites ITP 100. Lecture 3-4 hours per week.

ITP 120 JAVA PROGRAMMING I (3-4 cr.)—Entails instruction in fundamentals of object-oriented programming using Java. Emphasizes program construction, algorithm development, coding, debugging and documentation of console and graphical user interface applications. Co-requisites or prerequisites ITP 100 or ITP 102. Lecture 3-4 hours per week.

ITP 132 C++ Programming I (3-4 cr.)—Centers instruction in fundamentals of object-oriented programming and design using C++. Emphasizes program construction, algorithm development, coding, debugging, and documentation of C++ applications. Lecture 3-4 hours per week.

ITP 136 C# PROGRAMMING I (3-4 cr.)—Presents instruction in fundamentals of object-oriented programming and design using C#. Emphasizes program construction, algorithm development, coding, debugging, and documentation of applications within the .NET framework. Co-requisites or prerequisites ITP 100 or ITP 102. Lecture 3-4 hours per week.

ITP 140 CLIENT SIDE SCRIPTING (3-4 cr.)—Provides instruction in fundamentals of Internet application and design, development and deployment using client side scripting language(s). Co-requisites or prerequisites ITP 100, ITD 110 and a programming language or equivalent experience. Lecture 3-4 hours per week.

ITP 160 - INTRODUCTION TO GAME DESIGN & DEVELOPMENT (3- 4 CR)—Introduces object-oriented game design and development. Provides overview of the electronic game design and development process and underlines the historical contest, content creation strategies, game careers, and future trends in the industry. Utilizes a game language environment to introduce game design, object-oriented paradigms, software design, software development and product testing. Teaches skills of writing a game design document and creating a game with several levels and objects. Integrate 2D animations, 3D models, sound effects, and background music as well as graphic backgrounds. Lecture 3-4 hours per week.

ITP 212 VISUAL BASIC.NET II (3-4 cr.)—Includes instruction in application of advanced event-driven techniques to application development. Emphasizes database connectivity, advanced controls, web forms, and web services using Visual Basic.NET. Co-requisites or rerequisites ITP 112. Lecture 3-4 hours per week.

ITP 215 - XML WEB SERVICES (3-4 cr.)—Presents the techniques for developing and implementing Web-based applications with Web forms, ASP.NET, and the Microsoft.NET Framework. Includes Window services.NET remote objects, XML Web services, security, and consuming and manipulating Web data. Lecture 3-4 hours per week.

ITP 220 JAVA PROGRAMMING II (3-4 cr.)—Imparts instruction in application of advanced object-oriented techniques to application to application development using Java. Emphasizes database connectivity, inner classes, collection classes, networking and threads.Co-requisites or prerequisites: ITP 120. Lecture 3-4 hours per week.

ITP 232 C++ PROGRAMMING II (3- 4 CR)—Presents in-depth instruction of advanced object-oriented techniques for data structures using C++. Prerequisite: Recommended ITP 132. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

ITP 236 C# PROGRAMMING II (3-4 cr.)—Focuses instruction in advanced object-oriented techniques using C++ for application development. Course content emphasizes database connectivity and networking using the .NET framework. Co-requisites or prerequisites ITP 136. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

ITP 240 SERVER SIDE PROGRAMMING (3-4 cr.)—Centers around instruction in fundamentals of Internet application design, development, and deployment. Includes implementation of server component models, security, and database connectivity using server-side programming Co-requisites or prerequisites ITP 140 and ITD 110. Lecture 3-4 hours per week.

ITP 244 ASP.NET –SERVER SIDE PROGRAMMING (3-4 cr.)—Entails instruction in creation of ASP.NET Web applications to deliver dynamic content to a Web site utilizing server controls, web forms, and web services to accomplish complex data access tasks. Co-requisites or prerequisites: ITP 212. Lecture 3-4 hours per week.

ITP 248 E-COMMERCE INTERGRATION AND APPLICATIONS (3–4 cr.)—Includes instruction in the implementation of platform-independent e-commerce Web applications. Emphasizes building end-to-end e-commerce skills including comparison and selection of commerce architecture, installation and configuration, security considerations, and the development of a complete business-to-consumer and a business-to-business site. Co-requisites or prerequisites: ITP 240, ITP 244, or ITP 246. Lecture 3-4 hours per week.

ITP 251 SYSTEMS ANALYSIS AND DESIGN (3-4 cr.)—Focuses on application of information technologies (IT) to system life cycle methodology, systems analysis, systems design, and system implementation practices. Covers methodologies related to identification of information requirements, feasibility in the areas of economic, technical and social requirements, and related issues are included in course content. Software applications may be used to enhance student skills. Lecture 3-4 hours per week.

ITP 258 SYSTEMS DEVELOPMENT PROJECT (3-4 cr.)—Provides instruction in application of life cycle system development methodologies using a case study which incorporates feasibility study system analysis, system design, program specification, and implementation planning. Course project assignment(s) will have students perform as members of system development teams. Lecture 3-4 hours per week.

**ITP 298 CAPSTONE (3-4cr.) **—Course content requires completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of a career opportunities in the field. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

LEGAL ADMINISTRATION (LGL)

LGL 110 INTRODUCTION TO LAW AND THE LEGAL ASSISTANT (3 cr.)—Introduces various areas of law in which a legal assistant may be employed. Includes study of the court system (Virginia and federal) as well as a brief overview of criminal law, torts, domestic relations, evidence, ethics, the role of the legal assistant, and other areas of interest. Lecture 3 hours per week.

LGL 117 FAMILY LAW (3 cr.)—Studies elements of a valid marriage, grounds for divorce and annulment, separation, defenses, custody, support, adoptions, and applicable tax consequences. Includes property settlement, pre- and ante-nuptial agreements, pleadings, and rules of procedure. May include specific federal and Virginia consumer laws. Lecture 3 hours per week.

LGL 127 LEGAL RESEARCH AND WRITING (3 cr.)---Provides a basic understanding of legal research and the proper preparation of legal documents, including brief writing. Prerequisite ENG 111 or permission of the division. Lecture 3 hours per week.

LGL 130 LAW OFFICE ADMINISTRATION AND MANAGEMENT (3 cr.)—Introduces management principles and systems applicable to law firms, including record keeping, disbursements, escrow accounts, billing, and purchasing. May include accounting methods applicable to the law firm. Lecture 3 hours per week.

LGL 150 LAW AND MEDIATION (3 cr.)---Explores concepts, such as conflict resolution, communication and problem solving, as the basis for exploration of the mediation process. Significant focus is on experiential learning, as informed by initial introduction to the theoretical basis. Students will be introduced to the variety of settings in which mediation processes are utilized, and the utilization of mediation within the Commonwealth of Virginia. Co-requisite: LGL 110. Lecture 3 hours per week.

LGL 190 COORDINATED INTERNSHIP (1-5 cr.)—Supervises on-the-job training in selected business, industrial or service firms coordinated by the College. Credit/Practice ratio maximum 1:5 hours. May be repeated for credit. Variable hours.

LGL 200 ETHICS FOR THE LEGAL ASSISTANT (1 cr.)—Examines general principles of ethical conduct applicable to legal assistants. Includes the application of rules of ethics to the practicing legal assistant. Lecture 1 hour per week.

LGL 217 TRIAL PRACTICE AND THE LAW OF EVIDENCE (3 cr.)—Introduces civil and criminal evidence including kinds, degrees and admissibility of evidence. Studies methods and techniques of evidence acquisition. Emphasizes Virginia and federal rules of evidence. Focuses on the elements and various problems associated with the trial of a civil or criminal case. Lecture 3 hour per week.

LGL 218 CRIMINAL LAW (3 cr.)—Focuses on major crimes including their classification, elements of proof, intent, conspiracy, responsibility, parties, and defenses. Emphasizes Virginia law. May include general principles of applicable constitutional law and criminal procedure. Lecture 3 hours per week.

LGL 225 ESTATE PLANNING AND PROBATE (3 cr.)—Introduces various devices used to plan an estate, including wills, trust, joint ownership and insurance. Considers various plans in light of family situations and estate objectives. Focuses on practices involving administration of an estate including taxes and preparation of forms. Lecture 3 hours per week.

LGL 226 REAL ESTATE ABSTRACTING (3 cr.)—Reviews aspects of abstracting title to real estate, recordation of land transactions, liens, grantor-grantee indices, warranties, covenants, restrictions, and easements. Lecture 3 hours per week.

LGL 230 LEGAL TRANSACTIONS (3 cr.)---Presents an in-depth study of general contract law, including formation, breach, enforcement, and remedies. May include an overview of UCC sales, commercial paper, and collections. Lecture 3 hours per week.

LGL 238 BANKRUPTCY (3 cr.)—Provides a practical understanding of non-bankruptcy alternatives and the laws of bankruptcy including Chapters 7, 11, 12 and 13 of the Bankruptcy Code. Emphasis will be placed on preparing petitions, schedules, statements, and other forms. Lecture 3 hours per week.

LGL 290 COORDINATED INTERNSHIP (1-5 cr.)—Supervises on-the-job training in selected business, industrial or service firms coordinated by the College. Credit/Practice ratio maximum 1:5 hours. May be repeated for credit. Variable hours.

MACHINE TECHNOLOGY (MAC)

MAC 101-102 MACHINE SHOP I-II (7-8 cr.) (7-8 cr.)—Introduces the machinist to identification, care, and use of precision tools and instruments. Emphasizes the operation of the drill press, lathe, power saw, grinder, and milling machine. Covers the sharpening of lathe cutting tools, safety, and good housekeeping. Provides for operation and setup on the various types of precision grinders, milling machines, and drill presses. Lecture 4-5 hours. Laboratory 9 hours. Total 13-14 hours per week.

MAC 111-112 MACHINE TRADE THEORY AND COMPUTATION I-II (3 cr.) (3 cr.)—Covers shop theory and mathematics dealing with fractional and precision measuring tools. Includes layout, bandsaws, drill presses, the twist drill, thread cutting, taper turning, vertical and horizontal milling machines, lathe tool bit geometry, the engine lathe, and other lathe operations. Lecture 3 hours per week.

MAC 116 MACHINIST HANDBOOK (2 cr.)—Uses the machinist handbook as a ready reference book of tabular data, formulas, designs and processes relating to machine technology. Lecture 2 hours per week.

MAC 121-122 COMPUTER NUMERICAL CONTROL I-II (2-3 cr.) (2-3 cr.)—Focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in lathe and milling machine computer numerical control program writing, setup and operation. Lecture 1-2 hours. Laboratory 2-3 hours. Total 3-5 hours per week.

MAC 146 METALS/HEAT TREATMENT (2 cr.)—Provides approach to metals and their structure. Gives working knowledge of methods of treating ferrous and non-ferrous metals. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

MAC 161-162 MACHINE SHOP PRACTICES I-II (3 cr.) (3 cr.)—Introduces safety procedures, bench work, hand tools, precision measuring instruments, drill presses, cut-off saws, engine lathes, manual surface grinders, and milling machines. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

MAC 163-164 MACHINE SHOP PRACTICES III-IV (3 cr.) (3 cr.)—Offers practice in the operation of the drill press, engine lathe, vertical milling machine, horizontal milling machine, and the surface grinder. Introduces practical heat treatment of directly hardenable steels commonly used in machine shops. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MAC 181-182 MACHINE BLUEPRINT READING I-II (3 cr)(3 cr.)—Introduces reading and interpreting blueprints and working drawings. Applies visualization of objects, sketching, and machine terminology. Lecture 3 hours per week.

MAC 209 STANDARDS, MEASUREMENTS, AND CALCULATIONS (2-3 cr.)—Presents typical mathematical and mechanical problems requiring the use of reference standards such as the Machinery's Handbook for solution. Presents use of the Coordinate Measuring Machine for solution. Lecture 2-3 hours per week.

MAC 221-222 ADVANCED MACHINE TOOL OPERATIONS II-III (7 cr.) (7 cr.)—Focuses on advanced lathe and mill work with concentration on fits, finishes, inspection, quality control, and basic heat treating. Includes design and construction of specific projects to determine the student's operational knowledge of all equipment. Lecture 4 hours. Laboratory 9 hours. Total 13 hours per week.

MAC 231-232 ADVANCED PRECISION MACHINING I-II (3 cr.) (3 cr.)—Teaches machining principles and calculations necessary for the precision required by the machinist. Emphasizes advanced lathe and millwork with concentration on fits, finishes, inspection, and quality control. Includes design and construction of specific projects to determine the student's operational knowledge of all equipment. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MAC 241-242 ADVANCED MACHINERY PROCEDURES I-II (3 cr.) (3 cr.)—Focuses on machining principles and calculations necessary for the precision required by the machinist. Emphasizes advanced lathe and millwork with concentration on fits, finishes, inspections, and quality control. Teaches design and construction of specific projects to determine the student's operational knowledge of all equipment. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MAC 245 ADVANCED NUMERICAL CONTROL (2 cr.)—Applies the computer numerical control to machine tools, program writing setup and operation of milling machine and lathe. Lecture 1 hours. Laboratory 3 hours. Total 4 hours per week.

MEDICAL LABORATORY (MDL)

MDL 190 COORDINATED PRACTICE IN PHLEBOTOMY (1-5 cr.)—Supervised practice in selected health agencies coordinated by the College. Prerequisite MDL 105. Credit/Practice ratio maximum 1:5 hours. Variable hours.

MDL 198 SEMINAR AND PROJECT IN PHLEBOTOMY (2 cr.)—Concentrates on the improvement of interpersonal skills and the development of a code of ethics relating to patients, physicians, and coworkers. Lecture 2 hours.

MECHANICAL ENGINEERING TECHNOLOGY (MEC)

MEC 116 JIG AND FIXTURE DESIGN (2-3 cr.)—Focuses on fundamentals of the construction and design of various types of jigs and fixtures, including milling, reaming, tapping, and drilling fixtures. Studies preparation of complete working drawings from layouts, for interchangeable manufacture, computation of fits, limit dimensions, tolerances, tool drawing principles and methods, fundamentals of cutting tools and gauges. Lecture 1-2 hours. Laboratory 3 hours. Total 4-5 hours per week.

MEC 118 AUTOMATED MANUFACTURING TECHNOLOGY (2-3 cr.)—Studies computer numerical control (CNC) systems and related software. Includes application of numerical control (NC) to standard machine tools, numerical control systems, NC coordinate systems, APT systems, two-dimensional machine process, flexible manufacturing role of robotics in automated manufacturing. Lecture 1-2 hours. Laboratory 3 hours. Total 4-5 hours per week.

MEC 120 PRINCIPLES OF MACHINE TECHNOLOGY (2-3 cr.)—Studies fundamental machine operations and practices, including layout, measuring devices, hand tools, drilling, reaming, turning between centers, cutting tapers and threads, and milling; fabrication of mechanical parts on drill press, lathe and mill. Lecture 2 hours. Laboratory 1-3 hours. Total 5 hours per week.

MEC 161 BASIC FLUID MECHANICS - HYDRAULICS/PNEUMATICS (3-4 cr.)—Introduces theory, operation and maintenance of hydraulic/pneumatics devices and systems. Emphasizes the properties of fluids, fluid flow, fluid statics, and the application of Bernouli's equation. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

MEC 165 APPLIED HYDRAULICS, PNEUMATICS, AND HYDROSTATICS (3 cr.)— Teaches fluid power system design, operation, testing, maintenance and repair. Includes reservoirs, pump connecting valves, cylinders, pressure regulating valves, flow control valves, hydraulic motors, and introduction to basic hydrostatic hydraulic systems. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MENTAL HEALTH (MEN)

MEN 100 INTRODUCTION TO MENTAL HEALTH (3 cr.)—Surveys history of mental health from ancient to contemporary times, with special emphasis on impact of the Psychoanalytic, Humanistic, and Behavioral movements in the treatment of mental illness. Includes examination of structure and function of human service delivery systems, knowledge and skills of mental health workers, and current ethical and legal issues. Lecture 3 hours per week.

MEN 101-102 MENTAL HEALTH SKILL TRAINING I-II (3 cr.) (3 cr.)—Develops skills necessary to function as a mental health worker, with emphasis on guided practice in counseling skills as well as improved self-awareness. Includes training in problem-solving, goal-setting, and implementation of appropriate strategies and evaluation techniques relating to interaction involving a variety of client needs. Lecture 3 hours per week.

MEN 110 INTRODUCTION TO ABNORMAL PSYCHOLOGY (3 cr.)—Studies symptoms, causes and treatment of mental deficiency, menrosis, psychosis and character disorders, with specific relationship to work of the mental health technologists. Lecture 3 hours per week.

MEN 225 COUNSELING THERAPY (3 cr.) — Studies various models of counseling theories and appropriate application of counseling techniques in the helping profession. Lecture 3 hours per week.

MEN 245 PROBLEMS IN AGING (3 cr.)—Examines the problems associated with aging including personality changes and reactions to internal and external stress. Covers specific intervention strategies which seek to rehabilitate and facilitate the adjustment of the aging client. Places emphasis on techniques for psychological problems associated with such factors as organic and general physical deterioration, metabolic disturbance and social isolation. Prerequisite MEN 101 or departmental permission. Lecture 3 hours per week.

MINING (MIN)

MIN 110 ELEMENTS OF MINING (3 cr.)—Focuses on occurrence of coal deposits; irregularities in coal beds; coalfields of USA; prospecting for coal, mine entry development, slop and shaft sinking. Teaches operations in coal mining, coal mining machinery and operations; mining methods; mine environmental control. Lecture 3 hours per week.

MIN 120 MINING HYDRAULICS (3 cr.)—Studies principles of fluid power, types of hydraulic pumps, hydraulic fluids, hydraulic control systems and safety devices in modern mining equipment. Lecture 3 hours per week.

MIN 131-132 MINE ELECTRICITY I-II (4 cr.) (4 cr.)—Studies principles of electricity in both AC and DC circuits. Presents permissible mine machinery and legal requirements of state and federal agencies pertaining to underground electrical work. Teaches maintenance of permissible electrical equipment, transformer connections. and electrical control safety devices applicable to mine electrical distribution and utilization systems. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

MIN 146 STATE AND FEDERAL MINE LAWS (4 cr.)—Instructs in state and federal mine laws, in-depth review and analysis, means of implementation, implication to the coal industry, basic mine management. Reviews case histories. Lecture 4 hours per week.

MIN 210 PRINCIPLES OF MINE SUPERVISION (3 cr.)—Studies fundamentals of mine management, and hierarchy, including job descriptions and responsibilities, human relations between worker and supervisor, work improvement, training and orientation of employees, communication, evaluation of employee performance. Lecture 3 hours per week.

MIN 226 MINE MACHINERY OPERATION AND MAINTENANCE (3 cr.)—Studies different types of mine machinery and their operation. Teaches types of maintenance programs, including maintenance mangement scheduling and control, conforming to the legal requirements, relationship of these operational matters to the prevention of accidents, injuries and exposure to health hazards. Lecture 3 hours per week.

MIN 228 MINE FOREMAN AND VENTILATION TRAINING (4 cr.)—Applies state and federal codes and practices to ventilation, roof control, blasting, electricity, rescue and recovery operation, evaluation and control of mine gases and environment. Examines preparatory work for public examination for mine foreman certification. Teaches mine ventilation theory and practice, mine drainage and pumping, mathematical calculation, mine mapping symbols and procedures. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

MIN 287 NEW MINER TRAINING - UNDERGROUND (2 cr.)—Reviews federally mandated training consisting of 32 hours in the classroom and 8 hours on the jobsite to qualify student to work at an underground mine site. All course requirements meet or exceed CFR 30, Section 48.5 for underground new miner. Studies fundamentals of basic underground mining principles and safe underground mining procedures. Presents techniques and procedures for use in all phases of the total mine operation.
Total 2 hours per week.

MIN 288 NEW MINER TRAINING - SURFACE (1 cr.)—Reviews federally mandated training consisting of 16 hours in the classroom and 8 hours on the jobsite to qualify student to work at a surface mine site. All course requirements meet or exceed CFR 30, Section 48.5 for surface new miner. Studies fundamentals of basic surface mining principles and safe surface mining procedures. Presents techniques and procedures for use in all phases of the total mine operation. Lecture 1 hour per week.

MARKETING (MKT)

MKT 100 PRINCIPLES OF MARKETING (3 cr.)—Presents principles, methods, and problems involved in marketing to consumers and organizational buyers. Discusses problems and policies connected with distribution and sale of products, pricing, promotion, and buyer motivation. Examines variations of marketing research, legal, social, ethical, e-commerce, and international considerations in marketing. Lecture 3 hours per week.

MKT 110 PRINCIPLES OF SELLING (3 cr.)—Presents a fundamental, skills-based approach to selling and relationship building. Emphasizes learning effective interpersonal communication skills in all areas of the sales process through skill-building activities. Examines entry-level sales careers in retailing, wholesaling, services and industrial selling. Lecture 3 hours per week.

MKT 170 CUSTOMER SERVICE (2 cr.)--Introduces students to the concepts of marketing as they relate to customer service. Teaches development of customer service training and implementation of strategies to improve customer relations and service. Includes lecture, role-playing, and case studies. Lecture 1-2 hours per week.

MKT 220 PRINCIPLES OF ADVERTISING (3 cr.)—Emphasizes the role of advertising in the marketing of goods, services and ideas. Discusses the different uses of advertising; types of media; how advertising is created; agency functions and legal, social and economic aspects of the industry. Introduces advertising display, copy and art work preparation, printing and selection of media. Lecture 3 hours per week.

MKT 281 PRINCIPLES OF INTERNET MARKETING (3 cr.)—Introduces students to Internet marketing. Discusses how to implement marketing programs strategically and tactically using online communications tools. Teaches e-marketing strategies. Lecture 3 hours per week.

MKT 282 PRINCIPLES OF E-COMMERCE (3 cr.)—Studies on-line business strategies, and the hardware and software tools necessary for Internet commerce. Includes the identification of appropriate target segments, the development of product opportunities, pricing structures, distribution channels and execution of marketing strategies**.** Lecture 3 hours per week.

MATHEMATICS (MTH)

MTH 02 ARITHMETIC (1-5 cr.)—Covers arithmetic principles and computations including whole numbers, fractions, decimals, percents, measurement, graph interpretation, geometric forms, and applications. Develops the mathematical proficiency necessary for selected curriculum entrance. Credits not applicabale toward graduation. Variable hours per week.

MTH 03 ALGEBRA I (1-5 cr.)—Covers the topics of Algebra I including real numbers, equations and inequalities, exponents, polynomials Cartesian coordinate system, rational expressions, and applications. Develops the mathematical proficiency necessary for selected curriculum entrance. Credits not applicable toward graduation. Prerequisites: a placement recommendation for MTH 03 and Arithematic or equivalent. Variable hours per week.

MTH 04 ALGEBRA II (1-5 cr.)—Expands upon the topics of Algebra I including rational expressions, radicals and exponents, quadratic equations, systems of equations, and applications. Develops the mathematical proficiency necessary for selected curriculum entrance. Credits not applicable toward graduation. Prerequisites: a placement recommendation for MTH 04 and Algebra I or equivalent. Variable hours per week.

MTH 05 ALGEBRA REVISITED (1-5 cr.)—Reviews topics in Algebra II necessary for entry into occupational/ technical or transfer mathematics courses. Credits not applicable toward graduation. Prerequisites: a placement recommendation for MTH 05 and Algebra I and Algebra II or equivalent. Variable hours per week.

MTH 103-104 APPLIED TECHNICAL MATHEMATICS I-II (3 cr.) (3 cr.)—Presents a review of arithmetic, elements of algebra, geometry, and trigonometry. Directs applications to specialty areas. Prerequisites: a placement recommendation for MTH 103 and one unit of high school mathematics or equivalent. Lecture 3 hours per week.

MTH 115-116 TECHNICAL MATHEMATICS I-II (3 cr.) (3 cr.)—Presents algebra through exponential and logarithmic functions, trigonometry, vectors, analytic geometry, and complex numbers. Prerequisites: a placement recommendation for MTH 115 and Algebra I and Geometry, or Algebra I and Algebra II, or equivalent. Lecture 3 hours per week.

MTH 120 INTRODUCTION TO MATHEMATICS (3 cr.)—Introduces number systems, logic, basic algebra, and descriptive statistics. Prerequisites: a placement recommendation for MTH 120 and one unit of high school mathematics or equivalent. (Intended for occupational/technical programs.) Lecture 3 hours per week.

MTH 126 MATHEMATICS FOR ALLIED HEALTH (2-3 cr.)—Presents scientific notation, precision and accuracy, decimals and percents, ratio and proportion, variation, simple equations, techniques of graphing, use of charts and tables, logarithms, and the metric system. Prerequisites: a placement recommendation for MTH 126 and one unit of high school mathematics or equivalent. Lecture 2-3 hours per week.

MTH 151 MATHEMATICS FOR THE LIBERAL ARTS I (3 cr.)—Presents topics in sets, logic, numeration systems, geometric systems, and elementary computer concepts. Prerequisites: a placement recommendation for MTH 151 and Algebra I, Algebra II and Geometry or equivalent. Lecture 3 hours per week.

MTH 152 MATHEMATICS FOR THE LIBERAL ARTS II (3 cr.)—Presents topics in functions, combinatorics, probability, statistics and algebraic systems. Prerequisites: a placement recommendation for MTH 152 and Algebra I, Algebra II and Geometry or equivalent. Lecture 3 hours per week.

MTH 157 ELEMENTARY STATISTICS (3-4 cr.)—Presents elementary statistical methods and concepts including descriptive statistics, estimation, hypothesis testing, linear regression, and categorical data analysis. (Credit will not be awarded for both MTH 157 and MTH 240.) Prerequisites: Algebra I, Algebra II and Geometry and a placement recommendation for MTH 157. Lecture 3-4 hours per week.

MTH 163 PRECALCULUS I (3 cr.)—Presents college algebra, matrices, and algebraic, exponential, and logarithmic functions. Prerequisites: a placement recommendation for MTH 163 and Algebra I, Algebra II and Geometry or equivalent. (Credit will not be awarded for both MTH 163 and MTH 166). Lecture 3 hours per week.

MTH 164 PRECALCULUS II (3 cr.)—Presents trigonometry, analytic geometry, and sequences and series. Prerequisite: MTH 163 or equivalent. (Credit will not be awarded for both MTH 164 and MTH 168.) Lecture 3 hours per week.

MTH 173 CALCULUS WITH ANALYTIC GEOMETRY I (4-5 cr.)—Present analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and introduction to integration along with their differentials, and introduction to integration along with their applications. Designed for mathematical, physical and engineering science programs. Prerequisites: a placement recommendation for MTH 173 and four units of high school mathematics including Algebra I, Algebra II, Geometry and Trigonometry or equivalent. (Credit will not be awarded for more than one of MTH 173, MTH 175, or MTH 273.) Lecture 4-5 hours per week. Part I of II.

MTH 174 CALCULUS WITH ANALYTIC GEOMETRY II (4-5 cr.)—Present analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and introduction to integration along with their differentials, and introduction to integration along with their applications. Designed for mathematical, physical and engineering science programs. Prerequisites: MTH 173 or equivalent. Lecture 4-5 hours per week.

MTH 175 CALCULUS OF ONE VARIABLE I (3 cr.)—Presents differential calculus of one variable including the theory of limits, derivatives, differentials, antiderivatives and applications to algebraic and transcendental functions. Designed for mathematical, physical, and engineering science programs. Prerequisites: a placement recommendation for MTH 175 and four units of high school mathematics including Algebra I, Algebra II, Geometry and Trigonometry or equivalent. Corequisite: MTH 177. (Credit will not be awarded for more than one of MTH 173, MTH 175 or MTH 273.) Lecture 3 hours per week.

MTH 176 CALCULUS OF ONE VARIABLE II (3 cr.)—Continues the study of integral calculus of one variable including indefinite integral, definite integral and methods of integration with applications to algebraic and transcendental functions. Designed for mathematical, physical, and engineering science programs. Prerequisite: MTH 175 or equivalent. Corequisite: MTH 178. (Credit will not be awarded for more than one of MTH 174, MTH 176 or MTH 274.) Lecture 3 hours per week.

MTH 177 INTRODUCTORY LINEAR ALGEBRA (2 cr.)—Covers matrices, vector spaces, determinants, solutions of systems of linear equations, and eigen values. Designed for mathematical, physical, and engineering science programs. Corequisite: MTH 175. Lecture 2 hours per week.

MTH 178 TOPICS IN ANALYTIC GEOMETRY (2 cr.)—Covers conic sections, polar and parametric graphing. Designed for mathematical, physical, and engineering science programs. Co-requisite: MTH 176. Lecture 2 hours per week.

MTH 240 STATISTICS (3 cr.)—Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, and correlation and regression. Prerequisites: a placement recommendation for MTH 240 and MTH 163 or MTH 166 or equivalent. (Credit will not be awarded for both MTH 240 and MTH 241.) Lecture 3 hours per week.

MTH 271 APPLIED CALCULUS I (3 cr.)—Presents limits, continuity, differentiation of algebraic and transcendental functions with applications, and an introduction to integration. Prerequisite: MTH 163 or MTH 166 or equivalent. (Credit will not be awarded for both MTH 270 and MTH 271.) Lecture 3 hours per week.

MTH 272 APPLIED CALCULUS II (3 cr.)—Covers techniques of integration, multivariable calculus, and an introduction to differential equations Prerequisite: MTH 271 or equivalent. Lecture 3 hours per week.

MTH 273 CALCULUS I (4 cr.)—Presents topics in differential calculus of one variable including the theory of limits, derivatives, differentials, definite and indefinite integrals and applications to algebraic and transcendental functions. Designed for mathematical, physical, and engineering science programs. Prerequisites: a placement recommendation for MTH 273 and four units of high school mathematics including Algebra I, Algebra II, Geometry and Trigonometry or equivalent. (Credit will not be awarded for more than one of MTH 173,MTH 175 or MTH 273.) Lecture 4 hours per week.

MTH 274 CALCULUS II (4 cr.)—Covers vectors in three dimensions, definite integrals, methods of integration, indeterminate forms, partial differentiation, and multiple integrals. Designed for mathematical, physical, and engineering science programs. Prerequisite: MTH 273 or equivalent. (Credit will not be awarded for more than one of MTH 174, MTH 176 or MTH 274.) Lecture 4 hours per week.

MTH 275 MULTIVARIABLE CALCULUS AND LINEAR ALGEBRA (4 cr.)—Presents vector valued functions, partial derivatives, multiple integrals, matrices, vector spaces, determinants, solutions of systems of linear equations, basis and dimension, eigen values, and eigen vectors. Designed for mathematical, physical, and engineering science programs. Prerequisite: MTH 174 or equivalent. Lecture 4 hours per week.

MTH 277 VECTOR CALCULUS (4 cr.)—Presents vector valued functions, partial derivatives, multiple integrals, and topics from the calculus of vectors. Designed for mathematical, physical, and engineering science programs. Prerequisite: MTH 174 or equivalent. Lecture 4 hours per week.

MTH 279 ORDINARY DIFFERENTIAL EQUATIONS (4 cr.)—Introduces ordinary differential equations. Includes first order differential equations, second and higher order ordinary differential equations with application. Designed for mathematical, physical, and engineering science programs. Prerequisite: MTH 174 or equivalent. Lecture 4 hours per week.

MTH 285 LINEAR ALGEBRA (3 cr.)—Covers matrices,vector spaces, determinants, solutions of systems of linear equations, basis and dimension, eigen values, and eigen vectors. Designed for mathematical, physical and engineering science programs. Prerequisite: MTH 174 or equivalent. Lecture 3 hours per week.

MTH 291 DIFFERENTIAL EQUATIONS (3 cr.)—Introduces first order differential equations, linear differential equations, numerical methods, and applications. Designed for mathematical, physical, and engineering science programs. Prerequisite: MTH 174 or equivalent. Lecture 3 hours per week.

MUSIC (MUS)

MUS 111-112 MUSIC THEORY I-II (4 cr.) (4 cr.) —Discusses elements of musical construction of scales, intervals, triads, and chord progressions. Develops ability to sing at sight and write from dictation. Introduces the analysis of the Bach chorale style. Expands facility with harmonic dictation and enables the student to use these techniques at the keyboard. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

MUS 121-122 MUSIC APPRECIATION I-II (3 cr.) (3 cr.)—Increases the variety and depth of the student's interest, knowledge, and involvement in music and related cultural activities. Acquaints the student with traditional and twentieth century music literature, emphasizing the relationship music has as an art form with man and society. Increases the student's awareness of the composers and performers of all eras through listening and concert experiences. Lecture 3 hours per week.

MUS 131-132 CLASS VOICE I-II (2 cr.) (2 cr.) —Introduces the many aspects of singing from the physical act through the aesthetic experience. The course is designed for the beginning singer who desires vocal improvement, and for the voice major as an addition to and extension of skills and knowledge necessary for artistic development. Introduces appropriate repertoire. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 137 CHORUS ENSEMBLE (1- 2 cr.) —Ensemble consists of performance from the standard repertoires, including study of ensemble techniques and interpretation. Divisional approval required. May be repeated for credit. Laboratory 3-6 hours per week.

MUS 141-142 CLASS PIANO I-II (2 cr.) (2 cr.)—Offers the beginning piano student activities in learning musical notation, in accomplishing sight reading skills, and in mastering techniques of keyboard playing. Presents appropriate literature. Open to all students and may be used to fulfill applied minor instrument requirement for music major. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 149 BAND ENSEMBLE (1-2 cr.)—Ensemble consists of performance from the standard repertoires, including study of ensemble techniques and interpretation. Divisional approval required. May be repeated for credit. Laboratory 3-6 hours per week.

MUS 165 APPLIED MUSIC - STRINGS (1-2 cr.)—Teaches fundamentals of string instruments, harp, or guitar. Studies the standard repertoire. Private lessons are available for either 1 or 2 hours of credit per semester. The length of the lessons will be 1/2 hour for 1 hour credit and 1 hour for 2 hours credit per semester. All courses in applied music may be repeated for a total of 8 hours for the major and 4 hours for the minor. 1-2 half-hour lessons per week, Laboratory 4-8 hours per week.

MUS 221-222 HISTORY OF MUSIC I-II (3 cr.) (3 cr.)—Presents the chronology of musical styles from antiquity to the present time. Relates the historical development of music to parallel movements in art, drama, and literature. Develops techniques for listening, analytically and critically to music. Lecture 3 hours per week.

MUS 241-242 ADVANCED CLASS PIANO I-II (2 cr.) (2 cr.)—Teaches advanced applications of keyboard fundamentals and technical skills. Includes exercises in intervals, triads, all major and major scales, and simple and compound meters. Uses advanced repertoire. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 249 BAND ENSEMBLE** (1-2 cr.)—Ensemble consists of performance from the standard repertoires, including study of ensemble techniques and interpretation. Divisional approval required. May be repeated for credit. Continues MUS 149. Laboratory 3-6 hours per week.

NOTE:
**ENSEMBLE: Courses in ensemble consists of performance from the standard repertoires, including study of ensemble techniques and interpretation. Divisional approval required. May be repeated for credit. Laboratory 3 hours per week.

NATURAL SCIENCE (NAS)

NAS 106 CONSERVATION OF NATURAL RESOURCES (3 cr.)—Describes the management of natural resources, balance of nature, and the human impact on the environment. Lecture 3 hours per week.

NAS 120 INTRODUCTORY METEOROLOGY (3 cr.)—Studies cloud formation, weather maps, forecasting, and wind systems with emphasis on local weather patterns. Lecture 3 hours per week.

NAS 125 METEOROLOGY (4 cr.)—Presents a non-technical survey of fundamentals meteorology. Focuses on the effects of weather and climate on humans and their activities. Serves for endorsement or recertification of earth science teachers. Lecture 3 hours per week. Recitation and laboratory 2 hours per week. Total 5 hours per week.

NAS 131-132 ASTRONOMY I-II (4 cr.) (4 cr.)—Studies the major and minor bodies of the solar system, stars and nebulae of the milky way, and extragalactic objects. Examines life and death stars, origin of the universe, history of astronomy, and instruments and techniques of observation. Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week.

NAS 150 HUMAN BIOLOGY (3 cr.)—Surveys the structure and function of the human body. Applies principally to students who are not majoring in the health or science fields. Lecture 3 hours per week.

NAS 161-162 HEALTH SCIENCE I-II (4 cr.) (4 cr.)—Presents an integrated approach to human anatomy and physiology, microbiology, and pathology. Includes chemistry and physics as related to health sciences. Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week.

NAS 195 TOPICS IN UPPER EXTREMITY ANATOMY AND KINESIOLOGY (1 cr.)—Presents specific details of the skeletal, articular, muscular and neurologic anatomy of the human arm. Lecture 1 hour per week. Prerequisite: OCT 100, HLT 141 or 143, BIO 141.

NAS 200 INTRODUCTION TO NEUROANATOMY AND PHYSIOLOGY (3 cr.)—Focuses on the anatomy and physiology of human nervous systems with emphasis on external brain mapping and anatomic and physiologic brain and nervous system structures. Prerequisite: Instructor approval. Lecture 3 hours.

NURSING (NUR)

NUR 105 NURSING SKILLS (2 cr.)— Develops nursing skills for the basic needs of individuals and introduces related theory. Includes assessment, personal care, activity/rest, sterile technique, wound care, ostomy care, catheterization, oxygen administration, infection control, suctioning and medication administration. Provides supervised learning experiences in college nursing laboratories and/or cooperating agencies.Lecture 0 hours. Laboratory 6 hours. Total 6 hours per week. Prerequisites: Acceptance to the Nursing Program, MTH 126, ITE 115 or AST 232

NUR 108 NURSING PRINCIPLES AND CONCEPTS I (5 cr.)— Introduces principles of nursing, health and wellness concepts, and the nursing process. Identifies nursing strategies to meet the multidimensional needs of individuals. Includes math computational skills, basic computer instruction related to the delivery of nursing care, introduction to the profession of nursing, nursing process, documentation; basic needs related to integumentary system, teaching/learning, stress, psychosocial, safety, nourishment, elimination, oxygenation, circulation, rest, comfort, sensory, fluid and electrolyte and mobility needs in adult clients. Also, care of the pre/post operative client. Provides supervised learning experience in college nursing labs and/or cooperating agencies. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisites: Acceptance to the Nursing Program, MTH 126, ITE 115 or AST 232

NUR 109 NURSING PRINCIPLES AND CONCEPTS II (5 cr. .)— Focuses on nursing care of individuals and/or families experiencing alterations in health. Includes math computational skills, basic computer instruction related to the delivery of nursing care; immunological, gastrointestinal, musculoskeletal, oncological and diabetic disorders and pre/post operative care in adult and pediatric clients. Provides supervised learning experiences in college nursing laboratories and/or cooperating agencies. Lecture 3 hours. Laboratory 6 hours. Total 12 hours per week.
Prerequisites: NUR 105, 108, 226, 136; MTH 126; ITE 115 or AST 232, BIO 141

NUR 115 LPN TRANSITION (2-7 cr.)—Introduces the role of the registered nurse through concepts and skill development in the discipline of professional nursing. This course serves as a bridge course for licensed practical nurses and is based upon individualized articulation agreement, mobility exams, or other assessment criteria as they relate to local programs and service areas. Includes math computational skills and basic computer instruction related to the delivery of nursing care. Lecture 1-7 hours. Laboratory 0-18 hours. Total 2-19 hours per week. *Prerequisites: Acceptance to the LPN to RN program, BIO 141, BIO 142, MTH 126. (This course has been approved by the Vice Chancellor as an exception to the variable credit policy.)*

NUR 136 PRINCIPLES OF PHARMACOLOGY I (1 cr.)—Focuses on principles of medication administration which include dosage calculations, major drug classifications, drug legislation, legal aspects of medication administration, drug action on specific body systems, and basic computer applications. Lecture 1 hour per week. Prerequisites: Acceptance into the nursing program, MTH 126, ITE 115 or AST 232

NUR 137 PRINCIPLES OF PHARMACOLOGY II (1 cr.)— Continues discussion i n principles of medication administration which include dosage calculations, major drug classifications, drug legislation, legal aspects of medication administration, drug action on specific body systems, and basic computer applications. Lecture 1 hour per week. Prerequisites: NUR 105, 108, 226, 136; MTH 126; ITE 115 or AST 232; BIO 141

NUR 195 TOPICS IN GERIATRIC NURSING (2 cr. .)— Presents theoretical and clinical nursing aspects of the aging population. Includes the aging process, psychological aspects, common age-related disorders, pharmacologic aspects, care facilities, and relationships between elders and caregivers. Lecture 2 hours. Total 2 hours per week. Prerequisites: MTH 126; ITE 115 or ITE 100, Admission to Nursing Program.

NUR 201 PSYCHIATRIC NURSING (3 cr.)— Focuses on the care of individuals/families requiring clinical treatment. Uses all components of the nursing process with increasing degrees of skill. Includes math computational skills and basic computer instruction related to the delivery of nursing care, alterations in behavior, eating disorders, mood disorders, anxiety, chemical dependency and dementias. Provides supervised learning experiences in college nursing laboratories and/or cooperating agencies. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Prerequisites: NUR 105, 108, 109, 114, 136, 137, 226; MTH 126; ITE 115 or AST 232; BIO 141, 142, PSY 231

NUR 205 INTRODUCTION TO SECOND LEVEL NURSING (6 CR.)— Focuses on principles and concepts of nursing care for individuals, families, and/or groups in the community and hospital setting. Focuses on health team membership and various nursing care delivery systems. Includes math computational skills, basic computer instruction related to the delivery of nursing care; endocrine, renal, cardiovascular and immunological disorders in school and home health settings. Provides supervised learning experiences in cooperating agencies. Lecture 3 hours. Laboratory 9 hours. Total 12 hours per week. Prerequisites: NUR 105, 108, 109, 114, 136, 137, 226; MTH 126; ITE 115 or AST 232; BIO 141, 142; PSY 231

NUR 208 ACUTE MEDICAL/SURGICAL NURSING (6 CR.)— Focuses on the use of nursing process to provide care to individuals/families with acute medical or surgical problems or to prevent such problems. Includes math computational skills and basic computer instruction related to the delivery of nursing care. Provides supervised learning experiences in cooperating agencies. Lecture 3 hours. Laboratory 9 hours. Total 12 hours per week. Prerequisite: NUR 105, 108, 114, 136, 137, 201, 205, 226, 236; MTH 126; ITE 115 or AST 232; BIO 141, 142; PSY 231, 232

NUR 226 NURSING HEALTH ASSESSMENT (2 cr.)— Introduces the systematic approach to obtaining a health history and performing a physical assessment. Lecture 1 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisites: Acceptance to the Nursing Program, MTH 126, ITE 115 or AST 232

NUR 236 PRINCIPLES OF PHARMACOLOGY III (1 cr.)— Teaches principles of medication administration which include dosage calculations, major drug classifications, drug legislation, legal aspects of medication administration, and drug action on specific body systems. Part I of II Lecture 1 hour per week. Prerequisites: NUR 105, 108, 114, 136, 137, 226; MTH 126; ITE 115 or AST 232; BIO 141, 142

NUR 237 PRINCIPLES OF PHARMACOLOGY IV (1 cr.)— Teaches principles of medication administration which include dosage calculations, major drug classifications, drug legislation, legal aspects of medication administration, and drug action on specific body systems. Part II of II Lecture 1 hour per week. Prerequisites: NUR 105, 108, 114, 136, 137, 201, 205, 226, 236; MTH 126; ITE 115 or AST 232; BIO 141, 142

NUR 245 METERNAL/NEWBORN NURSING (3 CR.)— Develops nursing skills in caring for families in the antepartum, intrapartum, and post-partum periods. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Prerequisite: NUR 105, 108, 114, 136, 137, 201, 205, 226, 236; MTH 126; ITE 115 or AST 232; BIO 141, 142; PSY 231, 232

NUR 254 DIMENSIONS OF PROFESSIONAL NURSING (2 cr.)— Explores the role of the professional nurse. Emphasizes nursing organizations, legal and ethical implications, and addresses trends in management and organizational skills. Explores group dynamics, relationships, conflicts, and leadership styles. Lecture 2 hours per week. Prerequisite: NUR 105, 108, 114, 136, 137, 201, 205, 226, 236; MTH 126; ITE 115 or AST 232; BIO 141, 142; PSY 231, 232

OCCUPATIONAL THERAPY (OCT)

OCT 100 INTRODUCTION TO OCCUPATIONAL THERAPY (3 cr.)—Introduces the concepts of occupational therapy as a means of directing a person's participation in tasks selected to develop, maintain or restore skills in daily living. Examines the role of the assistant for each function of occupational therapy, and for various practice settings in relationship to various members of the health care team. Lecture 3 hours per week. Prerequisite: Admission to OTA program.

OCT 190 COORDINATED PRACTICE IN OCCUPATIONAL THERAPY (I and II) (1 cr. each)—This course consists of 75 hours of clinical experience emphasizing observation skills and integration of academic knowledge with various patient populations.

OCT 195 TOPICS IN OT FOR PHYSICAL DYSFUNCTION (2 cr.)--Focuses on the theory and application of occupational therapy in the evaluation and treatment of physical dysfunction. It will include a survey of conditions, which cause physical disability, and the role of the occupational therapy assistant in the assessment, planning, implementation of the treatment program, and restoration of functional abilities. Lecture 2 hours per week.

OCT 201 OCCUPATIONAL THERAPY WITH PSYCHOSOCIAL DYSFUNCTION (3 cr.)—Focuses on the theory and application of occupational therapy in the evaluation and treatment of psychosocial dysfunction. Includes a survey of conditions which cause emotional, mental and social disability, as well as the role of the occupational therapy assistant in the assessment, planning and implementation of treatment programs. Lecture 3 hours per week. Prerequisite: OCT 100.

OCT 202 OCCUPATIONAL THERAPY WITH PHYSICAL DISABILITIES (4 cr.)—Focuses on the theory and application of occupational therapy in the evaluation and treatment of physical dysfunction. Includes a survey of conditions which cause physical disability as well as the role of the occupational therapy assistant in assessment, planning and implementation of treatment programs. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisite: OCT 100, NAS 195.

OCT 203 OCCUPATIONAL THERAPY WITH DEVELOPMENTAL DISABILITIES (4 cr.)—Focuses on the theory and application of occupational therapy in the evaluation and treatment of developmental dysfunction. Includes a survey of conditions which cause developmental disability across the life span, with particular emphasis on children and the elderly. Investigates the role of the occupational therapist in assessment, planning and implementation of treatment programs. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Prerequisite: OCT 201.

OCT 205 THERAPEUTIC MEDIA (2-3 cr.)—Develops proficiency in various crafts used as treatment modalities in occuptional therapy. Emphasizes how to analyze, adapt and teach selected activities as well as how to equip and maintain a safe working environment. Lecture 1-2 hour. Laboratory 2-3 hours. Total 3-5 hours per week. Prerequisite: OCT 100.

OCT 207 THERAPEUTIC SKILLS (3-4 cr.)—Presents techniques used in the treatment of a variety of conditions frequently seen across the life span. Emphasizes the activities of self-care, work, and leisure as they relate to the development/resumption of normal social role functioning. Lecture 2-3 hours. Laboratory 3 hours. Total 5 hours per week. Prerequisites: OCT 201.

OCT 208 OCCUPATIONAL THERAPY SERVICE MANAGEMENT (3 cr.)—Presents principles and techniques of management appropriate to the occupational therapy assistant. Includes roles and functions of the supervisor and the supervisee, scheduling, billing, quality improvement. Issues relevant to professional practice and patient care will be discussed with similarities and differences between various facilities highlighted. Lecture 3 hours per week. Prerequisite: OCT 201.

OCT 210 ASSISTIVE TECHNOLOGY IN OCCUPATIONAL THERAPY (2 cr.)—Explores the assistive technologies available for persons with physical, sensory, and cognitive disabilities. Provides instruction in the process of assessment, selection, adaptation, and training assistive technology to persons with disability. Presents information on funding and maintenance of devices. Exposes students to technology in clinical practice and equipment companies.

OCT 220 OCCUPATIONAL THERAPY FOR THE ADULT (2 cr.)—Reviews normal changes related to aging and factors contributing to dysfunction. Analyzes intervention strategies for common problems, including wellness programs and home modifications. Reviews relevant legislation, continuum of care and caregiver issues. Lecture 2 hours per week. Prerequisite: OCT 100.

OCT 290 COORDINATED PRACTICE IN OCCUPATIONAL THERAPY (III and IV) (6 crs. each)—This course consists of an eight-week (40 hour per week) clinical affiliation that emphasizes direct participation in a setting for physical disabilities and also an eight-week (40 hour per week) clinical affiliation in a setting that focuses on either geriatric, psychiatric, or pediatric populations. Prerequsites: All academic courseswork and level I clinical (OCT 190) courses must be successfully completed with a grade of "C/P" or above before taking these courses.

PHYSICAL EDUCATION (PED)

PED 101-102 FUNDAMENTALS OF PHYSICAL ACTIVITY I-II (1-2 cr.) (1-2)—Presents principles underlying the components of physical fitness. Utilizes conditioning activities involving cardiovascular strength and endurance, respiratory efficiency, muscular strength, and flexibility. May include fitness assessment, nutrition and weight control information, and concepts of wellness. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 103-104 AEROBIC FITNESS I-II (1-2 cr.) (1-2 cr)—Develops cardiovascular fitness through activities designed to elevate and sustain heart rates appropriate to age and physical condition. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 105-106 AEROBIC DANCE I-II (1-2 cr.) (1-2 cr.)—Focuses on physical fitness through dance exercises. Emphasizes the development of cardiovascular endurance, muscular endurance, and flexibility. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 107-108 Exercise and Nutrition I-II (1-2 cr.) (1-2 cr.)—Provides the student with a full body workout through flexibility, strength, and cardiovascular endurance exercises. Includes fitness evaluation, nutrition analysis, and weight control. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 111-112 WEIGHT TRAINING I-II (1-2 cr.) (1-2 cr.)—Focuses on muscular strength and endurance training through individualized workout programs. Teaches appropriate use of weight training equipment. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 121-122 RACKETBALL I-II (1-2 cr.) (1-2 cr.)—Teaches racketball skills and strategies for team and individual play. Includes terminology, scoring, etiquette, equipment selection, and safety. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 123-124 TENNIS I-II (1-2 cr.) (1-2 cr.)—Teaches tennis skills with emphasis on stroke development and strategies for individual and team play. Includes rules, scoring, terminology, and etiquette. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 128 HORSEBACK RIDING (1-2 cr.)—Presents riding seats and preparation for riding, care and grooming of a horse, selection, use and care of equipment, and safety. Prerequisite appropriate riding skills or instructor's permission for advanced course. Lecture 1-2 hours per week. Laboratory 0-2 hours per week.

PED 135-136 BOWLING I-II (1-2 cr.) (1-2 cr.)—Teaches basic bowling skills and techniques, scoring, rules, etiquette, and terminology. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 147 HIKING (1-2 cr.)—Introduces physical and mental benefits of walking or hiking as a form of physical exercise. Skills developed include how to plan for a hike, what to take, and how to select a trail relative to individual abilities. Provides hiking opportunities to explore local regions. Develops awareness of safety, weather, and ecological considerations. Laboratory 2-4 hours per week.

PED 154 VOLLEYBALL (1-2 cr.)—Introduces skills, techniques, strategies, rules, and scoring. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 161-162 DANCE PRODUCTION I-II (1-2 cr.) (1-2 cr.)—Focuses on creating a dance performance. Teaches the basic skills in creating and producing a dance. Includes lighting, costumes, music, and choreography. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 163-164 JAZZ I-II (1-2 cr.) (1-2 cr.)—Introduces dance through contemporary jazz movements. Includes floor stretches, isolations, dance patterns and locomotor movements. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 173 ROCK CLIMBING AND RAPPELLING (1-2 cr.)—Presents techniques and skills of climbing and rappelling with emphasis on safety, equipment, skills in knot tying, termionology and physical conditioning. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 181-182 DOWNHILL SKIING I-II (1-2 cr.) (1-2 cr.)—Teaches basic skills of downhill skiing; selection and use of equipment; terminology and safety rules. Includes field experience. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

PED 188 FRESHWATER FISHING (1-2 cr.)—Teaches freshwater fishing techniques including spinning, bait casting and fly casting. Presents selection and care of equipment, fish habits, conservation, and safety. Lecture 1-2 hours. Laboratory 0-2 hours. Total 1-3 hours per week.

POLITICAL SCIENCE (PLS)

PLS 135 AMERICAN NATIONAL POLITICS (3 cr.)—Teaches political institutions and processes of the national government of the United States, focuses on the Congress, presidency, and the courts, and on their interrelationships. Gives attention to public opinion, suffrage, elections, political parties, interest groups, civil rights, domestic policy, and foreign relations. Lecture 3 hours per week.

PLS 211-212 U. S. GOVERNMENT I-II (3 cr.) (3 cr.)—Teaches structure, operation, and process of national, state, and local governments. Includes in-depth study of the three branches of the government and of public policy. Lecture 3 hours per week.

PLS 241 INTERNATIONAL RELATIONS I (3 cr.)—Teaches geographic, demographic, economic, ideological, and other factors conditioning the policies of countries and discusses conflicts and their adjustment. Lecture 3 hours per week.

PHILOSOPHY (PHI)

PHI 101-102 INTRODUCTION TO PHILOSOPHY I-II (3 cr.) (3 cr.)—Introduces a broad spectrum of philosophical problems and perspectives with an emphasis on the systematic questioning of basic assumptions about meaning, knowledge, reality, and values. Lecture 3 hours per week.

PHOTOGRAPHY (PHT)

PHT 100 INTRODUCTION TO PHOTOGRAPHY (2 cr.)—Introduces principles of photography with outside shooting assignments related to lecture topics. Lecture 1-2 hour. Laboratory 2 hours. Total 4 hours per week.

PHT 101-102 PHOTOGRAPHY I-II (3 cr.) (3 cr.)—Teaches principles of photography and fundamental camera techniques. Requires outside shooting and lab work. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

PHT 201-202 ADVANCED PHOTOGRAPHY I-II (3 cr.) (3 cr.)—Provides weekly critiques of students' work. Centers on specific problems found in critiques. Includes working procedures and critical skills in looking at photographs. Prerequisite PHT 102 or equivalent. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

PHT 207 COLOR SLIDE WORKSHOP (3 cr.)—Examines color transparency materials. Focuses on use of slides as personal expression and as a communication tool. Prerequisite PHT 102 or equivalent. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

PHT 226 COMMERCIAL PHOTOGRAPHY (3 cr.)—Examines advanced topics relating to commercial photography. Emphasizes advertising, portraiture, and commercial and public relations. Prerequisite PHT 206-222. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

PHYSICS (PHY)

PHY 201-202 GENERAL COLLEGE PHYSICS I-II (4 cr.) (4 cr.)—Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Prerequisite MTH 165 or equivalent. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 231-232 GENERAL UNIVERSITY PHYSICS I-II (5 cr.)—Teaches the principles of classic physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, and optics with extended coverage of selected topics. Includes recitation as part of the lecture. Prerequisite: MTH 173 (for PHY 231) and MTH 174 and PHY 231 (for PHY 232). Part I of II. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

PHY 241-242 UNIVERSITY PHYSICS I-II (4 cr.) (4 cr.)—Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Prerequisite for PHY 241—MTH 173 or MTH 273 or divisional approval; Prerequisite for PHY 242— MTH 174 or MTH 274 or divisional approval. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PRACTICAL NURSING (PNE)

PNE 135 MATERNAL AND CHILD HEALTH NURSING (5 cr.)--Examines pregnacy, childbirth, post-partum, and newborn care from a family centered approach. Covers complications related to childbearing. Emphasizes growth and development and exploration of common childhood disorders at various stages. Lecture 4 hours Clinical 3 hours. Total 7 hours per week.

PNE 141 NURSING SKILLS I (2-3 cr.)--Studies prinicples and procedures essential to the basic nursing care of patients. Lecture 0-2 hours. Laboratory 3-6 hours. Total 5-7 hours per week.

PNE 145 TRENDS IN PRACTICAL NURSING (1 cr.)--Studies the role of the Licensed Practical Nurse. Covers legal aspects, organizations, and opportunities in practical nursingl. Assists students in preparation for employment. Lecture 1 hours per week.

PNE 151 MEDICAL-SURGICAL NURSING I (4 cr.)--Studies etiology, symptoms, prescribed treatment, and experiences in the nursing care of patients with selected disorders. Selects learning experiences to correlate related patient care with classroom instruction whenever possible. Provides observational experiences when available. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PNE 152 MEDICAL-SURGICAL NURSING II (4-5 cr.)--Studies etiology, symptoms, prescribed treatment, and experience in the nursing care of patients with selected disorders. Lecture 3-4 hours. Laboratory 3-6 hours. Total 6-9 hours per week.

PNE 155 BODY STRUCTURE AND FUNCTION (3-4 cr.)--Studies the structure and function of the body. Lecture 3-4 hours. Laboratory 0. Total 3-4 hours per week.

PNE 158 MENTAL HEALTH/PSYCHIATRIC NURSING (1-2 cr.)--Recognizes emotional needs of patients. Provides knowledge of the role that emotions play. Enables students to understand their own behavior as well as patient behavior. Lecture 1-2 hours per week.

PNE 173 PHARMACOLOGY FOR PRACTICAL NURSES I (1-2 cr.)--Studies history, classification, sources, effects, uses, and legalities of drugs. Teaches problem solving skills used in medication administrations. Emphasizes major drug classes and specific agents within each class. Lecture 1-2 hours per week.

PNE 181-182 CLINICAL EXPERIENCE I-II (5 cr.) (5 cr.)--Provides guided nursing experiences in the hospital setting. Practices skills and applies principles of nursing in basic areas. Includes supervision in administration of medicines. Encourages students to develop basic skills in analyzing patient needs and making nursing decisions. Laboratory 15-18 hours per week.

PNE 290 GERIATRIC NURSING (7 cr.)--Presents an overview of aging, examines trends and issues affecting the older adult. Provides classroom, observational, direct clinical experience, and supervision of administration of medicines. Encourages students to analyze geriatric needs and make appropriate decisions based on leadership. Lecture 1-2 hours. Laboratory 15 hours. Total 16-17 hours per week.

PSYCHOLOGY (PSY)

PSY 120 HUMAN RELATIONS (3 cr.)—Introduces the theory and practice of effective human relations. Increases understanding of self and other interpersonal skills needed to be a competent and cooperative communicator. Lecture 3 hours per week.

PSY 125 INTERPERSONAL RELATIONSHIPS (3 cr.)—Studies individual behavior as it affects the individual's relationships. Considers such topics as attitudes, needs, values, leadership, communication, and group dynamics. Teaches constructive methods of interpersonal problem solving. Lecture 3 hours per week.

PSY 126 PSYCHOLOGY FOR BUSINESS AND INDUSTRY (3 cr.)—Focuses on the application of psychology to interpersonal relations and the working environment. Includes topics such as group dynamics, motivation, employee-employer relationship, interpersonal communications, and techniques for selection and supervision of personnel. Lecture 3 hours per week.

PSY 166 PSYCHOLOGY OF MARRIAGE (3 cr.)—Analyzes personality interactions in marriage and other intimate relationships. Examines theories of personal development and types of relationships resulting from interactions. Lecture 3 hours per week.

PSY 200 PRINCIPLES OF PSYCHOLOGY (3 cr.)—Surveys the basic concepts of psychology. Covers the scientific study of behavior, behavioral research methods and analysis, and theoretical interpretations. Includes topics that cover physiological mechanisms, sensation/perception, motivation, learning, personality, psychopathology, therapy, and social psychology. Lecture 3 hours per week.

PSY 205 PERSONAL CONFLICT AND CRISIS MANAGEMENT (2-3 cr.)—Studies the effective recognition and handling of personal and interpersonal conflicts. Discusses cooperative roles of public and private agencies, management of family disturbances, child abuse, rape, suicide, and related cases. Lecture 2-3 hours per week.

PSY 215 ABNORMAL PSYCHOLOGY (3 cr.)—Explores historical views and current perspectives of abnormal behavior. Emphasizes major diagnostic categories and criteria, individual and social factors of maladaptive behavior, and types of therapy. Includes methods of clinical assessment and research strategies. Prerequisite PSY 201or PSY 202 or PSY 200. Lecture 3 hours per week.

PSY 216 SOCIAL PSYCHOLOGY (3 cr.)—Examines individuals in social contexts, their social roles, group processes and intergroup relations. Includes topics such as small group behavior, social behavior, social cognition, conformity, attitudes, and motivation. Prerequisite PSY 201 or PSY 202 or PSY 200. Lecture 3 hours per week. This course is also approved for offering as SOC 265.

PSY 225 THEORIES OF PERSONALITY (3 cr.)—Studies the major personality theories and their applications. Includes psycodynamic, behavioral, cognitive, and humanistic perspectives. Prerequisite PSY 200 or PSY 201 or PSY 202 or divisional approval. Lecture 3 hours per week.

PSY 230 DEVELOPMENTAL PSYCHOLOGY (3 cr.)—Studies the development of the individual from conception to death. Follows a life-span perspective on the development of the person's physical, cognitive, and psychosocial growth. Lecture 3 hours per week.

PSY 231-232 LIFE SPAN HUMAN DEVELOPMENT I-II (3 cr.) (3 cr.)—Investigates human behavior through the life cycle. Describes physical, cognitive, and psycho-social aspects of human development from conception to death. Lecture 3 hours per week.

PSY 235 CHILD PSYCHOLOGY (3 cr.)—Studies development of the child from conception to adolescence. Investigates physical, intellectual, social and emotional factors involved in the child's growth. Lecture 3 hours per week.

PSY 236 ADOLESCENT PSYCHOLOGY (3 cr.)—Studies development of the adolescent. Investigates physical, intellectual, social, and emotional factors of the individual from late childhood to early adulthood. Lecture 3 hours per week.

PSY 250 LAW ENFORCEMENT PSYCHOLOGY (3 cr.)—Studies the psychology of police work in interpersonal or intergroup situations. Includes topics such as prejudice, suggestion, emotion, frustration, and aggression. Prerequisite PSY 100, 125, or divisional approval. Lecture 3 hours per week.

PSY 255 PSYCHOLOGICAL ASPECTS OF CRIMINAL BEHAVIOR (3 cr.)—Studies psychology of criminal behavior. Includes topics such as violent and non-violent crime, sexual offenses, insanity, addiction, white collar crime, and other deviant behaviors. Provides a background for law enforcement occupations. Prerequisites: PSY 125, 200, 201, 202 or divisional approval. Lecture 3 hours per week.

RADIOGRAPHY (RAD)

RAD 105 INTRODUCTION TO RADIOLOGY, PROTECTION AND PATIENT CARE (2 cr.)—Presents brief history of radiologic profession, code of ethics, conduct for radiologic students, and basic fundamentals of radiation projection. Teaches the care and handling of the sick and injured patient in the Radiology Department. Introduces the use of contrast media necessary in the investigation of the internal organs. Prerequisite: Acceptance into the Radiography Program. Lecture 2-3 hours per week.

RAD 110 IMAGING EQUIPMENT AND PROTECTION (3 cr.)---Discusses the basic components of radiographic unit, principles of x-ray production, principles of image receptors, automatic processing, film evaluation and concepts in radiation protection and radiobiology. Prerequisite: RAD 105 and RAD 245. Lecture 3 hours per week.

RAD 111-112 RADIOLOGIC SCIENCE I-II (4 cr.) (4 cr.)—Teaches concepts of radiation, radiography physics, fundamentals of electromagnetic radiation, electricity and magnetism, and application of these principles to radiography. Focuses on X-ray production, emission, and X-ray interaction with matter. Prerequisite: RAD 105 and RAD 245. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

RAD 121 RADIOGRAPHIC PROCEDURES I (4 cr.)—Introduces procedures for positioning the patient's anatomical structures relative to X-ray beam and image receptor. Emphasizes procedures for routine examination of the chest, abdomen, extremities, and axial skeleton. Prerequisite: RAD 105 and 245. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

RAD 205 RADIATION PROTECTION AND RADIOBIOLOGY (3 cr.)—Studies methods and devices used for protection from ionizing radiation. Teaches theories of biological effects, cell and organism sensitivity, and the somatic and genetic effects of ionizing radiation. Presents current radiation protection philosophy for protecting the patient and technologist. Prerequisite: RAD 110, RAD 112 and RAD 121-221. Lecture 3 hours per week.

RAD 215 CORRELATED RADIOGRAPHIC THEORY (1-2 cr.)—Presents intensive correlation of all major radiologic technology subject areas. Studies interrelationships of biology, physics, principles of exposure, radiologic procedures, patient care, and radiation protection. Prerequisite: RAD 110, RAD 112 and RAD 121-221. Lecture 1-2 hours per week.

RAD 221 RADIOGRAPHIC PROCEDURES II (4 cr.)—Continues procedures for positioning the patient's anatomical structures relative to X-ray beam and image receptor. Emphasizes procedures for routine examination of the skull, contrast studies of internal organs, and special procedures employed in the more complicated investigation of the human body. Prerequisite: RAD 110 and RAD 121. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

RAD 225 SPECIALIZED PATIENT CARE PROCEDURE (2 cr.)—Focuses on specific nursing procedures associated with routine and emergency conditions encountered in the performance of radiographic examinations. Teaches medication preparation and administration principles. Prerequisite: RAD 110, RAD 112 and RAD 121-221. Lecture 2 hours per week.

RAD 240 RADIOGRAPHIC PATHOLOGY (3 cr.)—Presents a survey of common medical and surgical disorders that affect radiographic image. Discusses conditions related to different systems of the human body. Studies the correlation of these conditions with radiographs. Prerequisite: BIO 141-142 and RAD 121-221. Lecture 3 hours per week.

RAD 245 RADIOLOGIC SPECIALTIES (1-2 cr.)—Introduces the study of treatment of disease as it relates to various imaging modalities, computerized tomography, and magnetic resonance imaging. Introduces computers and other innovations in radiology. Emphasizes theory, principle of operation, and clinical application of these topics. Prerequisite: Acceptance into the Radiography Program. Lecture 1-2 hours per week.

RAD 246 SPECIAL PROCEDURES (1-2 cr.)—Studies special radiographic and surgical procedures and equipment employed in the more complicated investigation of internal conditions of the human body. Prerequisite: BIO 141-142 and RAD 121-221. Lecture 1-2 hours per week.

RAD 247 CROSS-SECTIONAL ANATOMY (2-3 cr.)--Presents a specialized study of cross-sectional anatomy relevant to sectional imaging modalities such as computed tomography and magnetic resonance imaging. Prerequisite: ARRT or eligible. Prerequisite: ARRT or eligible, BIO 141-142 and RAD 21-221. Lecture 2-3 hours per week.

RAD 255 RADIOGRAPHIC EQUIPMENT (3 cr.)---Studies principles and operation of general and specialized x-ray equipment. Prerequisite: RAD 110, RAD 112 and RAD 245. Lecture 3 hours per week.

RAD 256 RADIOGRAPHIC FILM EVALUATION (3 cr.)—Presents a concentrated study and practical evaluation of radiographic quality and disease affects on radiographs. Focuses on technical factors, procedural factors, equipment malfunctions, and other difficulties associated with radiographs. Prerequisites: BIO 141,142, RAD 111,112,121, 221. Lecture 3 hours per week.

REAL ESTATE (REA)

REA 100 PRINCIPLES OF REAL ESTATE (4 cr.)—Examines practical applications of real estate principles. Includes a study of titles, estates, land descriptions, contracts, legal instruments and concepts, real estate mathematics, financing, agency, appraisal, fair housing, and management of real estate. Lecture 4 hours per week.

REA 215 REAL ESTATE BROKERAGE (3 cr.)—Considers administrative principles and practices of real estate brokerage, financial control and marketing of real property. Lecture 3 hours per week.

REA 216 REAL ESTATE APPRAISAL (3 cr.)—Explores fundamentals of real estate valuation. Introduces the Uniform Standards of Professional Appraisal Practice and the Uniform Residential Appraisal Report form.mulations, working problems and reviewing actual appraisals. Includes the opportunities available in the appraisal field. Lecture 3-4 hours per week.

REA 217 REAL ESTATE FINANCE (3 cr.)—Presents principles and practices of financing real estate. Analyzes various types of note contracts and mortgage and deed of trust instruments. Covers underwriting of conventional and government insured and guaranteed loans. Lecture 3 hours per week.

REA 225 REAL PROPERTY MANAGEMENT (3 cr.)—Introduces the field of property management. Focuses on the principles of tenant selection and retention, financial management, and building maintenance. Lecture 3 hours per week.

REA 245 REAL ESTATE LAW (3 cr.)—Focuses on real estate law, including rights pertaining to property ownership and management, agency, contracts, transfers of real property ownership, fair housing, and tax implications. Lecture 3 hours per week.

RELIGION (REL)

REL 100 INTRODUCTION TO THE STUDY OF RELIGION (3 cr.)—Explores various religious perspectives and ways of thinking about religious themes and religious experience. Lecture 3 hours per week.

REL 200 SURVEY OF THE OLD TESTAMENT (3 cr.)—Surveys books of the Old Testament, with emphasis on prophetic historical books. Examines the historical and geographical setting and place of the Israelites in the ancient Middle East as background to the writings. Lecture 3 hours per week.

REL 210 SURVEY OF THE NEW TESTAMENT (3 cr.)—Surveys books of the New Testament, with special attention upon placing the writings within their historical and geographical setting. Lecture 3 hours per week.

REL 230 RELIGIONS OF THE WORLD (3 cr.)—Introduces the religions of the world with attention to origin, history, and doctrine. Lecture 3 hours per week.

REL 246 CHRISTIANITY (3 cr.)--Examines the origins and historical development of Christianity, its basic metaphysical and theological assumptions, its essential doctrines, and the present state of the church in the modern world. Lecture 3 hours per week.

SAFETY (SAF)

SAF 120 SAFETY AND HEALTH STANDARDS: REGULATIONS AND CODES (3 cr.)—Teaches development of safety standards, the Occupational Safety and Health Act (OSHA), its rules and regulations; penalties for non-compliance, and methods of compliance. Includes an examination of Government Regulatory Codes and appraisal of consensus, advisory, and proprietary standards. Lecture 3 hours per week.

SAF 126 PRINCIPLES OF INDUSTRIAL SAFETY (3 cr.)—Teaches principles and practices of accident prevention, analysis of accident causes, mechanical safeguards, fire prevention, housekeeping, occupational diseases, first aid, safety organization, protection equipment and general safety principles and promotion. Lecture 3 hours per week.

SAF 127 INDUSTRIAL SAFETY (2 cr.)—Provides basic understanding of safety and health in an industrial situation. Includes hazardous materials, substances, conditions, activities and habits as well as the prescribed methods and equipment needed for the apprentice to protect himself/herself and others. Lecture 2 hours.

SAF 135 SAFETY PROGRAM ORGANIZATION AND ADMINISTRATION (3 cr.)—Introduces techniques of organizing and administering practical safety programs. Emphasizes safety as a management function. Included an examination of history, occupational safety and health regulations, and a survey of current laws, codes, and standards. Lecture 3 hours per week.

SAF 246 HAZARDOUS CHEMICALS, MATERIALS, AND WASTE IN THE WORKPLACE (3 cr.)---Introduce the rules and regulations governing use, exposure to, and disposal of hazardous chemicals, materials, and waste by-products. Discusses OSHA "Right to Know Laws," EPA and RCRA regulations. Provides the techniques to interpret and understand the code of Federal Regulations. Emphasis on management mandates, strategies, and options to comply with these regulations. Lecture 3 hours per week.

STUDENT DEVELOPMENT (SDV)

SDV 01 STUDENT DEVELOPMENT (Insert Appropriate Disciplines) (1-5 cr.)—Reviews the basic concepts and skills necessary for students to progress satisfactorily in regular college courses. Lecture 1-5 hours per week.

SDV 05 ACADEMIC STRATEGIES FOR SPECIAL NEEDS STUDENTS (3 cr.)—Develops skills in time management and studying in specific academic areas. Assists special needs students in evaluation of individual learning styles and determination of specific study needs according to their deficiencies. Provides on-going assessment of academic progress, hands-on instruction to microcomputer word processing software and tutorial programs. Lecture 3 hours per week.

SDV 100 ORIENTATION (1 cr.)—Assists students in transition to college. Provides overviews of college policies, procedures, curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, and other college resources available to students. May include English and math placement testing. Strongly recommended for first-time, full-time students. Required for graduation. Lecture 1 hour per week.

SDV 101 ORIENTATION TO (SPECIFY THE DISCIPLINE) (1-3 cr.)—Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling, and advising; listening, test taking, and study skills; and topical areas which are applicable to their particular discipline. Lecture 1-3 hours per week.

SDV 104 STUDY SKILLS (1-3 cr.)—Assists students in planning strategies to overcome nonproductive study habits and in implementing positive study behaviors. Includes management, memory improvement, note taking, and test taking. Lecture 1-3 hours per week.

SDV 105 PERSONAL DEVELOPMENT FROM A WOMAN'S PERSPECTIVE (1-2 cr.)—Addresses the psychological and educational adjustment needs of the female college student. Covers three segments: personal development, career education, and study skills. Emphasizes the special needs of the re-entry woman. Provides education and support for the individual. Lecture 2 hours per week.

SDV 106 PREPARATION FOR EMPLOYMENT (1-2 cr.)—Provides experience in to resume writing, preparation of applications, letters of application, and successfully preparing for completing the job interview. Assists students in identifying their marketable skills, aptitudes, and develops strategies for successful employment search. Assists students in understanding effective human relations techniques and communication skills in job search. Lecture 1-2 hours per week.

SDV 107 CAREER EDUCATION (3 cr.)---Surveys career options available to students. Stresses career development and assists in the understanding of self in the world of work. Assists students in applying decision-making to career choice. Lecture 1-3 hours per week.

SDV 108 COLLEGE SURVIVAL SKILLS (1-3 cr.)—Provides an orientation to the college. Introduces study skills, career and life planning. Offers an opportunity to engage in activities aimed at self-discovery. Emphasizes development of "coping skills" such as listening, interpersonal relations, competence, and improved self-concept. Recommended for students enrolled in developmental courses. Lecture 1-3 hours per week.

SDV 109 STUDENT LEADERSHIP DEVELOPMENT (1 cr.)—Provides opportunities for students to learn leadership theory and skills for application in campus organizations, committees and groups. Lecture 1 hour per week.

SOCIOLOGY (SOC)

SOC 200 PRINCIPLES TO SOCIOLOGY (3 cr.)—Introduces fundamentals of social life. Presents significant research and theory in areas such as culture, social structure, socialization, deviance, social stratification, and social institutions. Lecture 3 hours per week.

SOC 215 SOCIOLOGY OF THE FAMILY (3 cr.)—Studies topics such as marriage and family in social and cultural context. Addresses the single scene, dating and marriage styles, child-rearing, husband and wife interaction, single parent families, alternative lifestyles. Lecture 3 hours per week.

SOC 235 JUVENILE DELINQUENCY (3 cr.)—Studies demographic trends, casual theories, and control of juvenile delinquency. Presents juveniles' interaction with family, schools, police, courts, treatment programs, and facilities. Also approved for ADJ Juvenile curriculum. Lecture 3 hours per week.

SOC 236 CRIMINOLOGY (3 cr.)—Studies research and casual theories of criminal behavior. Examines crime statistics, crime victims, and types of criminal offenses. Introduces role of police, judicial and correctional system in treatment and punishment of offenders. Is also approved for ADJ Criminology. Lecture 3 hours per week.

SOC 245 SOCIOLOGY OF AGING (3 cr.)—Introduces study of aging with special emphasis on later stages of the life cycle. Includes theories of aging, historical and comparative settings, social policy, and future trends of aging. Lecture 3 hours per week.

SOC 265 SOCIAL PSYCHOLOGY (3 cr.)—Examines individuals in social contexts: social roles, group processes and intergroup relations. May include small group interaction, social behavior, social cognition, conformity, attitudes, and motivation. Prerequisite SOC 200 or 201. Lecture 3 hours per week.

SOC 268 SOCIAL PROBLEMS (3 cr.)—Applies sociological concepts and methods to analysis of current social problems. Includes delinquency and crime, mental illness, drug addiction, alcoholism, sexual behavior, population crisis, race relations, family and community disorganization, poverty, automation, wars, and disarmament. Lecture 3 hours per week.

SPANISH (SPA)

SPA 101-102 BEGINNING SPANISH I-II (4-5 cr.) (4-5 cr.)—Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week. Lecture 4-5 hours per week.

SPA 201-202 INTERMEDIATE SPANISH I-II (3-4 cr.) (3-4 cr.)—Continues to develop understanding, speaking, reading, and writing skills. Prerequisite SPA 102 or equivalent. May include oral drill and practice. Lecture 3-4 hours per week. May include one additional hour of oral practice per week.

SPA 211-212 INTERMEDIATE SPANISH CONVERSATION I-II (3 cr.) (3 cr.)—Continues to develop fluency through emphasis on idioms and other complex sentence structures. Prerequisite SPA 202 or equivalent. Lecture 3 hours per week.

TELECOMMUNICATIONS MANAGEMENT (TEL)

TEL 150 INTERNETWORKING I (3-4 cr.)—Introduces the functions of each layer of the ISO/OSI reference model, data link and network addresses, data encapsulation, different classes of IP addresses and subnetting and the function of the TCP/IP network-layer protocols. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

TEL 151 INTERNETWORKING II (3-4 cr.)—Teaches features of the Cisco IOS software, including log in, context-sensitive help, command history and editing, loading software, configuring and verifying IP addresses, preparing the initial configuration of a router, and adding routing protocols to the router configuration. Prerequisite: TEL 150. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hour per week.

TEL 250 INTERNETWORKING III (3-4 cr.)—Studies the advantages of LAN segmentation using bridges routers, and switches, Fast Ethernet configuring access lists. Covers Spanning Tree Protocol and Virtual LANs. Prerequistie: TEL 151. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

TEL 251 INTERNETWORKING IV (3-4 cr.)—Focuses on the differences between the following WAN services: LAPB, Frame Relay, ISDN/LAP HDLC, PPP, and DDR. Prerequisite: TEL 250. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

TRUCK DRIVING (TRK)

TRK 101 DOT SAFETY RULES AND REGULATIONS (2 cr.)—Includes an intensive study of the Department of Transportation and state and local laws and regulations governing the motor carrier industry as applied to the professional operation of commercial vehicles. Co-requisites TRK 102 and 103. Lecture 2 hours per week.

TRK 102 PREVENTIVE MAINTENANCE FOR TRUCK DRIVERS (1 cr.)—Focuses on the fundamentals of preventive maintenance and inspection procedures of gasoline and diesel powered tractor-trailers. Includes drivelines, brake systems, electrical system and accessories encountered by the professional truck driver. Co-requisites TRK 101 and 103. Lecture 1 hour per week.

TRK 103 TRACTOR TRAILER DRIVING (9 cr.)—Prepares the prospective driver to operate a motor vehicle in a safe and responsible manner. Provides practical training in over-the-road and city driving, including backing skills, and pre-trip inspection. Emphasizes defensive driving. Co-requisites TRK 101 and 102. Lecture 3 hours. Laboratory 12 hours. Total 15 hours per week.

TRK 110 SURVEY OF THE TRUCKING INDUSTRY (3 cr.)---Provides an overview of the trucking industry, and the characteristics of the professional truck driver. Emphasizes the uses of technology in the trucking industry, including simulators, mobile information management and communication, and electronic mapping techniques. Provides an introduction to the transportation of hazardous materials and environmental issues.

WELDING (WEL)

WEL 117 OXYFUEL WELDING AND CUTTING (3-4 cr.)—Introduces history of oxyacetylene welding, principles of welding and cutting, nomenclature of the equipment, development of the puddle, running flat beads, and butt welding in different positions. Explains silver brazing, silver and soft soldering, and safety procedures in the use of tools and equipment. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 123 SHIELDED METAL ARC WELDING (Basic) (3-4 cr.)—Teaches operation of AC and DC power sources,welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process; Deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 126 PIPE WELDING I (3-4 cr.)—Teaches metal arc welding processes including the welding of pressure piping in the horizontal, vertical, and horizontal-fixed positions in accordance with section IX of the ASME Code. Lecture 2-3 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 130 INERT GAS WELDING (3 cr.)—Introduces practical operations in the uses of inert-gas-shield arc welding. Discusses equipment, safety operations, welding practice in the various positions, process applications, and manual and semi-automatic welding. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 141-142 WELDER QUALIFICATION TESTS I-II (3-4 cr.) (3-4 cr.)—Studies techniques and practices of testing welded joints through destructive and non-destructive test. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 150 WELDING DRAWING AND INTERPRETATION (3 cr.)---Teaches fundamentals required for successful drafting as applied to the welding industry. Includes blueprint reading, geometric principles of drafting and freehand sketching, basic principles of orthographic projection, preparation of drawings and interpretation of symbols. Lecture 2-3 hours per week.

WEL 160 GAS METAL ARC WELDING (3-4 cr.)—Introduces semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

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