Isothermal Community College

www.isothermal.edu

COLLEGE CATALOG
2014 - 2015

Rutherford Campus
286 ICC Loop Road, P.O. Box 804
Spindale, North Carolina 28160-0804
828-286-3636

Polk Center
1255 W. Mill St.
Columbus, North Carolina 28722-9445
828-894-3092

Rutherfordton Learning Center
134 Maple Street
Rutherfordton, NC 28139
828-286-2218

VOLUME XXXI

August, 2014

This catalog is provided for information purposes and is designed only to assist prospective students in planning. It does not establish contractual relationships. Every reasonable effort is made to ensure accuracy at time of publication; however, the College may make corrections to the contents and provisions of the catalog at its discretion. The College reserves the right to change course offerings, programs, policies, regulations, or requirements from time to time, consistent with applicable laws, in order to fulfill its role and mission or to accommodate circumstances beyond its control. Changes to the catalog may be implemented without prior notice or obligation and are effective immediately unless otherwise stated.

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MESSAGE FROM THE PRESIDENT

Welcome to Isothermal Community College—your community college. At Isothermal, we provide opportunities for people to be the best that they can be, and we do it at an affordable price. For almost 50 years, we have been educating our students for transfer to four-year colleges; preparing our students for jobs through workforce training; working with industry on customized training; and providing opportunities in adult education, continuing education and technical education. In today's world, learning is truly a lifelong experience. And whatever your stage in life, Isothermal has something for you—something that will improve your future. This is your school, we invite you to take advantage of it and make the most of it. Welcome to the Isothermal family and we hope and trust this will be an exciting and beneficial experience.

Walter Dalton

ISOTHERMAL COMMUNITY COLLEGE BOARD OF TRUSTEES

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NONDISCRIMINATION STATEMENT

Isothermal Community College provides educational and employment opportunities without regard to veteran status, race, color, religion, age, sex, national origin, or disability. Isothermal Community College is committed to this policy. Isothermal Community College supports the protection available to members of its community under all applicable Federal Laws including Title VI and Title VII of the Civil Rights Act of 1964, Equal Pay Act of 1963, Title IX of the 1972 Education Amendments, Executive Order 11246 as amended by 11375, Title VI (section 799A) and Title VIII (section 8451) of the Public Health Service Act, Age Discrimination Act, Americans With Disabilities Act of 1990, and the Rehabilitation Act of 1973.

Any member of the Isothermal Community College Community believing they have been discriminated against or desiring more information concerning these provisions and/or grievance procedures should contact:

Stephen Matheny, Vice President of Administrative Services
Isothermal Community College, P.O. Box 804, Spindale, NC 28160-0804 (828) 395-1293

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Community and Workforce Development, College Advancement and Director of Alumni Affairs ..... Thad Harrill, Vice President
Marketing and Community Relations ..... Mike Gavin, Director

ACADEMIC SERVICES

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Applied Sciences and Technology ..... DeWalt Koones, Interim Dean
Arts and Sciences ..... Dr. Kathy Ackerman, Dean
Business Sciences ..... Kim Alexander, Dean
Foothills Nursing Consortium ..... Dr. Kelly Jones, Interim Director
Rutherford Early College High School ..... Meredith Moore, College Liaison
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STUDENT SERVICES ..... Dr. Karen Jones, Dean

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Financial Aid/Veteran Affairs ..... Lisa Bridges,Counselor
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Registrar ..... Kelly Metcalf
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College & Career Readiness Transition ..... *vacant*, Coordinator
Continuing Education ..... Donna Hood, Dean
Customized Training ..... Mark Franklin, Director
Emergency Services ..... Jerry Hinson, Coordinator
Grants and College Development and Fundraising ..... Sarah Morse, Coordinator
Nursing Assistant and Allied Health ..... Betsy Cuthbertson, Coordinator
Performing Arts and Conference Center ..... Russell Wicker, Director
Polk Center ..... Kate Barkschat, Director
Small Business Center ..... Faye Bishop, Director

ADMINISTRATIVE AND SUPPORT SERVICES

Assessment, Planning and Research ..... Anne Oxenreider, Director of Institutional Assessment and Accreditation
Business Office ..... Amy Penson, Controller
Campus Enforcement ..... Officer Andy Millard and Officer Robert Owens
Campus Print Shop ..... Susan Straw, Manager
Human Resources ..... Cindy Moore, Director
Information Technology ..... Robby Walters, Director
Library ..... Charles Wiggins, Director
Plant Operations & Maintenance ..... Rick Edwards, Director
WNCW Business Operations/Development & Sales ..... Terri Frashier, Director
WNCW Programming & Engineering Operations ..... David Kester, Director

For complete college directory, visit www.isothermal.edu.

ACADEMIC CALENDAR 2014-2015

Fall Semester 2014 (80 Days)

August 18	Monday	Convocation - All Faculty & Staff
August 19-20	Tuesday-Wednesday	Last Chance Registration-Fall Semester
August 21	Thursday	First Day of Classes, Schedule Adjustments
August 22	Friday	Schedule Adjustments
September 1	Monday	Labor Day Holiday (College Closed)
September 2	Tuesday	Last Day to Drop with 75% refund
September 27	Saturday	Grub Day/50th Anniversary Celebration
October 9	Thursday	Professional Development Day (No Classes)
October 10	Friday	Fall Break - Faculty, Students (No Classes)
October 24	Friday	Academic Advising Day (No Classes)
November 20	Thursday	Last day to drop with "W"
November 26-28	Wednesday, Thursday, Friday	Thanksgiving Break (College Closed)
December 18	Thursday	Last Day of Classes
December 19	Friday	Faculty Checkout
December 22-Jan.2		Winter Break College Closed

Spring Semester 2015 (80 Days)

January 5	Monday	Faculty & Staff Work Day
January 6-7	Tuesday-Wednesday	Last Chance Registration–Spring Semester
January 8	Thursday	First Day of Classes, Schedule Adjustments
January 9	Friday	Schedule Adjustments
January 19	Monday	Martin Luther King Holiday (College Closed)
January 20	Tuesday	Last Day to Drop with 75% refund
February 5	Thursday	Professional Development (No Classes)
March 20	Friday	Academic Advising Day (No Classes)
March 30-April 2	Monday-Thursday	Spring Break – Faculty, Students (4 days)
April 3 & 6	Friday & Monday	Spring Holidays (College Closed)
April 14	Tuesday	Sports Day
April 16	Thursday	Last day to drop with "W"
May 11	Monday	Last Day of Classes
May 12	Tuesday	Faculty Checkout
May 13-15	Wednesday-Friday	Faculty-Student Break (No Classes)
May 15	Friday	REaCH Graduation
May 18	Monday	Graduation (Curriculum)
May 19	Tuesday	Graduation (Adult High School & GED)

Summer Semester 2015

May 19	Tuesday	Last Chance Registration - Summer Semester
May 20	Wednesday	First Day of Classes, Schedule Adjustments
May 25	Monday	Memorial Day Holiday (College Closed)
May 27	Wednesday	Last Day to Drop with 75% refund
July 2	Thursday	Student Break (No Classes)
July 16	Thursday	Last day to drop with "W"
July 29	Wednesday	Last Day of Classes
July 30	Thursday	Faculty Checkout
August 3-August 14		Semester Break-Faculty, Students

Note: Inclement Weather Policy
In the event curriculum classes are canceled due to inclement weather or emergencies, time missed shall be made up by alternative assignments and documented with the appropriate dean's approval. If days canceled exceed five in a semester, break time may be rescheduled for class meetings. (Administrative approved policy: 402-02-05AP)

INTRODUCTION

HISTORICAL SKETCH

Founded in 1964, Isothermal Community College serves Rutherford and Polk counties in the beautiful foothills of western North Carolina. Isothermal, named for the region's steady climate, is a comprehensive, two-year public institution and is a part of the North Carolina Community College System. Isothermal's core purpose is to improve life through learning.

The main campus is on 181 acres in Spindale. The Rutherford campus, perched on the shore of an 11-acre lake, is home to The Foundation Performing Arts and Conference Center, the area's premier venue for the arts and other special events. The college also owns and operates WNCW 88.7, an award-winning public radio station that can be heard in parts of five different states: North Carolina, South Carolina, Virginia, Tennessee and Georgia.

The Polk Center is in Columbus and opened in the fall of 1989. The Polk Center offers GED, massage therapy, equine studies, and driving safety classes on a regular basis as well as a variety of continuing education classes. In August 2013, Isothermal Community College opened the Rutherfordton Learning Center (RLC) to provide administrative and instructional spaces for the Associate Degree Nursing and Practical Nurse Education programs. Continuing Education programs, including Certified Nursing Assistant, were already operating at the RLC. It is located in downtown Rutherfordton, approximately four miles from the main campus and near the regional hospital. In May 2013, the Honorable Walter Dalton, former Lieutenant Governor of North Carolina, was appointed President by the college's Board of Trustees. The preceding president was Dr. Myra Johnson who served as in that capacity for six years. Johnson, served a Isothermal for 23 years most recently as vice president of Academic and Student Affairs. She replaced Dr. Willard L. Lewis, III, who retired from the post in 2007 after 21 years at the college. During Johnson's presidency, the college acquired approximately 39 acres of property, contiguous to its existing borders. Most of this property was purchased by the Isothermal Community College Foundation and donated to the college, while one parcel was given to the college by the Rutherford County Board of Commissioners.

In January 2008, the doors were opened on the new Willard L. Lewis, III, Lifelong Learning Center. The two-story building of approximately 24,000 square feet houses classrooms, office space, high-tech distance learning facilities and the Rutherford Early College High School. The center will ultimately host many of the collaborative efforts for higher learning Isothermal has with Western Carolina, Gardner-Webb and Appalachian State universities. Recently, the College partnered with Polk County Schools to support the Polk County Early College.

Interest in a community college for Rutherford and Polk counties began even before a statewide community college system was established. In 1963, the General Assembly passed Chapter 115A, General Statutes of North Carolina, establishing the Department of Community Colleges, and shortly thereafter the Rutherford County Commissioners appointed a committee to study and promote plans for a community college in the county. The preliminary report, submitted in March 1964, recommended that the proposed college serve Rutherford and Polk counties, that a site south of Spindale be chosen, and that the college be financed by a bond issue and a special tax levy. On Sept. 5, 1964, Rutherford County citizens voted by a margin of more than 16 to 1 in favor of a $500,000 bond issue for construction of the college, to be matched by state funds, and a property tax increase to pay the county's portion of the operating costs. The college was chartered on Oct. 1, 1964, by the State Board of Education. The first meeting of the Board of Trustees was held on Nov. 17, and on Nov. 23 the Board approved the name "Isothermal Community College." Fred J. Eason was chosen by the Board as the College's first president on Dec. 22. On July 1, 1965, the Industrial Education Center, which had been operating since 1962 as an extension of Gaston Technical Institute, became the vocational and technical division of Isothermal Community College. The College thus began operation with 66 students, some of whom received the first diplomas issued by Isothermal in exercises that August. August 1965 also marked the culmination of a fundraising drive by Rutherford and Polk citizens and businesses for the purchase of land for the Rutherford campus.

Until the new campus was ready, the vocational-technical, college transfer (begun in Sept. 1966) and adult education divisions were scattered in a number of temporary locations in Avondale, Spindale and Caroleen. College transfer and vocational-technical education each had about 100 students. The adult education program was boosted by the creation of the High School Diploma program in May 1967. That same year, Isothermal's Polk County program began with continuing education courses in Tryon. The first three buildings on the Rutherford campus (Administration, Library and Continuing Education) opened on April 8, 1968, and the College's first full-fledged graduation exercises were held on Aug. 30. The lake and initial landscaping of the campus were completed by April 27, 1969, when the College's charter was presented. By that time, 554 full-time students were enrolled. On Jan. 11, 1970, the College was accredited by the Southern Association of Colleges and Schools.

Expansion continued with the opening of a new Occupational Education Building in 1972. A satellite program for Polk County was approved in September 1974, and in November 1974 Rutherford County voters passed a $1.8 million bond issue for additional construction on the Rutherford campus. This enabled construction of a new vocational building with electronics facilities which opened in September 1978, and the student center/ physical education building which opened in the spring of 1979. Both buildings were dedicated on October 21, 1979. President Eason retired effective June 30, 1978, and the Board of Trustees selected Dr. Ben E. Fountain, Jr. as his successor. Dr. Dillard L. Morrow served as acting president until Dr. Fountain could assume his duties in September.

With help from local business and industry, the Individualized Instruction Center opened in the fall of 1979, and the marble marker at the entrance to the campus was completed in November 1979. Generous support was also evident in the creation of the Robert W. Eaves Outstanding Teacher Award, established in 1982 by the widow of the noted Rutherford County educator. The Polk County Campus also progressed, with the initiation of an independent study program and college transfer courses in 1976, and attainment of classroom space in the old Jervey-Palmer Building in Tryon. A permanent site for the campus became available in October 1982 when the Polk County Commissioners granted the college 10 1/2 acres near St. Luke's Hospital. This new site was dedicated on July 25, 1983. Construction of the new facility was completed in the fall of 1989.

Dr. Willard L. Lewis, III was appointed President on June 9, 1986 following the retirement of Dr. Fountain (1985) and the interim service of Dr. G. Herman Porter. Under the leadership of Dr. Lewis, further expansion of the Rutherford campus included the completion of the High Tech Center (1988) which housed drafting, broadcasting, advertising/graphic design and electronics engineering. A second major building program resulted in The Foundation Performing Arts and Conference Center. This 61,216 square-foot facility opened in November of 1999 with a performance by the North Carolina Symphony Orchestra.

Beginning in the 1990's and continuing to date, in conjunction with a reexamination of mission and philosophy, the college has pursued a transformation in culture from the teaching paradigm to the learning paradigm. In seeking ways to improve learning, the college dedicates resources in support of cooperative learning in the classroom as part of an ongoing commitment to the development of a learning centered environment.

COLLEGE MISSION, VALUES, AND VISION

OUR MISSION

As an integral community partner, Isothermal Community College exists to improve life through learning by providing innovative, affordable educational programs and offering opportunities for personal, professional, economic, and cultural development.

VIVID DESCRIPTION

- Preparing learners for future success in a career, further education, and personal enrichment
- Providing cutting edge learning and technology
- Providing choices in support services and delivery methods
- Supporting professional development opportunities
- Involving the learner in his or her own learning process(es)
- Encouraging and modeling the effective and sustainable utilization of resources
- Working collaboratively with public education and the community in meeting local educational goals
- Establishing partnerships to advance excellence in learning
- Maintaining a reputation of excellence that ensures the prestige of our graduates
- Encouraging an entrepreneurial spirit across all levels of the college

VISION STATEMENT

To be the benchmark for excellence in learning, innovation, service, and economic development.

VALUES

In improving life through learning, we recognize and accept our pivotal leadership role by valuing:

- a shared commitment to the well-being and enrichment of individuals
- lifelong opportunities for personal and professional growth
- responsibility as a catalyst for positive economic development, innovation, community growth, creativity, and the arts
- a climate of integrity, accountability, and respect for individuals
- a culture of collaboration and communication
- achievement realized through perseverance, critical thinking, and personal responsibility for learning
- diversity and the exchange of ideas
- excellence in programs and services
- assessment and the spirit of reflection
- the elimination of barriers to learning
- the learning college culture

Isothermal Community College, a member of the North Carolina Community College System, is a comprehensive, two-year, public institution that serves the individuals in Rutherford and Polk Counties. The College offers individual courses and certificate, diploma, and degree programs that enable students to transfer to four-year institutions or to acquire skills for new or continued employment, as well as to function effectively as citizens in our society. In addition, the College provides training for area business and industry, personal enrichment courses, remedial and developmental courses, and community service activities.

Isothermal Community College shall be open to all eligible individuals who can benefit regardless of age, sex, socioeconomic status, ethnic origin, race, veteran status, religion, or disabilities. The essence of the College's efforts shall be to contribute, in cooperation with other local educational systems and institutions, to a higher quality of life in the community it serves.

ACCREDITATION

Isothermal Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate degrees.

Inquiries relating to the accreditation status of the College may be made to the Southern Association of Colleges and Schools Commission on Colleges, 1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone number 404-679-4500 at http://www.sacscoc.org. As a requirement for on-going accreditation, member colleges must go through an accreditation reaffirmation process every ten years. This means that college personnel review policies and practices of the College to assure that operations are in compliance with SACSCOC principles.

QUALITY ENHANCEMENT PLAN

A Quality Enhancement Plan (QEP) is a required part of our 2016 Reaffirmation with the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). At its core, a QEP is both a process and a report that identifies a key student learning need and demonstrates that the College can initiate, set, and assess significant goals through a process involving broad-based input.

Our QEP process began at Professional Development Day Spring 2013 when all faculty and staff participated in the "Snowball Activity" by recording and sharing answers to the question "What is our students' greatest learning need?" Later at Sports Day 2013, students were surveyed using the same question. As a result, the QEP topic of "Removing Barriers to Completion through Academic Advising" was identified.

During the coming year, the QEP Implementation Team will be gathering more broad-based input as a part of developing an effective program plan. Look for ways to get involved.

THE ISOTHERMAL DISTINCTION

Students who complete programs at Isothermal Community College are expected to be able to function effectively as contributing citizens of our society. Our programs, regardless of their content areas, are designed to enable graduates to achieve the following general competencies:

- *Communicate effectively through writing, speaking, and through demonstration of information literacy*
- *Analyze problems and make valid conclusions*
- *Demonstrate quantitative skills*
- *Demonstrate basic technology skills*
- *Perform technical skills in their chosen occupations*

We also value, promote, and emphasize the following soft skills:

- *Demonstrate positive interpersonal skills through cooperative learning and group interaction*
- *Use critical listening skills to understand, evaluate, and respond appropriately to verbal communication*
- *Develop and awareness of global issues and the interconnectedness and interdependence of persons, places, and events on earth from a current as well as historical perspective*

Achieving these competencies requires a commitment on the part of both Isothermal and its students to the satisfaction of certain goals and expectations.

WHAT STUDENTS CAN EXPECT OF ISOTHERMAL

In their commitment to learning and to the achievement of a true learning-centered community, Isothermal personnel will:

- *Meet student needs by demonstrating professional, friendly, and courteous service in all aspects of student life*
- *Maintain high professional and academic standards*
- *Serve as role models in the development of leadership skills*
- *Respect diversity and treat all students fairly*
- *Be available to students and helpful with student problems*
- *Communicate clear learning objectives and expected outcomes*
- *Provide timely feedback in the assessment of learning outcomes*
- *Stay current in subject matter*
- *Practice effective teaching/learning strategies that promote critical thinking*

WHAT ISOTHERMAL EXPECTS OF STUDENTS

In their commitment to learning, students will:

- *Accept responsibility for learning*
- *Attend and participate in all classes*
- *Complete required exercises and assignments as directed*
- *Develop a time management plan that includes adequate time for study*
- *Maintain an open-minded attitude toward learning*
- *Strive to become independent critical thinkers*
- *Seek help as needed from appropriate sources*
- *Be respectful and considerate of others*
- *Assume responsibility for knowing and adhering to all college policies*
- *Acknowledge that learning how to learn is the ultimate objective of education*
- *Recognize that struggle and discomfort often precede the rewards that accompany goal completion and success*

With this commitment on the part of all concerned, an exciting partnership will grow and thrive, thus creating a community of learners whose mission is ***to improve life through learning.***

NCCCS PERFORMANCE MEASURES FOR ISOTHERMAL COMMUNITY COLLEGE

The Performance Measures for Student Success Report is the North Carolina Community College System's major accountability document. This annual performance report is based on data compiled from the previous year and serves to inform colleges and the public on the performance of all North Carolina community colleges. Isothermal Community College is committed to using this system to continuously monitor, evaluate, and improve the quality of programs offered in Rutherford and Polk counties.

The 2014 Performance Measures for Student Success reports that the College was above the average college percentage in four of the eight performance measures as shown on the following chart.

Performance Measure	State Average	Isothermal
Basic Skills Progress	41.3%	22.0%
GED Pass Rate	73.6%	83.7%
Developmental English Subsequent Success	64.4%	74.9%
Developmental Math Subsequent Success	64.4%	71.0%
First Year Progression	68.3%	67.8%
Curriculum Student Completion	43.6%	38.6%
Licensure Pass Rate	83.2%	81.3%
Transfer Performance	87.8%	94.2%

GENERAL INFORMATION

ADMISSIONS & REGISTRATION

For information regarding classes offered and registration at Isothermal Community College, refer to www.isothermal.edu. For more information call 828-286-3636.

Admissions Exception Policy

Isothermal Community College, in order to maintain a safe and orderly educational environment, reserves the right to refuse admission to any applicant if it is necessary to protect the safety of the applicant or other individuals. When making safety determination, the college may refuse admission to an applicant when there is an articulable, imminent, and significant threat to the applicant or other individuals. Isothermal Community College also reserves the right to refuse admission to any applicant during any period of time that the student is suspended or expelled for non-academic reasons from any other educational entity. Policy No: 601-02-09BP

CAMPUS SERVICES

Services and activities at Isothermal Community College support the learning college environment through the provision of programs and services that are timely, user-friendly, accessible, and designed to support student learning. These services recognize the significant diversity of the student body and seek to provide programs and services that support learning among all levels and types of students including (but not limited to) distance education, day and evening, minority, disabled, foreign, high school students, as well as displaced workers, single parents, students with financial need, etc.

CLASS HOURS

In order to provide educational opportunities to the majority of the residents of Rutherford, Polk and contiguous counties, most academic programs are offered during both day and evening hours. Day classes are normally scheduled from 8:00 a.m. through 4:45 p.m. Monday through Friday. Evening classes usually are scheduled from 5:00 p.m. through 10:15 p.m. Monday through Thursday evenings. A limited number of special classes are offered on Friday evening and on Saturday. Classes are also offered online.

CONDUCT

The student assumes full responsibility for the consequences of his/her actions and behavior. It is the personal responsibility of each student to uphold the rules and regulations of Isothermal Community College. The College reserves the right to dismiss any student who, in its judgment, conducts him or herself in a manner that is not in compliance with the purposes of this institution. The complete policy for Student Rights, Responsibilities, and Judicial Procedures is available in the Student Services Office and detailed in the Student Handbook (Appendix A) which is available in print and on the website.

Students in certain programs may be expected to follow additional guidelines. Examples include (but are not limited to) Basic Law Enforcement Training Standards, guidelines associated with health sciences programs, and policies associated with Rutherford County Schools (e.g., REaCH) or Polk County Schools. The Students enrolled in adult basic education (ABE), adult high school (AHS), English as a second language (ESL), or (GED) preparation are also expected to follow both the *Basic Skills Code of Conduct* and the *Student Code of Conduct*.

It is the duty of the President to exercise full authority in the regulation of student services and discipline in the institution. Delegation of this authority is normally made to the Dean of Students. Nevertheless, it is the duty of the President to ensure to every student the right of due process.

CRIME AWARENESS AND CAMPUS SAFETY

As required by the Crime Awareness and Campus Security Act of 1990, information regarding crime awareness and campus safety is available in the Student Handbook. Emergency procedures are also described in the Student Handbook.

DRUG & ALCOHOL POLICY

The possession and/or use of any non-prescribed controlled substance, as defined in Chapter 90 of the General Statues of North Carolina and federal laws, is not permitted on the campuses of Isothermal Community College. The consumption of alcohol or the possession of an open container which contains alcoholic beverages is prohibited on the campuses of Isothermal Community College. A full description of the Drug and Alcohol Policy is available in the appendix of the Student Handbook.

FINANCIAL AID

For information about financial aid programs (including Institutional Scholarships, Powers, Veterans Affairs, and NC State Grants), please visit http://www.isothermal.edu/current-students/financial-aid/index.html. If you have questions, contact the Financial Aid office at (828) 395-4198 or by email at financialaid@isothermal.edu.

OFFICE HOURS

The administrative offices of the College are normally open Monday through Friday from 8:00 a.m. to 4:30 p.m. Hours may vary during breaks. Summer hours are 7:30 a.m. to 5:30 p.m. Monday through Thursday.

POLICIES, PROCEDURES, & PUBLICATIONS

In publishing Policies and Procedures, the College does not recognize any implied contract as having validity beyond the present academic catalog year. The President reserves the right to make changes in curricula and in regulations when, such changes are for the best interest of the students and the College. Until revised, the current catalog is the catalog of record for all students seeking to complete certificate, diplomas, or degrees in the current academic year. Students enrolled prior to the fall of 1997 must confer with their advisors and the Office of Student Services in order to determine semester equivalents of quarter course credits.

Students in certain programs may be expected to follow additional guidelines. Examples include (but are not limited to) Basic Law Enforcement Training Standards, guidelines associated with health sciences programs, and policies associated with Rutherford County Schools (e.g., REaCH) or Polk County Schools. The Students enrolled in adult basic education (ABE), adult high school (AHS), English as a second language (ESL), or (GED) preparation are also expected to follow both the *Basic Skills Code of Conduct* and the *Student Code of Conduct*.

The College publishes important information through a variety of sources including (but not limited to):

Notice of Availability of Institutional and Financial Aid Information
Isothermal Community College distributes consumer information to students through a variety of sources including the College Catalog and the Student Handbook. For the convenience of students, Isothermal has also created a web page to provide quick and easy access to institutional and financial aid information. This resource is available at www.isothermal.edu/consumerinfo/. Printed paper copies are available upon request in Student Services.

College Catalog
The College Catalog is Isothermal's primary source of information regarding curriculum programs and class descriptions, other educational programs, administrator and faculty credentials, general educational competencies, and educational facilities.

Student Handbook
The Student Handbook for curriculum students provides information regarding what every student needs to know in order to successfully navigate the college experience at Isothermal.

Other Publications
Each student is responsible for observing the procedures, regulations, and requirements of the College as they are announced here and in other official college publications. Information, policies, and procedures may vary by program, e.g., Career and College Promise (CCP), health sciences programs cosmetology, and Basic Law Enforcement Training (BLET). Information regarding specific programs is available in departmental areas.

TITLE IX

Title IX of the Education Amendments of 1972 protects people from discrimination based on sex in education programs and activities that receive federal financial assistance.

The Title IX regulation describes the conduct that violates Title IX. Examples of the types of discrimination that are covered under Title IX include sexual harassment, sexual violence, and discrimination based on pregnancy. To enforce Title IX, the U.S. Department of Education maintains an Office for Civil Rights, with headquarters in Washington, DC and 12 offices across the United States.

At Isothermal Community College, personnel have been designated as Title IX Coordinators. Any concerns or complaints regarding Title IX should be directed to one of the designated coordinators including:

Contact	Population Served	Contact Information
Cindy Moore, Title IX Coordinator	Employees, Community Members, and Coordinates all Title IX Issues	828-395-1294 cinmoore@isothermal.edu
Karen Jones, Title IX Deputy Coordinator	Curriculum Students	828-395-1429 kjones@isothermal.edu
Donna Hood, Title IX Deputy Coordinator	Continuing Education Students	828-395-1404 dhood@isothermal.edu
Jeremiah McCluney, Title IX Deputy Coordinator	REaCH Students	828-395-4164 jsmcclun@rcsnc.org

CURRICULUM PROGRAMS OF STUDY

Programs of study fall into two major categories—college transfer and career preparation. The Associate of Arts and Associate of Science Degree Programs are designed primarily for students planning to transfer to a four-year college or university. The Associate of Applied Science Degree, Diploma, and Certificate Programs are designed for career preparation. Some Associate of Applied Science Degree Programs are also transferable to four-year colleges and universities.

DEGREE PROGRAMS

DIPLOMA PROGRAMS

CERTIFICATE PROGRAMS

ONE PLUS ONE PROGRAMS

Physical Therapy Assistant, Dental Hygiene, and Occupational Therapy Assistant
Through an agreement with Greenville Technical College, a limited number of Isothermal students can enter these vital health care programs. These programs are arranged as two separate components called One Plus One (1+1). The first component is taken at Isothermal and the second at Greenville Tech. Please contact the Health Sciences Advisors for further information.

Health Information Technology
Health Information Technology is a 1+1 collaborative agreement program between McDowell Technical Community College and Isothermal Community College. For more information, please see the dean of Business Sciences.

COOPERATIVE EDUCATION PROGRAM

Cooperative Education is an alternative college program in which students are employed for specific periods of on- or off-campus work. This employment is related as closely as possible to each student's course of study and individual interest. The blend of classroom theory and practical on-the-job training adds a vital dimension to learning experiences. Numerous advantages accrue from the Cooperative Education approach to learning, such as career direction and financial assistance for participating students, a source of manpower for employers, and an avenue to better relate the college to the community.

A student may participate in the Co-op Program and earn credit toward degree requirements depending on his/her major.
In order to be eligible for the Co-op Program, the student must:

1. Be enrolled in a curriculum program that includes Co-op as an option or requirement.
2. Have been at Isothermal for at least 1 semester.
3. Have at least a 2.0 GPA.
4. Be employable.
5. Be at least 17 years of age.
6. Have met the curriculum restrictions in accordance with the NCCCS Curriculum Procedures.

ACADEMIC DEVELOPMENT

This college level educational support program is designed to provide access to success for Isothermal Community College students. Support is provided in the form of developmental English and math courses, a Writing Center, math tutoring, and Supplemental Instruction.

Students whose placement tests indicate a need for one or more Academic Development courses are given a specific in-class diagnostic exam to further assess strengths and needs in the areas of English and mathematics. These diagnostic exams help instructors plan programs that will help students be successful.

Courses are offered in various levels of English and mathematics. Class formats include self-paced, lecture, web-assisted, and online instruction. In every case, instructors work with students to provide them with a foundation for confident, life-long learning. Each DRE course is taught in an 8-week format, MAT 050 is taught in an 8-week format, and each DMA course is taught in a 4-week format.

Both day and evening classes are available in the following Academic Development Courses:

Developmental English

DRE 096	Integrated Reading and Writing
DRE 097	Integrated Reading and Writing II
DRE 098	Integrated Reading and Writing III

Developmental Math

MAT 050	Basic Math Skills
DMA 010	Operations with Integers
DMA 020	Fractions and Decimals
DMA 030	Proportion/Ratio/Rate/Percent
DMA 040	Expressions/Linear Equations/Inequalities
DMA 050	Graphs/Equations of Lines
DMA 060	Polynomial/Quadratic Applications
DMA 070	Rational Expressions/Equations
DMA 080	Radical Expressions/Equations

ARTS AND SCIENCES PROGRAM

Objectives:
The primary objective of the Arts and Sciences Curricula is to provide students with the general education courses required in the first two years of a traditional four-year degree. Depending on proposed majors at the four-year schools, students at Isothermal Community College will pursue either the A.A. (Associate of Arts) or the A.S. (Associate of Science) degree.

Graduation Requirements:
Students enrolled in both the A.A. and the A.S. degree programs must earn 60-61 semester hours in designated disciplines with an overall grade point average of 2.0 to graduate. A.S. degree students are required to take additional hours in upper level math and science while A.A. degree students take more electives in the liberal arts.

Transferability of courses:
A Comprehensive Articulation Agreement (C.A.A.) between the North Carolina Community College System and the 16 institutions of the University of North Carolina contains the following components:

1. Students who complete the A.A. or A.S. degree at a college within North Carolina Community College System are assured admission to one of the 16 universities within the UNC system and will transfer as juniors. They will still be responsible for any institutional requirements at the transfer university, such as foreign language. If these requirements have not been met at the community college, they will have to be completed at the transfer university. (Note: This agreement does not guarantee acceptance at the student's first choice institution.)
2. Students who complete the A.A. or A.S. degree, with grades of C or higher in all courses and an overall GPA of at least 2.0, prior to transfer to a UNC institution, will have satisfied the UNC institution's lower-division requirements in general education.
3. The A.A. and A.S. degree programs are comprised of two components: 1) the Universal General Education Transfer Component (UGETC) of 30 semester hours and, 2) additional general education, pre-major, and elective courses that are selected by students according to the requirements of their intended major at the transfer institution.
4. Students who complete all courses in the UGETC with a grade of C or higher and an overall GPA of 2.0 or higher will be granted credit toward the university's lower-division general education requirements.
5. Students who satisfactorily complete transfer-level courses that are not within the UGET will receive transfer credit for the courses, but the university will determine whether to award the credits as general education, pre-major, or elective.
6. Each UNC university is required to publish and maintain its degree plans so that community college students can select clear pathways toward completion of baccalaureate degrees.

*An Independent Comprehensive Articulation Agreement (I.C.A.A.) allows for transfer to a limited group of private colleges.

Students who transfer to private colleges that are not included in the I.C.A.A. or to public universities outside of North Carolina will have their transcripts evaluated in accordance with the policies of the university to which they are transferring. The final decision on transferability rests with the transfer institution.

The average rate of student persistence toward degree completion at Isothermal Community College is available in the office of Student Services.

GRADUATION COURSE REQUIREMENTS
ASSOCIATE OF ARTS (A.A.) - DEGREE (A 10 10 0)

The Associate of Arts degree will be awarded to those students completing the general liberal arts requirements listed below. When considering options, students should consult four-year college catalogs to determine institutional and program requirements at the schools to which they intend to transfer.

Program Student Learning Outcomes
Graduates will be able to:

1. Communicate effectively through writing, reading, speaking, and listening through the demonstration of information literacy
2. Analyze problems and make logical conclusions.
3. Demonstrate positive interpersonal skills through cooperative learning and group interaction
4. Demonstrate quantitative competencies
5. Demonstrate technology skills
6. Demonstrate an awareness and an understanding of diverse culture and historical perspective
7. Transfer successfully the entire core into a Bachelor's Degree program at any state university in North Carolina to which they are accepted, as well as most other universities and colleges in the United States. Further, students that go beyond the transfer general education component and complete an AA degree or AS degree should be able to transfer as a junior (3rd year) level student.

NOTE: Courses used to satisfy one group cannot be used in another group.

I. Required Courses Local/State Requirement: (4 hours) ACA 122 CIS 110

II: Universal General Education Transfer Component (31–32 hours)

English Composition – 6 hrs (select both courses): ENG 111 ENG 112

Humanities/Fine Arts – 9 hrs (select 3 courses from at least 2 different disciplines):

ART 111	ART 114	ART 115	COM 231	ENG 231
ENG 232	MUS 110	MUS 112	PHI 215	PHI 240

Social/Behavioral Sciences – 9 hrs (select 3 courses from at least 2 different disciplines):

ECO 251	ECO 252	HIS 111	HIS 112	HIS 131
HIS 132	POL 120	PSY 150	SOC 210	

Mathematics – 3-4 hrs (select one course from the following):

MAT 143	MAT 152	MAT 171

Natural Sciences – 4 hrs (select one course from the following):

AST 111/111A	AST 151/151A	BIO 110	GEL 111	PHY 110/110A
BIO 111	CHM 151			

Total: 35–36 hours

III: Additional General Education Electives (14 hours)
NOTE: For group 3 and group 4, students should select these courses based on their intended major and transfer university. Courses listed in Group 2 may be used to satisfy this group if they are not used to satisfy another group.

Humanities/Fine Arts – 3 hours – select from the following: (recommended: 3rd prefix different from above)

ART 111	ART 114	ART 115	COM 231	ENG 231
ENG 232	ENG 241	ENG 242	ENG 261	ENG 262
HUM 115	HUM 120	HUM 122	HUM 130	HUM 211
HUM 212	MUS 110	MUS 112	MUS 113	PHI 215
PHI 240	REL 110	REL 111	REL 211	REL 212
SPA 111	SPA 112	SPA 211	SPA 212	

Social/Behavioral Sciences – 3 hours – select from the following (recommended: 3rd prefix different from above):

ANT 210	ANT 220	ECO 251	ECO 252	GEO 111
HIS 111	HIS 112	HIS 131	HIS 132	POL 120
POL 220	PSY 150	PSY 237	PSY 241	SOC 210
SOC 213	SOC 220			

Mathematics – 4 hours – select from the following (different from above):

MAT 143	MAT 152	MAT 171	MAT 172	MAT 271
MAT 272	MAT 273			

Natural Sciences – 4 hours – select from the following (different from above):

AST 111/111A	AST 151/151A	AST 152/152A	BIO 110	BIO 111
BIO 112	BIO 140/140A	CHM 131/131A	CHM 132	CHM 151
CHM 152	GEL 111	PHY 110/110A	PHY 151	PHY 251
PHY 252	PHY 152			

Total: 49-50 hours

IV: Additional hours and courses for degree/Pre-Major Electives (11–12 hours)

NOTE: For group 3 and group 4, students should select these courses based on their intended major and transfer university. Courses listed in Group 2 may be used to satisfy this group if they are not used to satisfy another group.

Health/Wellness – minimum of 2 hours – select from the following

BIO 155	HEA 110	HEA 120	PED 110	PED 113
PED 117	PED 130	PED 137	PED 152	PED 153
PED 155				

Pre-Major Electives – minimum of 9 hours – select from the following:

ACC 120	ACC 121	ANT 210	ANT 220	ART 111
ART 114	ART 115	ART 121	ART 131	ART 132
ART 140	ART 240	ART 241	AST 111/111A	AST 151/151A
AST 152/152A	BIO 110	BIO 111	BIO 112	BIO 140/140A
BIO 155	BIO 168	BIO 169	BIO 175	BIO 275
BUS 110	BUS 115	BUS 137	CHM 131/131A	CHM 132
CHM 151	CHM 152	CHM 251	CHM 252	CIS 115
CJC 111	CJC 121	CJC 141	COM 231	COM 251
CSC 134	CSC 139	CTS 115	ECO 251	ECO 252
ENG 231	ENG 232	ENG 241	ENG 242	ENG 261
ENG 262	GEL 111	GEO 111	HEA 110	
HEA 112	HEA 120	HIS 111	HIS 112	HIS 131
HIS 132	HIS 226	HUM 115	HUM 120	HUM 122
HUM 130	HUM 170	HUM 211	HUM 212	MAT 143
MAT 152	MAT 171	MAT 172	MAT 263	MAT 271
MAT 272	MAT 273	MAT 280	MAT 285	MUS 110
MUS 112	MUS 113	PED 110	PED 113	PED 117
PED 130	PED 137	PED 152	PED 153	PED 155
PHI 215	PHI 240	PHY 110/110A	PHY 151	PHY 152
PHY 251	PHY 252	POL 120	POL 220	PSY 150
PSY 237	PSY 241	PSY 281	REL 110	REL 111
REL 211	REL 212	SOC 210	SOC 213	SOC 220
SPA 111	SPA 112	SPA 181	SPA 182	SPA 211
SPA 212	SPA 281	SPA 282		

Total: 60–61 hours

NOTE: One semester hour of credit may be included in a 61 SHC associate in arts program of study. The transfer of this hour is not guaranteed.

GRADUATION COURSE REQUIREMENTS
ASSOCIATE OF SCIENCE (A.S.) - DEGREE (A 10 40 0)

The Associate of Science degree will be awarded to students who complete the requirements listed below. Students planning to transfer to science/math based programs within the UNC System should also follow the guidelines in articulation agreements available through advisors and/or consult four-year college catalogs when considering course options.

Program Student Learning Outcomes
Graduates will be able to:
1. Communicate effectively through writing, reading, speaking, and listening through the demonstration of information literacy
2. Analyze problems and make logical conclusions
3. Demonstrate positive interpersonal skills through cooperative learning and group interaction
4. Demonstrate quantitative competencies
5. Demonstrate technology skills
6. Demonstrate an awareness and an understanding of diverse culture and historical perspective
7. Transfer successfully the entire core into a Bachelor's Degree program at any state university in North Carolina to which they are accepted, as well as most other universities and colleges in the United States. Further, students that go beyond the transfer general education component and complete an AA degree or AS degree should be able to transfer as a junior (3rd year) level student.

NOTE: Courses used to satisfy one group cannot be used in another group.

I: Required Courses Local/State Requirement: (4 hours) ACA 122 CIS 110

II: Universal General Education Transfer Component (34 hours)

English Composition – 6 hrs (select both courses): ENG 111 ENG 112

Humanities/Fine Arts – 6 hrs (select 2 courses from 2 different disciplines):

ART 111	ART 114	ART 115	COM 231	ENG 231
ENG 232	MUS 110	MUS 112	PHI 215	PHI 240

Social/Behavioral Sciences – 6 hrs (select 2 courses from 2 different disciplines):

ECO 251	ECO 252	HIS 111	HIS 112	HIS 131
HIS 132	POL 120	PSY 150	SOC 210	

Mathematics – 8 hrs (select 2 courses from the following):

MAT 171	MAT 172	MAT 263	MAT 271

Natural Sciences – 8 hrs (SELECT ONE OPTION):
Option 1: (select 2 courses from the following):
AST 151/151A BIO 110 GEL 111 PHY 110/110A
Option 2: BIO 111 and BIO 112
Option 3: CHM 151 and CHM 152
Option 4: PHY 151 and PHY 152
Option 5: PHY 251 and PHY 252

Total: 38 hours

III: Additional General Education Electives (11 hours)
NOTE: For group 3 and group 4, students should select these courses based on their intended major and transfer university. Courses listed in Group 2 may be used to satisfy this group if they are not used to satisfy another group.

Humanities/Fine Arts/Social/Behavioral Sciences – 3 hours – select 1 course from the following (recommended: 3rd prefix different from above):

ART 111	ART 114	ART 115	COM 231	ENG 231
ENG 232	ENG 241	ENG 242	ENG 261	ENG 262
HUM 115	HUM 120	HUM 122	HUM 130	HUM 211
HUM 212	MUS 110	MUS 112	MUS 113	PHI 215
PHI 240	REL 110	REL 111	REL 211	REL 212
SPA 111	SPA 112	SPA 211	SPA 212	
ANT 210	ANT 220	ECO 251	ECO 252	GEO 111
HIS 111	HIS 112	HIS 131	HIS 132	POL 120
POL 220	PSY 150	PSY 237	SOC 210	SOC 213
SOC 220				

Mathematics – 4 hrs – select 1 course from the following:

PSY 241	PSY 281	
MAT 171	MAT 172	MAT 263
MAT 273	MAT 271	MAT 272

Natural Sciences – 4 hrs – select 1 course from the following:

AST 151/151A	AST 152/152A	BIO 110	BIO 111	BIO 112
BIO 140/140A	CHM 131/131A	CHM 132	CHM 151	CHM 152
GEL 111	PHY 110/110A	PHY 151		
PHY 252	PHY 152	PHY 251		

Total: 49 hours

IV: Additional hours and courses for degree/Pre-Major Electives (11–12 hours)

NOTE: For group 3 and group 4, students should select these courses based on their intended major and transfer university. Courses listed in Group 2 may be used to satisfy this group if they are not used to satisfy another group.

Pre-Major Electives – select from the following:

AST 151/151A	AST 152/152A	BIO 110	BIO 111	BIO 112
BIO 140/140A	BIO 155	BIO 168	BIO 169	BIO 175
BIO 275	CHM 131/131A	CHM 132	CHM 151	CHM 152
CHM 251	CHM 252	CIS 115	CSC 134	CSC 139
CTS 115	GEL 111	MAT 171	MAT 172	MAT 263
MAT 271	MAT 272	MAT 273	MAT 280	MAT 285
PHY 110/110A	PHY 151	PHY 152	PHY 251	PHY 252
SPA 111	SPA 112	SPA 181	SPA 182	SPA 211
SPA 212	SPA 281	SPA 282		

Total: 60–61 hours

NOTE: One semester hour of credit may be included in a 61 SHC associate in arts program of study. The transfer of this hour is not guaranteed.

HEALTH SCIENCES
Associate Degree Nursing - Degree (A 45 11 0)

Curriculum Description
The Associate Degree Nursing curriculum provides knowledge, skills, and strategies to integrate safety and quality into nursing care, to practice in a dynamic environment, and to meet individual needs which impact health, quality of life, and achievement of potential.

Course work includes and builds upon the domains of healthcare, nursing practice, and the holistic individual. Content emphasizes the nurse as a member of the interdisciplinary team providing safe, individualized care while employing evidence-based practice, quality improvement, and informatics.

Graduates of this program are eligible to apply to take the National Council Licensure Examination (NCLEX-RN). Employment opportunities are vast within the global health care system and may include positions within acute, chronic, extended, industrial, and community health care facilities.

Program Student Learning Outcomes
Graduates will be able to:

1. Advocate for patients and families in ways that promote their self-determination, integrity, and ongoing growth as human beings
2. Make judgments in practice, substantiated with evidence that integrates nursing science in the provision of safe, quality care and that promote the health of patients within a family and community context
3. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving identity as a nurse committed to evidence-based practice, caring, advocacy, and safe, quality care for diverse patients within a family and community context
4. Examine the evidence that underlines clinical nursing practice to challenge the status quo, question underlying assumptions, and offer new insights to improve the quality of care for patients, families, and communities

			Class Hours	Lab Hours	Clin. Hours	Credit Hours
I.	**General Education Requirements - 26 Credit Hours**					
	BIO 168	Anatomy & Physiology I	3	3	0	4
	BIO 169	Anatomy & Physiology II	3	3	0	4
	BIO 175	General Microbiology	2	2	0	3
	ENG 111	Writing and Inquiry	3	0	0	3
	ENG 112	Writing/Research in the Disciplines	3	0	0	3
		Humanities Elective	3	0	0	3
	PSY 150	General Psychology	3	0	0	3
	PSY 241	Developmental Psychology	3	0	0	3
II.	**Required Core Courses - 43 Credit Hours**					
	NUR 111	Intro to Health Concepts	4	6	6	8
	NUR 112	Health Illness Concepts	3	0	6	5
	NUR 113	Family Health Concepts	3	0	6	5
	NUR 114	Holistic Health Concepts	3	0	6	5
	NUR 211	Health Care Concepts	3	0	6	5
	NUR 212	Health System Concepts	3	0	6	5
	NUR 213	Complex Health Concepts	4	3	15	10
III.	**Other Major Required Courses - 4 Credit Hours***					
	NUR 214	Nursing Transistion Concepts	3	0	3	4
IV.	**Other Required Hours - Select 1 Credit Hour**					
	ACA 115	Success & Study Skills	0	2	0	1
	ACA-122	College Transfer Success	0	2	0	1
Total Required Hours						**69**

Note: The Associate Degree A 45 11 0 is offered for students entering the program in fall 2009. Students admitted to the program before fall 2009 are in the Associate Degree Nursing Non-Inegrated-Degree A 45 12 0 program. If a student's progress in the program is interrupted after the new curriculum A 45 11 0 begins, that student must re-apply to the A 45 11 0 curriculum.
**For students accepted as advanced placement, pending approval by NCCCS.*

Emergency Medical Science – Degree (A 45 34 0)

Program Student Learning Outcomes
The Emergency Medical Science graduates are prepared to meet the requirements to enter the workforce as paramedics and can obtain an Associate Degree.

			Class Hours	Lab Hours	Clin. Hours	Credit Hours
I.	**General Education Requirements – 15 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	MAT 143	Quantitative Literacy	3	2	0	3
		Humanities Elective	3	0	0	3
	ENG 112	Writing/Research in the Disc	3	0	0	3
		OR				
	ENG 114	Prof Research & Reporting				
	PSY 150	General Psychology	3	0	0	3
		OR				
	SOC 210	Introduction to Sociology				
II.	**Required Core Courses – 52 Credit Hours**					
	EMS 110	EMT	6	6	0	8
	BIO 169	Anatomy and Physiology II	3	3	0	4
	MED 121	Medical Terminology I	3	0	0	3
	MED 122	Medical Terminology II	3	0	0	3
	EMS 122	EMS Clinical Practicum I	0	0	3	1
	EMS 130	Pharmacology	3	3	0	4
	EMS 131	Advanced Airway Management	1	2	0	2
	EMS 160	Cardiology I	1	3	0	2
	EMS 220	Cardiology II	2	3	0	3
	EMS 221	EMS Clinical Practicum II	0	0	6	2
	EMS 231	EMS Clinical Pract III	0	0	9	3
	EMS 240	Patients W/ Special Challenges	1	2	0	2
	EMS 241	EMS Clinical Practicum IV	0	0	12	4
	EMS 250	Medical Emergencies	3	3	0	4
	EMS 260	Trauma Emergencies	1	3	0	2
	EMS 270	Life Span Emergencies	2	3	0	3
	EMS 285	1997SU EMS Capstone	1	3	0	2
III.	**Other Major Required Courses – 8 Credit Hours**					
	EMS 140	Rescue Scene Management	1	3	0	2
	EMS 235	EMS Management	2	0	0	2
	BIO 168	Anatomy and Physiology I	3	3	0	4
IV.	**Other Major Hours – 1 Credit Hour**					
	ACA 115	Success and Study Skills	0	2	0	1
Total Required Hours						**76**

EMS-280, EMS BRIDGING COURSE, WILL BE OFFERED IN THE EMERGENCY MEDICAL SCIENCE PROGRAM

General Occupational Technology - Degree (A 55 28 0)

Curriculum Description
The General Occupational Technology curriculum provides individuals with an opportunity to upgrade their skills and to earn an associate degree by taking courses suited for their occupational interests and/or needs. The curriculum content will be individualized for students according to their occupational interests and needs. A program of study for each student will be selected from associate degree-level courses offered by the College. Graduates will become more effective workers, better qualified for advancements within their field of employment, and become qualified for a wide range of entry-level employment opportunities.

Program Student Learning Outcomes
Graduates will be able to:

1. Communicate effectively through writing, reading, speaking, and listening through the demonstration of information literacy
2. Analyze problems and make logical conclusions
3. Demonstrate positive interpersonal skills through cooperative learning and group interaction
4. Demonstrate quantitative competencies
5. Meet requirements of their chosen tracks within the program of study, such as in order to transfer or be job-ready in health sciences.

				Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**					
	ENG-111	Writing and Inquiry		3	0	3
	MAT-143	Quantitative Literacy		2	2	3
	PSY-150	General Psychology		3	0	3
	Humanities – **Select 3 Credit Hours**					3
		ART-111	Art Appreciation			
		ART-114	Art History Survey I			
		ART-115	Art History Survey II			
		ENG-231	American Literature I			
		ENG-232	American Literature II			
		ENG-241	British Literature I			
		ENG-242	British Literature II			
		ENG-261	World Literature I			
		ENG-262	World Literature II			
		HUM-115	Critical Thinking			
		HUM-120	Cultural Studies			
		HUM-122	Southern Culture			
		HUM-130	Myth in Human Culture			
		HUM-170	The Holocaust			
		HUM-211	Humanities I			
		HUM-212	Humanities II			
		MUS-110	Music Appreciation			
		MUS-112	Introduction to Jazz			
		MUS-113	American Music			
		PHI-215	Philosophical Issues			
		PHI-240	Introduction to Ethics			
		REL-110	World Religions			
		REL-111	Eastern Religions			
		REL-211	Intro to Old Testament			
		REL-212	Intro to New Testament			
	English Option – **Select 3 Credit Hours**					
		ENG 112	Writing/Research in the Disciplines	3	0	3
		COM 231	Public Speaking	3	0	3
II.	**Required Core Courses - 29-31 Credit Hours**					
	BIO 168	Anatomy and Physiology I		3	3	4
	BIO 169	Anatomy and Physiology II		3	3	4
	CIS-110	Introduction to Computers		2	2	3
	MED-121	Medical Terminology I		3	0	3
	MED-122	Medical Terminology II		3	0	3
	PSY-241	Developmental Psych		3	0	3

			Class Hours	Lab Hours	Credit Hours
	Other Major Required Courses - (Take 1 Group)				
	Registered Nurse				
	BIO 111	General Biology I	3	3	4
	BIO 175	General Microbiology	3	3	4
	BIO 155	Nutrition	3	0	3
	Licensed Practical Nurse				
	BIO 175	General Microbiology	3	3	4
	BIO 155	Nutrition	3	0	3
	ISC 121	Environmental Health and Safety	3	0	3
	Surgical Technology				
	BIO 155	Nutrition	3	0	3
	BIO 175	General Microbiology	3	3	4
	ISC 121	Environmental Health and Safety	3	0	3
	Transfer				
	BIO 111	General Biology I	3	3	4
	MAT 152	Statistical Methods I	3	3	4
	SOC 210	Introduction to Sociology	3	0	3
III.	**Other Required Courses - Select 21 Credit Hours**				
	BIO 111	General Biology I	3	3	4
	BIO-155	Nutrition	3	0	3
	BIO-175	General Microbiology	3	3	4
	BIO-175	General Microbiology	2	2	3
	CHM-131	Introduction to Chemistry	3	0	3
	CHM-131A	Introduction to Chemistry Lab	0	3	1
	CTS-130	Spreadsheet	2	2	3
	HEA-110	Personal Health/Wellness	3	0	3
	HEA-112	First Aid & CPR	1	2	2
	HEA-120	Community Health	3	0	3
	ISC-110	Workplace Safety	1	0	1
	ISC-121	Environmental Health & Safety	3	0	3
	MAT 152	Statistical Methods I	3	3	4
	OST-136	Word Processing	2	2	3
	OST-148	Med Coding Billing & Insu	3	0	3
	OST-149	Medical Legal Issues	3	0	3
	PSY-281	Abnormal Psychology	3	0	3
	SOC 210	Introduction to Sociology	3	0	3
	SOC-213	Sociology of the Family	3	0	3
	SOC-220	Social Problems	3	0	3
	SPA-111	Elementary Spanish I	3	0	3
	SPA-181	Spanish Lab 1	0	2	1
	WEB-110	Internet/Web Fundamentals	2	2	3
IV.	**Other Major Hours - Select 1 Credit Hour**				
	ACA-115	Success & Study Skills	0	2	1
	ACA-122	College Transfer Success	0	2	1
Total Required Hours					**66-68**

General Occupational Technology - Diploma (D 55 28 0)

I.	**General Education Requirements - 6 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	PSY 150	General Psychology	3	0	3
II.	**Required Core Courses - 14 Credit Hours**				
	BIO 168	Anatomy and Physiology I	3	3	4
	BIO 169	Anatomy and Physiology II	3	3	4
	CIS 110	Introduction to Computers	2	2	3
	PSY 241	Developmental Psych	3	0	3
III.	**Other Major Required Courses - Select 18 Credit Hours**				
	BIO 111	General Biology I	3	3	4
	BIO 155	Nutrition	3	0	3
	BIO 175	General Microbiology	2	2	3
	CHM 131	Introduction to Chemistry	3	0	3
	CHM 131A	Introduction to Chemistry Lab	0	3	1
	CTS 130	Spreadsheet	2	2	3
	HEA-110	Personal Health/Wellness	3	0	3
	HEA-112	First Aid & CPR	1	2	2
	HEA-120	Community Health	3	0	3
	ISC-110	Workplace Safety	1	0	1
	ISC-121	Environmental Health & Safety	3	0	3
	MAT 152	Statistical Methods I	3	2	4
	MED-121	Medical Terminology I	3	0	3
	MED-122	Medical Terminology II	3	0	3
	OST-136	Word Processing	2	2	3
	OST-148	Med Coding Billing & Insu	3	0	3
	OST-149	Medical Legal Issues	3	0	3
	PSY-281	Abnormal Psychology	3	0	3
	SOC 210	Introduction to Sociology	3	0	3
	SOC-213	Sociology of the Family	3	0	3
	SOC-220	Social Problems	3	0	3
	SPA-111	Elementary Spanish I	3	0	3
	SPA-181	Spanish Lab 1	0	2	1
	SPA-181	Spanish for the Workplace	3	0	3
	WEB-110	Internet/Web Fundamentals	2	2	3
III.	**Other Major Hours - Select 1 Credit Hour**				
	ACA-115	Success & Study Skills	0	2	1
	ACA-122	College Transfer Success	0	2	1
Total Required Hours					**39**

General Occupational Technology - Certificate (C 55 28 0)

I.	**General Education Requirements - 6 Credit Hours**				
	ENG-111	Writing and Inquiry	3	0	3
	PSY 150	General Psychology	3	0	3
II.	**Other Major Required Courses - 11 Credit Hours**				
	BIO-168	Anatomy and Physiology I	3	3	4
	BIO-169	Anatomy and Physiology II	3	3	4
	PSY 241	Developmental Psychology	3	0	3
III.	**Other Major Hours - Select 1 Credit Hour**				
	ACA-115	Success & Study Skills	0	2	1
	ACA-122	College Transfer Success	0	2	1
Total Required Hours					**18**

Licensed Practical Nurse Refresher - Certificate (C 45 39 0)

Curriculum Description
The Licensed Practical Nurse Refresher curriculum provides a refresher course for individuals previously licensed as Practical Nurses and who are ineligible for reentry into nursing practice due to a lapse in licensure for five or more years. *Individuals entering this curriculum must have been previously licensed as a Practical Nurse.*

Course work includes common medical-surgical conditions and nursing approaches to their management, including mental health principles, pharmacological concepts, and safe clinical nursing practice.

Graduates will be eligible to apply for reinstatement of licensure by the North Carolina Board of Nursing. Employment opportunities include hospitals, long term care facilities, clinics, physicians' offices, industry, and community health agencies.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate the ability to protect clients and health care personnel from health and environmental hazards
2. Provide nursing care for clients that incorporates knowledge of expected stages of growth and development and prevention and/or early detection of health problems
3. Provide care that assists with promotion and support of the emotional, mental, and social well-being of clients
4. Assist clients with the management of health alterations
5. Recall and comprehend information and concepts foundational to quality nursing practice
6. Utilize the LPN scope of practice when applying the nursing process to delivery of client care

		Class Hours	Lab Hours	Clin. Hours	Credit Hours
NUR 107	LPN Refresher	9	0	9	12
Total Required Hours					**12**

Practical Nursing - Diploma (D 45 66 0)

Curriculum Description
The Practical Nursing curriculum prepares individuals with the knowledge and skills to provide nursing care to children and adults. Students will participate in assessment, planning, implementing, and evaluating nursing care. Graduates are eligible to apply to take the National Council Licensure Examination (NCLEX-PN) which is required for practice as a Licensed Practical Nurse. Employment opportunities include hospitals, rehabilitation/long term care/home health facilities, clinics, and physicians' offices.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate the ability to protect clients and health care personnel from health and environmental hazards
2. Provide nursing care for clients that incorporates knowledge of expected stages of growth and development and prevention and/or early detection of health problems
3. Provide care that assists with promotion and support of the emotional, mental, and social well-being of clients
4. Assist clients with the management of health alterations
5. Recall and comprehend information and concepts foundational to quality nursing practice
6. Apply the nursing process to the delivery of client care
7. Apply nursing knowledge to perinatal nursing care

			Class Hours	Lab Hours	Clin. Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	PSY 110	Life Span Development	3	0	0	3
II.	**Required Core Courses - 33 Credit Hours**					
	NUR 101	Practical Nursing I	7	6	6	11
	NUR 102	Practical Nursing II	8	0	12	12
	NUR 103	Practical Nursing III	6	0	12	10
III.	**Other Major Required Courses - 8 Credit Hours**					
	BIO 168	Anatomy and Physiology I	3	3	0	4
	BIO 169	Anatomy and Physiology II	3	3	0	4
IV.	**Other Required Hours - 1 Credit Hour**					
	ACA 115	Success & Study Skills	0	2	0	1
Total Required Hours						**48**

Surgical Technology – Diploma (D 45 74 0)

Curriculum Description
The Surgical Technology curriculum prepares individuals to assist in the care of the surgical patient in the operating room and to function as a member of the surgical team.

Students will apply theoretical knowledge to the care of patients undergoing surgery and develop skills necessary to prepare supplies, equipment, and instruments; maintain aseptic conditions; prepare patients for surgery; and assist surgeons during operations. Graduates of this program will be eligible to apply to take the National Board for Surgical Technologist and Surgical Assistance (NBSTSA). Employment opportunities include labor/delivery/emergency departments, inpatient/outpatient surgery centers, dialysis units/facilities, physicians' offices, and central supply processing units.

Program Student Learning Outcomes
Graduates will demonstrate knowledge on the National Board for Surgical Technologist and Surgical Assistance exam which covers perioperative care, equipment sterization and maintence, and basic science.

			Class Hours	Lab Hours	Clin. Hours	Credit Hours
I.	**General Education Requirements – 6 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	CIS 110	Introduction to Computers	2	2	0	3
II.	**Required Core Courses - 33 Credit Hours**					
	SUR 110	Intro to Surgical Technology	3	0	0	3
	SUR 111	Periop Patient Care	5	6	0	7
	SUR 122	Surgical Procedures I	5	3	0	6
	SUR 123	SUR Clinical Practice I	0	0	21	7
	SUR 134	Surgical Procedures II	5	0	0	5
	SUR 135	SUR Clinical Practice II	0	0	12	4
	SUR 137	Prof Success Prep	1	0	0	1
III.	**Other Major Required Courses - 8 Credit Hours**					
	* BIO 163	Basic Anatomy and Physiology	4	2	0	5
	BIO 175	General Microbiology	2	2	0	3
	* BIO 168 and BIO 169 are recommended					
IV.	**Other Required Hours - 1 Credit Hour**					
	ACA 115	Success & Study Skills	0	2	0	1
Total Required Hours						**48**

ASSOCIATE OF APPLIED SCIENCE DEGREE (A.A.S.)

Graduation Requirements
An Associate of Applied Science (A.A.S.) Degree will be awarded to students completing a prescribed two-year program of study with a minimum of a 2.0 grade point average and passing all courses.

DIPLOMA and CERTIFICATE PROGRAMS

A diploma or certificate will be awarded to students completing a prescribed program of study of one year or less with a minimum of a 2.0 grade point average. Degree, diploma, and certificate programs are listed alphabetically in the pages that follow. Upon completion of all courses listed in a program, the student is eligible to receive the program credential.

ASSOCIATE OF APPLIED SCIENCE HUMANITIES/FINE ARTS AND SOCIAL BEHAVIORAL SCIENCE ELECTIVES

Electives should be taken from the following:

Humanities/Fine Arts Elective Choices: ART 111, ART 114, ART 115, COM 231, ENG 231, ENG 232, ENG 241, ENG 242, ENG 261, ENG 262, HUM 115, HUM 120, HUM 122, HUM 130, HUM 211, HUM 212, MUS 110, MUS 112, MUS 113, PHI 215, PHI 240, REL 110, REL 111, REL 211, REL 212, SPA 111, SPA 112, SPA 211, SPA 212

Social/Behavioral Sciences Elective Choices: ANT 210, ANT 220, ECO 251, ECO 252, GEO 111, HIS 111, HIS 112, HIS 131, HIS 132, POL 120, POL 220, PSY 150, PSY 237, PSY 241, SOC 210, SOC 213, SOC 220

Advertising and Graphic Design - Degree (A 30 10 0)

Curriculum Description
The Advertising and Graphic Design curriculum is designed to provide students with knowledge and skills necessary for employment in the graphic design profession which emphasizes design, advertising, illustration, and digital and multimedia preparation of printed and electronic promotional materials.

Students will be trained in the development of concept and design for promotional materials such as newspaper and magazine advertisements, posters, folders, letterheads, corporate symbols, brochures, booklets, preparation of art for printing, lettering and typography, photography, and electronic media.

Graduates should qualify for employment opportunities with graphic design studios, advertising agencies, printing companies, department stores, a wide variety of manufacturing industries, newspapers, and businesses with in-house graphics operations.

Program Student Learning Outcomes
Graduates will be able to:

1. Demonstrate an understanding of the principles and elements of design through hands-on application
2. Demonstrate proficiency in design application, analysis, specification and creation of typographical elements
3. Produce quality illustrations from concept to finished artwork
4. Utilize software applications to creatively manipulate and illustratively build digital images which accomplish the design objectives
5. Prepare and professionally present an effective portfolio and related self-promotional materials
6. Create effective photographic images for the purpose of communicating a message

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
	Humanities Elective		3	0	3
	Social Science Elective		3	0	3
II.	**Required Core Courses - 7 Credit Hours**				
	GRD 110	Typography I	2	2	3
	GRD 280	Portfolio Design	2	4	4
III.	**Required Subject Courses - 22 Credit Hours**				
	DES 135	Principles & Elements of Design I	2	4	4
	GRD 121	Drawing Fundamentals I	1	3	2
	GRD 131	Illustration I	1	3	2
	GRD 141	Graphic Design I	2	4	4
	GRD 142	Graphic Design II	2	4	4
	GRD 151	Computer Design Basics	1	4	3
	GRD 152	Computer Design Tech I	1	4	3
IV.	**Other Major Required Courses - 27 Credit Hours**				
	GRD 132	Illustration II	1	3	2
	GRD 153	Computer Design Tech II	1	4	3
	GRD 160	Photo Fundamentals I	1	4	3
	GRD 161	Photo Fundamentals II	1	4	3
	GRD 162	Photography Portfolio	1	4	3
	GRD 241	Graphic Design III	2	4	4
	GRD 242	Graphic Design IV	2	4	4
	GRD 263	Illustrative Imaging	1	4	3
	GRD 281	Design of Advertising	2	0	2
	4 Semester Hours To Be Selected From The Following:				4
	ART 131	Drawing I	(0-6-3)		
	ART 132	Drawing II	(0-6-3)		
	ART 140	Basic Painting	(0-4-2)		
	BUS 230	Small Business Management	(3-0-3)		
	CIS 110	Introduction to Computers	(2-2-3)		
	GRD 133	Illustration III	(1-3-2)		
	GRD 167	Photographic Imaging I	(1-4-3)		
	GRD 168	Photographic Imaging II	(1-4-3)		
	GRD 210	Airbrush I	(1-2-2)		
	GRD 233	Product Illustration	(1-3-2)		
	WBL 111	Work-Based Learning I	(0-10-1)		
	WBL 121	Work-Based Learning II	(0-10-1)		
	WEB 110	Internet/Web Fundamentals	(2-2-3)		

				Class Hours	Lab Hours	Credit Hours
	WEB 120	Intro Internet Multimedia	(2-2-3)			
	WEB 140	Web Development Tools	(2-2-3)			
V.	**Other Required Hours - 1 Credit Hour**					
	ACA 115	Success & Study Skills		0	2	1
Total Required Hours						**76**

Advertising and Graphic Design – Certificate (C 30 10 0)

Advertising and Graphic Arts Design – 16 Credit Hours

DES 135	Principles & Elements of Design I	(2-4-4)			
GRD 121	Drawing Fundamentals I		1	3	2
GRD 141	Graphic Design I		2	4	4
GRD 151	Computer Design Basics		1	4	3
GRD 160	Photo Fundamentals I		1	4	3

Basic Law Enforcement Training - Certificate

Curriculum Description
Basic Law Enforcement Training (BLET) is designed to give students essential skills required for entry-level employment as law enforcement officers with state, county, or municipal governments, or with private enterprise.

This program utilizes State commission-mandated topics and methods of instruction. General subjects include, but are not limited to, criminal, juvenile, civil, traffic, and alcoholic beverage laws; investigative, patrol, custody, and court procedures; emergency responses; and ethics and community relations.

Students must successfully complete and pass all units of study which include the certification examination mandated by the North Carolina Criminal Justice Education and Training Standards Commission and the North Carolina Sheriffs' Education and Training Standards Commission to receive a certificate.

Program Student Learning Outcomes
Graduates will be able to:

1. Demonstrate an understanding of North Carolina criminal law, juvenile law, motor vehicle law, controlled substance law, civil law and alcoholic beverages law.
2. Demonstrate an understanding of patrol responsibilities that include: dealing with hazardous material, traffic crashes, in-custody transport, crowd management, radio procedures, rapid deployment, vehicle stops, answering calls for service and anti-terrorism.
3. Describe the fundamental communication aspects of law enforcement that include: dealing with victims, domestic violence response, ethics in policing, interacting with individuals with mental illness, crime prevention, and general communication skills.
4. Describe the fundamental tasks in the area of investigations that include: fingerprinting and photography, field note-taking and report writing, criminal investigation procedures, interviewing, dealing with controlled substances and human trafficking.
5. Demonstrate proficiency in the following law enforcement basics: firearms, first aid, driving, physical agility, and subject control arrest techniques.
6. Describe proper procedures for sheriff specific responsibilities that include: civil process, detention duties and court duties.

Basic Law Enforcement Training - 19 Credit Hours (C 55 12 0)

CJC 100	Basic Law Enforcement Training		9	30	19

Broadcasting and Production Technology - Degree (A 30 12 0)

Curriculum Description
Students enrolled in the Broadcasting Production Technology curriculum will develop professional skills in radio, television, audio, video, and related applications.

Training will emphasize speech, script writing, production planning, editing, and post production. Students will also study the development of the broadcasting industry, sales, ethics, law, marketing, and management. Hands-on training and teamwork approaches are essential to the instructional process.

Upon successful completion, students are prepared to enter broadcasting, production, and related industries in a variety of occupations.

Program Student Learning Outcomes

Graduates will be able to:

1. Demonstrate proficiency in operating a video camera in both field and studio modes evaluated by the camera rubric
2. Use basic three point lighting, both in studio and field, according to industry standards
3. Identify legal issues and regulations of broadcast stations as measured by specific assignments and testing questions
4. Write both a one-column radio script and a two-column video script according to industry formatting standards
5. Successfully edit video and audio with a professional non-linear editing software program as evaluated by a specific rubric
6. Identify organization and strategies used by broadcast stations as measured by specific testing questions
7. Operate audio boards and audio production equipment according to industry standards
8. Demonstrate professional speaking and presentation skills for audio and video productions, according to industry standards

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	ENG 112	Writing/Research in the Disc	3	0	0	3
	MAT 143	Quantitative Literacy	2	2	0	3
		OR				
	MAT 152	Statistical Methods I (3-2-4)				
		Humanities Elective	3	0	0	3
		Social Science Elective	3	0	0	3
II.	**Required Core Courses - 13 Credit Hours**					
	BPT 110	Introduction to Broadcasting	3	0	0	3
	BPT 111	Broadcast Law and Ethics	3	0	0	3
	BPT 112	Broadcast Writing	3	2	0	4
	BPT 113	Broadcast Sales	3	0	0	3
III.	**Other Major Required Courses - 31 Credit Hours**					
	Options: Select 6 credit hours from the following courses:					
	BPT 135	Radio Performance I	0	6	0	2
	BPT 136	Radio Performance II	0	6	0	2
	BPT 137	Radio Performance III	0	6	0	2
	BPT 235	TV Performance I	0	6	0	2
	BPT 236	TV Performance II	0	6	0	2
	BPT 237	TV Performance III	0	6	0	2
	Additional Major Required Courses					
	BPT 131	Audio/Radio Production I	2	6	0	4
	BPT 132	Audio/Radio Production II	2	6	0	4
	BPT 140	Introduction to TV Systems	2	0	0	2
	BPT 231	Video/TV Production I	2	6	0	4
	BPT 232	Video/TV Production II	2	6	0	4
	BPT 285	Broadcast Prod Capstone	1	6	0	3
	FVP 227	Multimedia Production	2	3	0	3
	WBL 111	Work-Based Learning I	0	0	10	1
	Options: Select 15 credit hours from the following courses:					
	BPT 115	Public Relations	3	0	0	3
	BPT 121	Broadcast Speech I	2	3	0	3
	BPT 138	Radio Performance IV	0	6	0	2
	BPT 139	Radio Performance V	0	6	0	2
	BPT 210	Broadcast Management	3	0	0	3
	BPT 215	Broadcast Programming	3	0	0	3
	BPT 220	Broadcast Marketing	3	0	0	3
	BPT 238	TV Performance IV	0	6	0	2
	BPT 239	TV Performance V	0	6	0	2
	BPT 241	Broadcast Journalism I	3	2	0	4
	BPT 242	Broadcast Journalism II	3	2	0	4
	BPT 250	Institutional Video	2	3	0	3
	BPT 255	Computer-Based Production	2	3	0	3
	BPT 260	Multi-Track Recording	2	2	0	3
	CIS 110	Introduction to Computers	2	2	0	3

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
	WEB 110	Internet/Web Fundamentals	2	2	0	3
	WBL 121	Work-Based Learning II	0	0	10	1
IV.	**Other Required Hours - 1 Credit Hour**					
	ACA 115	Success & Study Skills	0	2	0	1
Total Required Hours						**75/76**

Broadcasting and Production Technology / Audio Production – Diploma (D 30 12 0 01)

I.	**General Education Requirements - 6 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
		Social Science Elective	3	0	0	3
II.	**Major Required Courses - 37 Credit Hours**					
	BPT 110	Introduction to Broadcasting	3	0	0	3
	BPT 111	Broadcast Law and Ethics	3	0	0	3
	BPT 112	Broadcast Writing	3	2	0	4
	BPT 113	Broadcast Sales	3	0	0	3
	BPT 121	Broadcast Speech I	2	3	0	3
	BPT 131	Audio/Radio Production I	2	6	0	4
	BPT 132	Audio/Radio Production II	2	6	0	4
	BPT 135	Radio Performance I	0	6	0	2
	BPT 136	Radio Performance II	0	6	0	2
	BPT 137	Radio Performance III	0	6	0	2
	BPT 210	Broadcast Management	3	0	0	3
	CIS 110	Introduction to Computers	2	2	0	3
	WBL 111	Work-Based Learning I	0	0	10	1
Total Required Hours						**43**

Broadcasting and Production Technology / Video Production – Diploma (D 30 12 0 02)

I.	**General Education Requirements - 6 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
		Social Science Elective	3	0	0	3
II.	**Major Required Courses - 36 Credit Hours**					
	BPT 110	Introduction to Broadcasting	3	0	0	3
	BPT 111	Broadcast Law and Ethics	3	0	0	3
	BPT 112	Broadcast Writing	3	2	0	4
	BPT 113	Broadcast Sales	3	0	0	3
	BPT 121	Broadcast Speech I	2	3	0	3
	BPT 140	Introduction to TV Systems	2	0	0	2
	BPT 231	Video/TV Production I	2	6	0	4
	BPT 232	Video/TV Production II	2	6	0	4
	BPT 235	TV Performance I	0	6	0	2
	BPT 236	TV Performance II	0	6	0	2
	BPT 237	TV Performance III	0	6	0	2
	CIS 110	Introduction to Computers	2	2	0	3
	WBL 111	Work-Based Learning	0	0	10	1
Total Required Hours						**42**

Broadcasting and Production Technology – Certificate

Basic Audio Production - 18 Credit Hours (C 30 12 0 01)

BPT 121	Broadcast Speech I	2	3	3
BPT 131	Audio/Radio Production I	2	6	4
BPT 132	Audio/Radio Production II	2	6	4
BPT 135	Radio Performance I	0	6	2
BPT 136	Radio Performance II	0	6	2
BPT 260	Multi-Track Recording	2	2	3

Basic Video Production - 17 Credit Hours (C 30 12 0 02)

BPT 140	Introduction to TV Systems	2	0	2
BPT 231	Video/TV Production I	2	6	4
BPT 232	Video/TV Production II	2	6	4
BPT 235	TV Performance I	0	6	2
BPT 236	TV Performance II	0	6	2
BPT 250	Institutional Video	2	3	3

Building Construction Technology – Degree (A 35 14 0)

Curriculum Description

The Building Construction Technology curriculum prepares individuals to apply technical knowledge and skills to residential and commercial building construction and remodeling. Includes instruction in construction equipment and safety; site preparation and layout; construction estimating; print reading; building codes; framing; masonry; heating, ventilation, and air conditioning; electrical and mechanical systems; interior and exterior finishing; and plumbing.

Graduates should qualify for entry-level jobs in construction and trades professions as well as positions in industry and government.

Program Student Learning Outcomes

Graduates will be able to:

1. Demonstrate knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads
2. Utilize design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models
3. Demonstrate knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications
4. Demonstrate knowledge of machines and tools, including their designs, uses, repair, and maintenance
5. Demonstrate knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions
6. Apply the practical application of engineering science and technology, including principles, techniques, procedures, and equipment to design and produce various goods and services

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Core Courses - 21 Credit Hours**				
	ARC 112	Constr. Matls & Methods	3	2	4
	ARC 131	Building Codes	2	2	3
	ARC 132	Specifications & Contract	2	0	2
	BPR 130	Print Reading – Const	3	0	3
	CMT 120	Codes and Inspections	3	0	3
	CST 241	Planning/Estimating I	2	2	3
	SST 140	Green Building & Design Concepts	3	0	3
III.	**Required Subject Courses - 12 Credit Hours**				
	CAR 111	Carpentry I	3	15	8
		OR			
	CST 111	Construction I	3	3	4
		AND			
	CST 112	Construction II	3	3	4

			Class Hours	Lab Hours	Credit Hours
	CST 221	Statics/Structures	3	3	4
IV.	**Other Major Required Hours - 12 Credit Hours**				
	BUS 230	Small Business Management	3	0	3
	CST 131	OSHA/Safety/Certification	2	2	3
	CST 251	Electrical Wiring Systems	2	2	3
	WOL 110	Basic Construction Skills	2	3	3
	Technical Electives (Choose 15 Credit Hours)				
	AHR 151	HVAC Duct Systems I	1	3	2
	AHR 210	Residential Building Code	1	2	2
	AHR 211	Residential System Design	2	2	3
	ALT 120	Renewable Energy Tech.	2	2	3
	ALT 250	Thermal Systems	2	2	3
	ARC 111	Intro to Arch. Technology	1	6	3
	ARC 114	Architectural CAD	1	3	2
	CAB 111	Cabinetmaking I	4	9	7
	CAR 110	Intro to Carpentry	2	0	2
	CAR 112	Carpentry II	3	15	8
	CAR 113	Carpentry III	3	9	6
	CAR 116	Metal Framing	1	3	2
	CAR 150	Concrete Construction	2	9	5
	CIS 110	Introduction to Computers	2	2	3
	CMT 210	Construction Management Fund.	3	0	3
	CMT 212	Total Safety Performance	3	0	3
	CST 211	Construction Surveying	2	3	3
	CST 244	Sustainable Bldg Design	2	3	3
	ELC 113	Residential Wiring	2	6	4
	ELC 114	Commercial Wiring	2	6	4
	MAS 140	Intro to Masonry	1	2	2
	PLU 111	Intro to Basic Plumbing	1	3	2
	PLU 211	Commercial/Ind Plumbing	2	2	3
	SST 110	Intro to Sustainability	3	0	3
	SST 120	Energy Use Analysis	2	2	3
	WLD 112	Basic Welding Processes	1	3	2
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**~~76~~**

Building Construction Technology - Diploma (D 35 14 0)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
		OR			
	ENG 111	Writing and Inquiry (3-0-3)			
	MAT 121	Algebra/Trigonometry I	2	2	3
II.	**Required Core Courses - 21 Credit Hours**				
	ARC 112	Construction Materials & Methods	3	2	4
	ARC 131	Building Codes	2	2	3
	ARC 132	Specifications & Contract	2	0	2
	BPR 130	Print Reading – Construction	3	0	3
	CMT 120	Codes and Inspections	3	0	3
	CST 241	Planning/Estimating I	2	2	3
	SST 140	Green Building & Design Concepts	3	0	3

			Class Hours	Lab Hours	Credit Hours
III.	**Required Subject Courses - 12 Credit Hours**				
	CAR 111	Carpentry I	3	15	8
		OR			
	CST 111	Construction I	3	3	4
		AND			
	CST 112	Construction II	3	3	4
	CST 221	Statics/Structures	3	3	4
IV.	**Other Major Required Hours - 6 Credit Hours**				
	CST 131	OSHA/Safety/Certification	2	2	3
	WOL 110	Basic Construction Skills	2	3	3
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**46**

Building Construction Technology – Certificate (C 35 14 0)

Basic Carpentry - 17 Credit Hours (C 35 14 001)				
BPR 130	Print Reading – Construction	3	0	3
CAR 111	Carpentry I	3	15	8
ARC 131	Building Codes	2	2	3
CST 241	Planning / Estimating I	2	2	3
Advanced Carpentry - 14 Credit Hours (C 35 14 002)				
BUS 230	Small Business Management	3	0	3
CAR 112	Carpentry II	3	15	8
CST 131	OSHA/Safety/Certification	2	2	3
Basic Plumbing - 14 Credit Hours (C 35 14 003)				
BPR 130	Print Reading – Construction	3	0	3
CST 131	OSHA/Safety/Certification	2	2	3
CST 241	Planning / Estimating I	2	2	3
PLU 111	Introduction to Basic Plumbing	1	3	2
PLU 211	Commercial/Industrial Plumbing	2	2	3
Basic Air Conditioning – 13 Credit Hours (C 35 14 0 04)				
AHR 151	HVAC Duct Systems I	1	3	2
AHR 210	Residential Building Code	1	2	2
AHR 211	Residential System Design	2	2	3
BPR 130	Print Reading – Construction	3	0	3
CST 131	OSHA/Safety/Certification	2	2	3
General Contractor Licensing Preparation - 16 Credit Hours (C 35 14 005)				
ARC 112	Construction Materials and Methods	3	2	4
ARC 131	Building Codes	2	2	3
BPR 130	Print Reading – Construction	3	0	3
CST 131	OSHA/Safety/Certification	2	2	3
CST 241	Planning / Estimating I	2	2	3
Basic Construction – 15 Credit Hours (C 35 14 0 08)				
BPR 130	Print Reading – Construction	3	0	3
CAR 110	Introduction to Carpentry	2	0	2
CST 251	Electrical Wiring Systems	2	2	3
MAS 140	Introduction to Masonry	1	2	2
PLU 111	Introduction to Basic Plumbing	1	3	2
WOL 110	Basic Construction Skills	2	3	3

		Class Hours	Lab Hours	Credit Hours
Elementary Carpentry – 14 Credit Hours (C 35 14 0 09)				
BPR 130	Print Reading – Construction	3	0	3
CAR 111	Carpentry I	3	15	8
WOL 110	Basic Construction Skills	2	3	3
Sustainable Building Design – 18 Credit Hours (C 35 14 0 10)				
ARC 111	Introduction to Arch Technology	1	6	3
ARC 112	Construction Materials & Methods	3	2	4
ARC 131	Building Codes	2	2	3
ARC 114	Architectural CAD	1	3	2
SST 110	Introduction to Sustainability	3	0	3
SST 140	Green Building & Design Concepts	3	0	3
Construction Management – 15 Credit Hours (C 35 14 0 11)				
BUS 230	Small Business Management	3	0	3
CMT 120	Codes and Inspections	3	0	3
CMT 210	Construction Management Fund.	3	0	3
CMT 212	Total Safety Performance	3	0	3
CST 131	OSHA/Safety/Certification	2	2	3

Business Administration – Degree (A 25 12 0)

Curriculum Description
The Business Administration curriculum is designed to introduce students to the various aspects of the free enterprise system. Students will be provided with a fundamental knowledge of business functions, processes, and an understanding of business organizations in today's global economy.

Course work includes business concepts such as accounting, business law, economics, management, and marketing. Skills related to the application of these concepts are developed through the study of computer applications, communication, team building, and decision making.

Through these skills, students will have a sound business education base for lifelong learning. Graduates are prepared for employment opportunities in government agencies, financial institutions, and large to small business or industry.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate an understanding of the role of accounting and finance in the management process
2. Discuss various economic principles and articulate the impact that those principles have on domestic and global economies
3. Explain the role of marketing in the business environment and apply core marketing principles to the development of business strategy and decision-making process
4. Review the impact of leadership, employee behavior, group dynamics, and the team-based approach in defining organizational culture
5. Define the ethical and legal framework in which business decisions are made

		Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**			
ECO 252	Principles of Macroeconomics	3	0	3
ENG 111	Writing & Inquiry	3	0	3
	Humanities Elective	3	0	3
COM 231	Public Speaking	3	0	3
	Or			
ENG 112	Writing/Research in the Disciplines	3	0	3
MAT 110	Mathematical Measurement and Literacy	2	2	3
	Or			
MAT 143	Quantitative Literacy	2	2	3
	Or			
MAT 152	Statistical Methods I	3	2	4

			Class Hours	Lab Hours	Credit Hours
II.	**Required Core Courses - 19 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	BUS 115	Business Law I	3	0	3
	BUS 137	Principles of Management	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	ECO 251	Principles of Microeconomics	3	0	3
	MKT 120	Principles of Marketing	3	0	3
III.	**Other Major Required Courses - 32/33 Credit Hours**				
	ACC 121	Principles of Managerial Accounting	3	2	4
	BUS 110	Introduction to Business	3	0	3
	BUS 125	Personal Finance	3	0	3
	BUS 153	Human Resource Management	3	0	3
	BUS 225	Business Finance	2	2	3
	BUS 260	Business Communication	3	0	3
	CTS 130 Spreadsheet		2	2	3
	WBL 110	World of Work	1	0	1
	Elective (choose a Track) (9-10 credit hours)				
	ACCOUNTING TRACK				
	ACC 129	Individual Income Taxes	2	2	3
	ACC 180	Practices in Bookkeeping	3	0	3
	ACC 220	Intermediate Accounting	3	2	4
	MARKETING TRACK				
	MKT 123	Fundamentals of Selling	3	0	3
	MKT 220	Advertising & Sales Promotion	3	0	3
	MKT 223	Customer Service	3	0	3
	Or				
	WEB 140	Web Development Tools	2	2	3
	ENTREPRENEURSHIP TRACK				
	BUS 139	Entrepreneurship I	3	0	3
	ETR 220	Innovation and Creativity	3	0	3
	BUS 230	Small Business Management	3	0	3
	TECHNOLOGY TRACK				
	CTS 125	Presentation Graphics	2	2	3
	DBA 110	Database Concepts	2	3	3
	WEB 140	Web Development Tools	2	2	3
	GENERAL BUSINESS TRACK				
	ACC 129	Individual Income Tax	2	2	3
	BUS 253	Leadership and Management Skills	3	0	3
	BUS 230	Small Business Management	3	0	3
	**OST 131 may be chosen if student needs typing skills				
	HOSPITALITY TRACK *(Pending SACSCOC approval)*				
	HRM 110	Introduction to Hospitality and Tourism	3	0	3
	MKT 223	Customer Service	3	0	3
	HRM 140	Legal Issues - Hospitality	3	0	3
	Or				
	HRM 150	Training for Hospitality	3	0	3
	IV.	**Other Required Hours - 1 Credit Hour**			
	ACA 115	Success and Study Skills	0	2	1
Total Required Hours					**67/69**

Business Administration - Diploma (D 25 12 0)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education - 9 Credit Hours**				
	ECO 252	Principles of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
II.	**Required Core Courses - 19 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	BUS 115	Business Law I	3	0	3
	BUS 137	Principles of Management	3	0	3
	MKT 120	Principles of Marketing	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	ECO 251	Principles of Microeconomics	3	0	3
III.	**Other Major Required Courses - 19 Credit Hours**				
	ACC 121	Principles of Managerial Accounting	3	2	4
	BUS 110	Introduction to Business	3	0	3
	BUS 125	Personal Finance	3	0	3
	BUS 225	Business Finance	2	2	3
	CTS 130	Spreadsheet	2	2	3
		Elective (Choose one)			
		BUS 153 Human Resource Management	3	0	3
		BUS 253 Leadership and Management Skills	3	0	3
		BUS 260 Business Communication	3	0	3
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**48**

Business Administration – Certificate

Business Administration - 15 Credit Hours (C 25 12 0)

		Class Hours	Lab Hours	Credit Hours
CIS 110	Introduction to Computers	2	2	3
BUS 110	Introduction to Business	3	0	3
	Or			
BUS 125	Personal Finance	3	0	3
BUS 115	Business Law I	3	0	3
BUS 137	Principles of Management	3	0	3
MKT 120	Principles of Marketing	3	0	3

Business Administration – Bookkeeping Certificate

Bookkeeping - 14 Credit Hours (C 25 12 0 01)

		Class Hours	Lab Hours	Credit Hours
ACC 120	Principles of Financial Accounting	3	2	4
ACC 121	Principles of Managerial Accounting	3	2	4
ACC 180	Practices in Bookkeeping	3	0	3
CIS 110	Introduction to Computers	2	2	3

Business Administration - Degree (A 25 12 A)
Banking and Finance Concentration

Curriculum Description
Banking and Finance is a concentration under the curriculum title of Business Administration. This curriculum is designed to prepare individuals for a career with various financial institutions and other businesses.

Course work includes principles of banking, money and banking, lending fundamentals, banking and business law, and practices in the areas of marketing, management, accounting, and economics.

Graduates should qualify for a variety of entry-level jobs in banking and finance. Also available are employment opportunities with insurance, brokerage and mortgage companies, and governmental lending agencies.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate the ability to use financial statements to describe strengths and weaknesses of a financial institution
2. Discuss the aspects of the direct and indirect lending process of financial institutions
3. Demonstrate knowledge of the functions of the Federal Open Market Committee (FOMC) in regards to U.S. monetary policy
4. Explain how sales, marketing, and customer service help build customer relationships in the banking industry
5. Evaluate the ethical issues and dilemmas related to banking and finance
6. Demonstrate familiarity with the major laws and regulations impacting financial markets and securities

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ECO 252	Principles of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
		Humanities elective	3	0	3
	COM 231	Public Speaking[1]	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		OR			
	MAT 143	Quantitative Literacy	2	2	3
		OR			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 19 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	CIS 110	Introduction to Computers	2	2	3
	BUS 115	Business Law I	3	0	3
	BUS 137	Principles of Management	3	0	3
	ECO 251	Principles of Microeconomics	3	0	3
	MKT 120	Principles of Marketing	3	0	3
III.	**Required Concentration Courses - 12 Credit Hours**				
	BAF 110	Principles of Banking	3	0	3
	BAF 131	Fund. Of Bank Lending	3	0	3
	BAF 141	Law and Banking: Principles	3	0	3
	BAF 222	Money and Banking	3	0	3
IV.	**Other Major Required Courses - 22/23 Credit Hours**				
	ACC 121	Principles of Managerial Accounting	3	2	4
	CTS 130	Spreadsheet	2	2	3
	BUS 110	Introduction to Business	3	0	3
	BUS 125	Personal Finance	3	0	3
	BUS 225	Business Finance	2	2	3
	BUS 260	Business Communication	3	0	3
	WBL 110	World of Work	1	0	1
		Elective (Choose One)			
		ACC 180 Practices in Bookkeeping	3	0	3
		ACC 129 Individual Income Taxes	2	2	3
		CIS 165 Desktop Publishing I	2	2	3
		CTS 125 Presentation Graphics	2	2	3
		OST 131 Keyboarding	1	2	2

			Class Hours	Lab Hours	Credit Hours
	OST 136	Word Processing	2	2	3

V. Other Required Hours - 1 Credit Hour

ACA 115	Success & Study Skills	0	2	1

Total Required Hours **69/71**

1. This course may be substituted with ENG 112 Argument Based Research

Business Administration - Degree (A 25 12 F)
Marketing and Retailing Concentration

Curriculum Description

Marketing and Retailing is a concentration under the curriculum title of Business Administration. This curriculum is designed to provide students with fundamental skills in marketing and retailing.

Course work includes marketing, retailing, merchandising, selling, advertising, computer technology, and management.

Graduates should qualify for marketing positions within manufacturing, retailing, and service organizations.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ECO 252	Principles of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
		Humanities elective	3	0	3
	COM 231	Public Speaking[1]	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 19 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	BUS 115	Business Law I	3	0	3
	BUS 137	Principles of Management	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	ECO 251	Principles of Microeconomics	3	0	3
	MKT 120	Principles of Marketing	3	0	3
III.	**Required Concentration Courses - 15 Hours**				
	+MKT 122	Visual Merchandising	3	0	3
	MKT 123	Fundamentals of Selling	3	0	3
	MKT 220	Advertising & Sales Promotion	3	0	3
	+MKT 225	Marketing Research	3	0	3
	+MKT 226	Retail Applications	3	0	3
IV.	**Other Major Required Courses - 20 Credit Hours**				
	ACC 121	Principles of Managerial Accounting	3	2	4
	BUS 110	Introduction to Business	3	0	3
	BUS 125	Personal Finance	3	0	3
	BUS 260	Business Communication	3	0	3
	CTS 130	Spreadsheet	2	2	3
	MKT 223	Customer Service	3	0	3
	WBL 110	World of Work	1	0	1
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1

Total Required Hours **70/71**

1. This course may be substituted with ENG 112 Argument-Based Research.

+ Conducted at Cleveland Community College

Collision Repair and Refinishing Technology – Diploma (D 60 13 0)

Curriculum Description
The Collision Repair and Refinishing Technology curriculum prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. Includes instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.

Program Student Learning Outcomes
Graduates will be able to:

1. Understand and apply all safety, environmental and industry standards as related to collision repair
2. Demonstrate knowledge of materials available to technicians for refinishing of automobiles
3. Demonstrate the ability to use spray equipment to match modern auto finishes
4. Demonstrate the ability to figure the cost of materials, parts, and labor for estimating purposes
5. Understand automotive electrical systems and how to diagnose problems

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
		OR			
	ENG 111	Writing and Inquiry (3-0-3)			
	MAT 110	Math Measurement & Literacy	2	2	3
II.	**Required Core Courses - 5 Credit Hours**				
	TRN 170	PC Skills for Transp	1	2	2
	TRN 180	Basic Welding for Transp	1	4	3
II.	**Required Subject Courses - 15 Credit Hours**				
	AUB 111	Painting & Refinishing I	2	6	4
	AUB 112	Painting & Refinishing II	2	6	4
	AUB 121	Non-Structural Damage I	1	4	3
	AUB 131	Structural Damage I	2	4	4
III.	**Other Major Required Courses - 22 Credit Hours**				
	AUB 114	Special Finishes	1	2	2
	AUB 122	Non-Structural Damage II	2	6	4
	AUB 132	Structural Damage II	2	6	4
	AUB 136	Plastics and Adhesives	1	4	3
	AUB 150	Automotive Detailing	1	3	2
	AUB 160	Body Shop Operations	1	0	1
	AUB 162	Autobody Estimating	1	2	2
	TRN 180A	Basic Welding for Transp Lab	0	3	1
	CIS 110	Introduction to Computers	2	2	3
		OR			
	BUS 230	Small Business Management (3-0-3)			
Total Required Hours					**48**

Collision Repair and Refinishing Technology – Certificates

Basic Collision Repair and Refinishing – 15 Credit Hours (C 60 13 0 01)

AUB 111	Painting & Refinishing I	2	6	4
AUB 121	Non-Structural Damage I	1	4	3
AUB 131	Structural Damage I	2	4	4
TRN 180	Basic Welding for Transp	1	4	3
TRN 180A	Basic Welding for Transp Lab	0	3	1

Advanced Collision Repair and Refinishing – 12 Credit Hours (C 60 13 0 02)

AUB 112	Painting and Refinishing II	2	6	4
AUB 122	Non-Structural Damage II	2	6	4
AUB 132	Structural Damage II	2	6	4

Computer Engineering Technology – Degree (A 40 16 0)

Curriculum Description

The Computer Engineering Technology curriculum prepares the students to use basic engineering principles and technical skills for installing, servicing, and maintaining computers, peripherals, networks, and microprocessor and computer controlled equipment. Includes instruction in mathematics, computer electronics and programming, prototype development and testing, systems installation and testing, solid state and microminiature circuitry, peripheral equipment, and report preparation. Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

Program Student Learning Outcomes

Graduates will be able to:

1. Understand and mathematically demonstrate basic engineering-related laws and theories (e.g.. Ohm's Law, Kirchhoff's Laws)
2. Demonstrate competency with field test instruments (e.g.. Digital Multimeter, Oscilloscope)
3. Demonstrate competency with semiconductor applications (e.g.. Transistor theory, sensors, I.C.'s)
4. Understand and demonstrate basic digital logic design and troubleshooting (e.g.. Gate logic, digital devices)
5. Demonstrate competency with automation technology (e.g.. PLC programming, Microcontrollers)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Dis	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
	Technical Core Courses – 16 Credit Hours				
	ELC 138	DC Circuit Analysis	3	3	4
	ELC 139	AC Circuit Analysis	3	3	4
	ELN 131	Analog Electronics I	3	3	4
	ELN 133	Digital Electronics	3	3	4
II.	**Program Major Required Courses - 12 Credit Hours**				
	CET 111	Computer Upgrade/Repair I	2	3	3
		OR			
	CTS 120	Hardware/Software Support (2-3-3)			
	ELN 232	Introduction to Microprocessors	3	3	4
	CET 161	Procedural Programming	2	3	3
		OR			
	CSC 134	C++ Programming (2-3-3)			
		OR			
	CSC 139	Visual BASIC Programming (2-3-3)			
	ELN 152	Fabrication Techniques	1	3	2
III.	**Other Major Required Courses - 30/31 Credit Hours**				
	Take all of the following courses:				
	CIS 110	Intro to Computers	2	2	3
	EGR 110	Intro to Engineering Tech	1	2	2
	EGR 285	Design Project	0	4	2
	ELC 127	Software for Technicians	1	3	2
	ELC 128	Intro to PLC	2	3	3
	Automation				
	Choose one of the following courses:				
	ATR 211	Robot Programming	2	3	3
	ATR 215	Sensors and Transducers (2-3-3)			
	ATR 218	Work Cell Integration (2-3-3)			

			Class Hours	Lab Hours	Credit Hours
	System Design				
	Choose one of the following courses:				
	CET 242	High Performance Comp (2-3-3)			
	CET 245	Internet Servers (2-3-3)			
	CET 251	Software Eng Principles	3	3	4
	ELN 233	Microprocessor Systems (3-3-4)			
	Mathematics				
	Choose one of the following courses:				
	MAT 122	Algebra/Trigonometry II	2	2	3
	MAT 152	Statistical Methods I (3-2-4)			
	MAT 172	Precalculus Trigonometry (3-2-4)			
	MAT 271	Calculus I (3-2-4)			
	Physics I				
	Choose one of the following courses:				
	PHY 131	Physics-Mechanics	3	2	4
	PHY 151	College Physics I (3-2-4)			
	Physics II				
	Choose one of the following courses:				
	PHY 132	Physics-Elect & Magnetism	3	2	4
	PHY 152	College Physics II (3-2-4)			
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**74/76**

Computer Engineering Technology – Diploma (D 40 16 0)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 9 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
		OR			
	ENG 111	Writing and Inquiry (3-0-3)			
	MAT 110	Math Measurement and Literacy	2	2	3
		Social Science Elective	3	0	3
II.	**Technical Core Courses - 16 Credit Hours**				
	ELC 138	DC Circuit Analysis	3	3	4
	ELC 139	AC Circuit Analysis	3	3	4
	ELN 131	Analog Electronics I	3	3	4
	ELN 133	Digital Electronics	3	3	4
III.	**Program Major Required Courses - 8 Credit Hours**				
	CET 111	Computer Upgrade/Repair I	2	3	3
		OR			
	CTS 120	Hardware/Software Support (2-3-3)			
	CET 161	Procedural Programming	2	3	3
	ELN 152	Fabrication Techniques	1	3	2
IV.	**Other Major Courses - 7 Credit Hours**				
	Take all of the following courses:				
	CIS 110	Introduction to Computers	2	2	3
	ELC 127	Software for Technicians	1	3	2
	EGR 110	Introduction to Engineering Tech	1	2	2
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**41**

Computer Engineering Technology – Certificate (C 40 16 0)

CET 111	Computer Upgrade/Repair I	2	3	3
	OR			
CTS 120	Hardware/Software Support (2-3-3)			
ELC 138	DC Circuit Analysis	3	3	4
ELC 139	AC Circuit Analysis	3	3	4
ELN 152	Fabrication Techniques	1	3	2
EGR 110	Introduction to Engineering Tech	1	2	2
Total Required Hours				**15**

Computer Information Technology - Degree (A 25 26 0)

Curriculum Description

The Computer Information Technology curriculum is designed to prepare graduates for employment with organizations that use computers to process, manage, and communicate information. This is a flexible curriculum that can be customized to meet community information systems needs.

Course work will develop a student's ability to communicate complex technical issues related to computer hardware, software, and networks in a manner that computer users can understand. Classes cover computer operations and terminology, operating systems, database, networking, security, and technical support.

Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies which rely on computer systems to manage information. Graduates should be prepared to sit for industry-recognized certification exams.

Program Student Learning Outcomes

Graduates will be able to:

1. Apply appropriate problem-solving techniques to achieve solutions to issues related to information technology.
2. Perform basic technical support functions.
3. Demonstrate the ability to utilize current application packages and operating systems.
4. Demonstrate the ability to communicate technical issues related to computer information technology.
5. Identify legal, ethical, social, and security issues related to computer information technology.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ECO 252	Principles of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
		Humanities Elective	3	0	3
	COM 231	Public Speaking	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 36 Credit Hours**				
	BUS 110	Introduction to Business	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	CIS 115	Introduction to Program & Logic	2	3	3
	CTS 120	Hardware/Software Support	2	3	3
	CTS 285	Systems Analysis & Design	3	0	3
	CTS 289	System Support Project	1	4	3
	DBA 110	Database Concepts	2	3	3
	NOS 110	Operating System Concepts	2	3	3
	NOS 130	Windows Single User	2	2	3
	NOS 230	Windows Admin I	2	2	3
	NET 125	Networking Basics	1	4	3
	SEC 110	Security Concepts	2	2	3
III.	**Other Major Required Courses - 13 Credit Hours**				
	CTS 155	Tech Support Functions	2	2	3
	CTS 220	Adv Hard/Software Support	2	3	3
	CTS 217	Computer Training/Support	2	2	3
	WBL 110	World of Work	1	0	1

			Class Hours	Lab Hours	Credit Hours
	Elective (Choose one of the following courses)				3
	NET 126	Routing Basics			
	CSC 134	C++ Programming			
	CSC 139	Visual Basic Programming			
	WEB 110	Internet/Web Fundamentals			
	WEB 115	Web Markup and Script			
	SEC 150	Secure Communications			
	SEC 160	Secure Administration I			
	NOS 120	Linux/Unix Single User			
	WEB 210	Web Design			
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**65/66**

Computer Information Technology - Certificate

Computer Information Technology - 15 Credit Hours (C 25 26 0)

		Class Hours	Lab Hours	Credit Hours
CIS 110	Introduction to Computers	2	2	3
NOS 110	Operating System Concepts	2	3	3
NET 125	Networking Basics	1	4	3
DBA 110	Database Concepts	2	3	3
SEC 110	Security Concepts	2	2	3

Computer-Integrated Machining - Diploma (D 50 21 0)

Curriculum Description

The Computer-Integrated Machining curriculum prepares students with the analytical, creative and innovative skills necessary to take a production idea from an initial concept through design, development and production, resulting in a finished product.

Coursework may include manual machining, computer applications, engineering design, computer-aided drafting (CAD), computer-aided machining (CAM), blueprint interpretation, advanced computerized numeric control (CNC) equipment, basic and advanced machining operations, precision measurement and high-speed multi-axis machining.

Graduates should qualify for employment as machining technicians in high-tech manufacturing, rapid-prototyping and rapid-manufacturing industries, specialty machine shops, fabrication industries, and high-tech or emerging industries such as aerospace, aviation, medical, and renewable energy, and to sit for machining certification examinations.

Program Student Learning Outcomes

Graduates will be able to:

1. Understand and evaluate a basic blueprint using specified NIMS tolerances and industry standards
2. Identify work orders and write out or modify as needed correctly, calculate information needed to machine parts to correct specs
3. Locate the part location information on computer and enter parts in the CNC machine, and complete a CNC machine part
4. Construct input milling by properties, and simulate cutting operation of 3-D surface and solid modeling features by computer-assisted methods
5. Evaluate machining process during cutting operation and adjust initial variable settings to achieve maximum results
6. Create a multiple part mechanism which requires both CNC milling and turning to manufacture a capstone

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
		OR			
	ENG 111	Writing and Inquiry (3-0-3)			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
		OR			
	MAT 110	Math Measurement & Literacy	2	2	3

			Class Hours	Lab Hours	Credit Hours
II.	**Required Subject Courses – 12 Credit Hours**				
	BPR 111	Print Reading	1	2	2
	MAC 121	Introduction to CNC	2	0	2
	MAC 141	Machine Applications I	2	6	4
	MAC 142	Machine Applications II	2	6	4
III.	**Other Major Required Courses – 30 Credit Hours**				
	BPR 121	Blueprint Reading: Mechanical	1	2	2
	MAC 122	CNC Turning	1	3	2
	MAC 124	CNC Milling	1	3	2
	MAC 141A	Machining Applications I Lab	0	6	2
	MAC 142A	Machining Applications II Lab	0	6	2
	MAC 151	Machining Calculations	1	2	2
	MAC 222	Advanced CNC Turning	1	3	2
	MAC 224	Advanced CNC Milling	1	3	2
	MAC 233	Applications in CNC Machining	2	12	6
	MEC 231	Computer Aided Manufacturing I	1	4	3
		Technical Elective – Choose 5 Credit Hours			5
		CIS 110 Intro to Computers (2-2-3)			
		DFT 121 Intro to GD&T (1-2-2)			
		DFT 154 Intro Solid Modeling (2-3-3)			
		DFT 231 Jig & Fixture Design (1-2-2)			
		EGR 110 Intro to Engineering Technology (1-2-2)			
		ISC 121 Environmental Health and Safety (3-0-3)			
		MAC 114 Intro to Metrology (2- 0-2)			
		MEC 181 Introduction to CIM (2-0-2)			
		MEC 232 Computer Aided Manufacturing II (1-4-3)			
Total Required Hours					**48**

Computer-Integrated Machining - Certificate (C 50 21 0)

Machining Certificate - 12 Hours (C 50 21 001)

		Class Hours	Lab Hours	Credit Hours
MAC 141	Machine Applications I	2	6	4
MAC 141A	Machining Applications I Lab	0	6	2
MAC 142	Machine Applications II	2	6	4
MAC 142A	Machining Applications II Lab	0	6	2

CNC Certificate - 16 Hours (C 50 21 002)

MAC 121	Introduction to CNC	2	0	2
MAC 122	CNC Turning	1	3	2
MAC 124	CNC Milling	1	3	2
MAC 222	Advanced CNC Turning	1	3	2
MAC 224	Advanced CNC Milling	1	3	2
MAC 233	Applications in CNC Machining	2	12	6

Motorsports Machining Certificate - 16 Hours (C 50 21 003)

MAC 141	Machine Applications I	2	6	4
MAC 141A	Machining Applications I Lab	0	6	2
BPR 111	Print Reading	1	2	2
MAC 122	CNC Turning	1	3	2
MAC 124	CNC Milling	1	3	2
MAC 121	Introduction to CNC	2	0	2
MAC 151	Machining Calculations	1	2	2

Computer Programming - Degree (A 25 13 0)

Curriculum Description
The Computer Programming curriculum prepares individuals for employment as computer programmers and related positions through study and applications in computer concepts, logic, programming procedures, languages, generators, operating systems, networking, data management, and business operations.

Students will solve business computer problems through programming techniques and procedures, using appropriate languages and software. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve.

Graduates should qualify for employment in business, industry, and government organizations as programmers, programmer trainees, programmer/analysts, computer operators, systems technicians, or database specialists.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate an understanding of programming concepts and techniques.
2. Demonstrate an understanding of the role selected programming languages have related to other industry tools and technologies.
3. Develop programs using selected programming languages.
4. Demonstrate an advanced understanding of selected programming languages syntax and structure.
5. Utilize industry related programming tools and techniques to develop highly sophisticated programs.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ECO 252	Prin of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
		Humanities Elective	3	0	3
	COM 231	Public Speaking	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 42 Credit Hours**				
	BUS 110	Introduction to Business	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	CIS 115	Intro to Prog and Logic	2	3	3
	CSC 134	C++ Programming	2	3	3
	CSC 234	Advanced C++ Programming	2	3	3
	CTS 285	Systems Analysis and Design	3	0	3
	CSC 289	Programming Capstone Project	1	4	3
	DBA 110	Database Concepts	2	3	3
	NET 125	Networking Basics	1	4	3
	NOS 110	Operating System Concepts	2	3	3
	SEC 110	Security Concepts	2	2	3
	NOS 120	Linux/UNIX Single User	2	2	3
	CSC 139	Visual Basic Programming	2	3	3
	CSC 239	Advanced Visual Basic Programming	2	3	3
III.	**Other Major Required Hours - 10 Credit Hours**				
	WBL 110	World of Work	1	0	1
	WEB 182	PHP Programming	2	2	3
	WEB 250	Database Driven Websites	2	2	3
	WEB 115	Web Markup and Scripting	2	2	3
IV.	**Other Required Hour - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**68/69**

Cosmetology - Degree (A 55 14 0)

Curriculum Description
The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics.

Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate proficiency in professional imaging, hair design, skin care, and nail care
2. Demonstrate an understanding of chemical processes
3. Demonstrate an understanding of multicultural practices
4. Demonstrate an understanding of sanitation/infection control
5. Demonstrate an understanding of business and computer principles

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	ENG 112	Writing/Research in the Disc	3	0	0	3
	MAT 110	Math Measurement & Literacy	2	2	0	3
		Humanities Elective	3	0	0	3
		Social Science Elective	3	0	0	3
II.	**Required Core Courses - 34 Credit Hours**					
	COS 111	Cosmetology Concepts I	4	0	0	4
	COS 112	Salon I	0	24	0	8
	COS 113	Cosmetology Concepts II	4	0	0	4
	COS 114	Salon II	0	24	0	8
	COS 115	Cosmetology Concepts III	4	0	0	4
	COS 116	Salon III	0	12	0	4
	COS 117	Cosmetology Concepts IV	2	0	0	2
III.	**Other Major Required Courses - 24 Credit Hours**					
	CIS 110	Introduction to Computers	2	2	0	3
	COS 118	Salon IV	0	21	0	7
	COS 223	Contemp Hair Coloring	1	3	0	2
	COS 225	Adv Contemp Hair Coloring	1	3	0	2
		Computer Related Elective **(choose one)**:				3
		CTS 130 Spreadsheet				
		DBA 110 Database Concepts				
		WEB 110 Internet/Web Fundamentals				
	Options: Select 7 credit hours from the following courses:					
	BUS 115	Business Law I	3	0	0	3
	BUS 137	Principles of Management	3	0	0	3
	BUS 230	Small Business Management	3	0	0	3
	BUS 253	Leadership & Mgt Skills	3	0	0	3
	COS 119	Esthetics Concepts I	2	0	0	2
	COS 121	Manicure/Nail Technology I	4	6	0	6
	COS 222	Manicure/Nail Technology II	4	6	0	6
	COS 224	Trichology and Chemistry	1	3	0	2
	COS 240	Contemporary Design	1	3	0	2
	COS 250	Computerized Salon Ops	1	0	0	1
	WBL 111	Work-Based Learning I	0	0	10	1**
	WBL 115	Work-Based Learning Seminar I	1	0	0	1**
IV.	**Other Required Hours - 1 Credit Hour**					
	ACA 115	Success & Study Skills	0	2	0	1
Total Required Hours						**74**

****NOTE: Any Cosmetology Student who decides to leave with the 1200 hour apprenticeship criteria, receives their apprentice license, and satisfies the North Carolina Board of Cosmetic Arts with the appropriate documented hours to receive their cosmetology license may then have their last COS practical class added to their transcript through the WBL 111 and WBL 115 with the documented 1500 hour criteria.**

Cosmetology - Diploma (D 55 14 0)

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**					
	ENG 101	Applied Communications I	3	0	0	3
	MAT 110	Math Measurement & Literacy	2	2	0	3
II.	**Required Core Courses - 34 Credit Hours**					
	COS 111	Cosmetology Concepts I	4	0	0	4
	COS 112	Salon I	0	24	0	8
	COS 113	Cosmetology Concepts II	4	0	0	4
	COS 114	Salon II	0	24	0	8
	COS 115	Cosmetology Concepts III	4	0	0	4
	COS 116	Salon III	0	12	0	4
	COS 117	Cosmetology Concepts IV	2	0	0	2
III.	**Other Major Required Courses - 7 Credit Hours**					
	COS 118	Salon IV	1	21	0	7
Total Required Hours						**47**

Manicuring/Nail Technology - Certificate (C 55 40 0)

Curriculum Description:
The Manicuring/Nail Technology curriculum provides competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the nail technology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills.

Course work includes instruction in all phases of professional nail technology, business/computer principles, product knowledge, and other related topics.

Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and nail salons, as a platform artist, and in related businesses.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate proficiency in nail care.
2. Demonstrate an understanding of sanitation/infection control.

	COS 121	Manicure/Nail Technology I	4	6	0	6
	COS 222	Manicure/Nail Technology II	4	6	0	6
Total Required Hours						**12**

Esthetics Technology - Certificate (C 55 23 0)

Curriculum Description
The Esthetics Technology curriculum provides competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the art of skin care. The curriculum provides a simulated salon environment which enables students to develop manipulative skills. Course work includes instruction in all phases of professional Esthetics Technology, business/human relations, product knowledge, and other related topics. Graduates should be prepared to take the North Carolina Cosmetology State Board Licensing Exam and upon passing be licensed and qualify for employment in beauty and cosmetic/skin care salons, as a platform artist, and in related businesses.

Program Student Learning Outcomes
Graduates will be able to:
1. Demonstrate proficiency in professional imaging and makeup color analysis.
2. Demonstrate proficiency in skin care.
3. Demonstrate an understanding of sanitation/infection control.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements**				
	None				
II.	**Core Required Courses**				
	COS 119	Esthetics Concepts I	2	0	2
	COS 120	Esthetics Salon I	0	18	6
	COS 125	Esthetics Concepts II	2	0	2
	COS 126	Esthetics Salon II	0	18	6
Total Required Hours					**16**

Cosmetology Instructor - Certificate (C 55 16 0)

Curriculum Description
The Cosmetology Instructor curriculum provides a course of study for learning the skills needed to teach the theory and practice of cosmetology as required by the North Carolina Board of Cosmetic Arts. Course work includes requirements for becoming an instructor, introduction to teaching theory, methods and aids, practice teaching, and development of evaluation instruments. Graduates of the program may be employed as cosmetology instructors in public or private education and business.

Program Student Learning Outcomes
Graduates will be able to:
1. Identify theories of education and develop lesson plans for an active learning environment.
2. Deliver classroom instruction in an active learning environment.
3. Demonstrate supervisory techniques to effectively oversee students in a clinical setting.
4. Assess student performance in a classroom setting to meet the NC Board of Cosmetic Art standards.
5. Keep accurate records of student performances in a clinical setting.

I.	**General Education Requirements**				
	None				
II.	**Core Required Courses**				
	COS 271	Instructor Concepts I	5	0	5
	COS 272	Instructor Practicum I	0	21	7
	COS 273	Instructor Concepts II	5	0	5
	COS 274	Instructor Practicum II	0	21	7
Total Required Hours					**24**

Manicuring Instructor - Certificate (C 55 38 0)

Curriculum Description
The Manicuring Instructor curriculum provides a course of study covering the skills needed to teach the theory and practices of manicuring as required by the North Carolina State Board of Cosmetology. Course work includes all phases of manicuring theory laboratory instruction. Graduates should be prepared to take the North Carolina Cosmetology State Board Manicuring Instructor Licensing Exam and upon passing be qualified for employment in a cosmetology or manicuring school.

Program Student Learning Outcomes
Graduates will be able to:
1. Identify theories of education and develop lesson plans for an active learning environment.
2. Deliver classroom instruction in an active learning environment.
3. Demonstrate supervisory techniques to effectively oversee students in a clinical setting.
4. Assess student performance in a classroom setting to meet the NC Board of Cosmetic Art standards.
5. Keep accurate records of student performances in a clinical setting.

I.	**General Education Requirements**				
	None				
II.	**Major Courses**				
	Required Core Courses				
	COS 251	Manicure Instructor Concepts	8	0	8
	COS 252	Manicure Instructor Practicum	0	15	5
Total Required Hours					**13**

Esthetics Instructor - Certificate (C 55 27 0)

Curriculum Description
The Esthetics Instructor curriculum provides a course of study covering the skills needed to teach the theory and practices of esthetics as required by the North Carolina State Board of Cosmetology. Course work includes all phases of esthetics theory laboratory instruction. Graduates should be prepared to take the North Carolina Cosmetology State Board Esthetics Instructor Licensing Exam and upon passing be qualified for employment in a cosmetology or esthetics school.

Program Student Learning Outcomes
Graduates will be able to:
1. Identify theories of education and develop lesson plans for an active learning environment.
2. Deliver classroom instruction in an active learning environment.
3. Demonstrate supervisory techniques to effectively oversee students in a clinical setting.
4. Assess student performance in a classroom setting to meet the NC Board of Cosmetic Art standards.
5. Keep accurate records of student performances in a clinical setting.

I. General Education Requirements
None

II. Core Required Courses

COS 253	Esthetics Instructor Concepts I	6	15	11
COS 254	Esthetics Instructor Concepts II	6	15	11
Total Required Hours				**22**

Criminal Justice Technology - Degree (A 55 18 0)

Curriculum Description
The Criminal Justice Technology curriculum is designed to provide knowledge of criminal justice systems and operations. Study will focus on local, state, and federal law enforcement, judicial processes, corrections, and security services. The criminal justice system's role within society will be explored.

Emphasis is on criminal justice systems, criminology, juvenile justice, criminal and constitutional law, investigative principles, ethics, and community relations. Additional study may include issues and concepts of government, counseling, communications, computers, and technology.

Employment opportunities exist in a variety of local, state, and federal law enforcement, corrections, and security fields. Examples include police officer, deputy sheriff, county detention officer, state trooper, intensive probation/parole surveillance officer, correctional officer, and loss prevention specialist.

Program Student Learning Outcomes
Graduates will be able to:
1. For the 3 components of the American Criminal Justice System (law enforcement, courts and corrections), understand each of their histories, present day operations, and potential future outlooks.
2. Have a working knowledge of the laws, policies, and programs that direct/govern the American Criminal Justice System
3. Demonstrate and discuss basic criminal justice practices that are incorporated in the journey of a crime as it passes through the 3 components of the American Criminal Justice System
4. Describe the function and utilization of the various complimentary accessories to the American Criminal Justice System
5. Articulate how the American Criminal Justice System addresses various categories of crime
6. Be able to explain the extent of crime in the United States and provide numerous plausible reasons/theories of why crime occurs

I. General Education Requirements - 18 Credit Hours

ENG 111	Writing and Inquiry	3	0	3
ENG 112	Writing/Research in the Disc	3	0	3
MAT 143	Quantitative Literacy	2	2	3
	OR			
MAT 171	Precalculus Algebra (3-2-4)			
PSY 150	General Psychology	3	0	3
POL 120	American Government	3	0	3
	OR			
SOC 210	Introduction to Sociology (3-0-3)			
	Humanities Elective	3	0	3

			Class Hours	Lab Hours	Credit Hours
II.	**Required Core Courses - 22 Credit Hours**				
	CJC 111	Introduction to Criminal Justice	3	0	3
	CJC 112	Criminology	3	0	3
	CJC 113	Juvenile Justice	3	0	3
	CJC 131	Criminal Law***	3	0	3
	CJC 212	Ethics and Community Relations	3	0	3
	CJC 221	Investigative Principles***	3	2	4
	CJC 231	Constitutional Law	3	0	3
III.	**Other Major Required Courses - 29 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	CJC 120	Interviews-Interrogations***	1	2	2
	CJC 121	Law Enforcement Operations***	3	0	3
	CJC 122	Community Policing	3	0	3
	CJC 132	Court Procedure and Evidence	3	0	3
	CJC 141	Corrections	3	0	3
	CJC 225	Crisis Intervention***	3	0	3
	CJC 232	Civil Liability	3	0	3
	CJC 255	Issues in Criminal Justice App	3	0	3
	CJC	Elective (Choose one of the following)			3
		CJC 151 Intro to Loss Prevention (3-0-3)			
		CJC 222 Criminalistics (3-0-3)			
		CJC 223 Organized Crime (3-0-3)			
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**70**

Note:***Students who successfully complete the Basic Law Enforcement Training (BLET) course may be given credit for CJC 120, CJC 121, CJC 131, CJC 221, and CJC 225 in the Criminal Justice Curriculum.

Criminal Justice Technology - Diploma (D 55 18 0)

I.	**General Education Requirements - 9 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	PSY 150	General Psychology	3	0	3
	SOC 210	Introduction to Sociology	3	0	3
		OR			
	POL 120	American Government (3-0-3)			
II.	**Required Core Courses - 18 Credit Hours**				
	CJC 111	Introduction to Criminal Justice	3	0	3
	CJC 112	Criminology	3	0	3
	CJC 113	Juvenile Justice	3	0	3
	CJC 131	Criminal Law	3	0	3
	CJC 212	Ethics and Community Relations	3	0	3
	CJC 231	Constitutional Law	3	0	3
III.	**Other Major Required Courses - 18 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	CJC 121	Law Enforcement Operations	3	0	3
	CJC 132	Court Procedure and Evidence	3	0	3
	CJC 141	Corrections	3	0	3
	CJC 232	Civil Liability	3	0	3
	CJC	Elective (Choose one of the following)			3
		CJC 151 Intro to Loss Prevention (3-0-3)			
		CJC 222 Criminalistics (3-0-3)			
		CJC 223 Organized Crime (3-0-3)			
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**46**

Criminal Justice Technology - Certificate

Criminal Justice - 18 Credit Hours (C 55 18 0)

CJC 111	Introduction to Criminal Justice		3	0	3
CJC 113	Juvenile Justice		3	0	3
CJC 121	Law Enforcement Operations		3	0	3
CJC 141	Corrections		3	0	3
CJC 212	Ethics and Community Relations		3	0	3
CJC	Elective ***(Choose one of the following)***				3
	CJC 151	Intro to Loss Prevention (3-0-3)			
	CJC 222	Criminalistics (3-0-3)			
	CJC 223	Organized Crime (3-0-3)			

Early Childhood Education - Degree (A 55 22 0)

Curriculum Description

The Early Childhood Education curriculum prepares individuals to work with children from birth through eight in diverse learning environments. Students will combine learned theories with practice in actual settings with young children under the supervision of qualified teachers.

Course work includes child growth and development; physical/nutritional needs of children; care and guidance of children; and communication skills with families and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of young children.

Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities include child development and child care programs, preschools, public and private schools, recreational centers, Head Start Programs, and school-age programs.

Program Student Learning Outcomes

Graduates will be able to:

1. Create environments that are healthy, respectful, supportive, and challenging to ALL children
2. Design and implement developmentally effective curriculum that addresses all domains of learning
3. Support and empower ALL children, families, and communities through trusting and respectful reciprocal relationships
4. Use authentic assessment responsibility to make informed decisions to guide ALL children's learning
5. Communicate effectively using standard written and verbal skills
6. Utilize technology to enhance learning for ALL children
7. Serve as a leader, advocate, and professional in the fields of early education

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	ENG 112	Writing/Research in the Disc	3	0	0	3
	MAT 110	Math Measurement & Literacy	2	2	0	3
		OR				
	MAT 143	Quantitative Literacy (2-2-3)				
		Humanities Elective	3	0	0	3
		Social Science Elective	3	0	0	3
II.	**Required Core Courses - 32 Credit Hours**					
	EDU 119	Intro to Early Child Education	4	0	0	4
	EDU 131	Child, Family, and Community	3	0	0	3
	EDU 146	Child Guidance	3	0	0	3
	EDU 151	Creative Activities	3	0	0	3
	EDU 153	Health, Safety and Nutrition	3	0	0	3
	EDU 221	Children with Exceptional	3	0	0	3
	EDU 234	Infants, Toddlers, and Twos	3	0	0	3
	EDU 271	Educational Technology	2	2	0	3
	EDU 280	Language & Literacy Experiences	3	0	0	3
	EDU 284	Early Child Capstone Prac	1	9	0	4
III.	**Required Subject Courses - 6 Credit Hours**					
	EDU 144	Child Development I	3	0	0	3
	EDU 145	Child Development II	3	0	0	3

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
IV.	**Other Major Required Courses - 12 Credit Hours**					
	CIS 110	Introduction to Computers	2	2	0	3
	EDU 184	Early Child Intro Pract	1	3	0	2
	EDU 214	Early Child Interm Pract	1	9	0	4
	EDU 259	Curriculum Planning	3	0	0	3
	Choose one of the following Tracks					
	Track A (Early Childhood - 8 Credit Hours)					
	EDU 185	Cognitive and Language Activity	3	0	0	3
	EDU 252	Math and Science Activities	3	0	0	3
	EDU 254	Music and Movement for Children	1	2	0	2
	Track B (Administration - 9 Credit Hours)					
	BUS 230	Small Business Management	3	0	0	3
	EDU 261	Early Childhood Administration I	3	0	0	3
	EDU 262	Early Childhood Administration II	3	0	0	3
	Track C (Special Education - 9 Credit Hours)					
	EDU 154	Social/Emotional/Behav Dev	3	0	0	3
	EDU 223	Specific Learning Disab	3	0	0	3
	EDU 248	Developmental Delays	3	0	0	3
	Track D (College Transfer - 9 Credit Hours)					
	HUM 211	Humanities I	3	0	0	3
	PSY 150	General Psychology	3	0	0	3
	SOC 210	Introduction to Sociology	3	0	0	3
V.	**Other Required Hours - 1 Credit Hour**					
	ACA 115	Success & Study Skills	0	2	0	1
Total Required Hours						**74/75**

Early Childhood Education - Diploma (D 55 22 0)

			Class Hours	Lab Hours	Co-Op Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**					
	ENG 111	Writing and Inquiry	3	0	0	3
	MAT 110	Math Measurement & Literacy (2-2-3)				
		OR				
	MAT 143	Quantitative Literacy	2	2	0	3
II.	**Required Core Courses - 22 Credit Hours**					
	EDU 119	Intro to Early Child Education	4	0	0	4
	EDU 131	Child, Family, and Community	3	0	0	3
	EDU 146	Child Guidance	3	0	0	3
	EDU 151	Creative Activities	3	0	0	3
	EDU 153	Health, Safety and Nutrition	3	0	0	3
	EDU 221	Children with Exceptional	3	0	0	3
	EDU 234	Infants, Toddlers, & Twos	3	0	0	3
III.	**Required Subject Courses - 6 Credit Hours**					
	EDU 144	Child Development I	3	0	0	3
	EDU 145	Child Development II	3	0	0	3
IV.	**Other Major Required Courses - 8 Credit Hours**					
	CIS 110	Introduction to Computers	2	2	0	3
	EDU 184	Early Child Intro Pract	1	3	0	2
	EDU 259	Curriculum Planning	3	0	0	3
T**otal Required Hours**						**42**

Early Childhood Education - Certificate

		Class Hours	Lab Hours	Credit Hours
Early Childhood - 15 Credit Hours (C 55 22 0)				
EDU 119	Intro to Early Child Education	4	0	4
EDU 184	Early Child Intro Pract	1	3	2
EDU 259	Curriculum Planning	3	0	3
EDU 146	Child Guidance	3	0	3
EDU 151	Creative Activities	3	0	3

Infant/Toddler Care - Certificate

Curriculum Description
The curriculum prepares individuals to work with children from infancy to three years of age in diverse learning environments. Students will combine learned theories, competency-based knowledge, and practice in actual settings with infants and toddlers.

Course work includes infant/toddler growth and development: physical/nutritional needs of infants and toddlers; safety issues in the care of infants and toddlers; care and guidance; communication skills with families and children; design an implementation of appropriate curriculum; and other related topics.

Graduates should be prepared to plan and implement developmentally appropriate infant/toddler programs in early childhood settings. Employment opportunities include child development and child care programs, preschools, public and private schools, recreational centers, Early Head Start Programs, and other infant/toddler programs.

Program Student Learning Outcomes
Graduates will be able to:

1. Create environments that are healthy, respectful, supportive, and challenging to ALL children
2. Design and implement developmentally effective curriculum that addresses all domains of learning
3. Support and empower ALL children, families, and communities through trusting and respectful reciprocal relationships
4. Use authentic assessment responsibility to make informed decisions to guide ALL children's learning
5. Communicate effectively using standard written and verbal skills
6. Utilize technology to enhance learning for ALL children
7. Serve as a leader, advocate, and professional in the fields of early education

		Class Hours	Lab Hours	Credit Hours
Infant/Toddler - 16 Credit Hours (C 55 29 0)				
EDU 119	Introduction to Early Childhood Education	4	0	4
EDU 131	Child, Family, and Community	3	0	3
EDU 144	Child Development I	3	0	3
EDU 153	Health, Safety and Nutrition	3	0	3
EDU 234	Infant, Toddlers and Twos	3	0	3

School–Age Education - Degree (A 55 44 0)

Curriculum Description
This curriculum prepares individuals to work with children in elementary through middle grades in diverse learning environments. Students will combine learned theories with practice in actual settings with school-age children under the supervision of qualified teachers.

Course work includes child growth/development; computer technology in education; physical/nutritional needs of school-age children; care and guidance of school-age children; and communication skills with families and children. Students will foster the cognitive/language, physical/motor, social/emotional, and creative development of school-age populations.

Graduates are prepared to plan and implement developmentally appropriate programs in school-aged environments. Employment opportunities include school-age teachers in child care programs, before/after-school programs, paraprofessional positions in public/private schools, recreational centers, and other programs that work with school-age populations.

Program Student Learning Outcomes
Graduates will be able to:

1. Create environments that are healthy, respectful, supportive, and challenging to ALL children
2. Design and implement developmentally effective curriculum that addresses all domains of learning
3. Support and empower ALL children, families, and communities through trusting and respectful reciprocal relationships
4. Use authentic assessment responsibility to make informed decisions to guide ALL children's learning
5. Communicate effectively using standard written and verbal skills
6. Utilize technology to enhance learning for ALL children
7. Serve as a leader, advocate, and professional in the fields of early education

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
		OR			
	MAT 143	Quantitative Literacy (2-2-3)			
		Humanities Elective	3	0	3
		Social Science Elective	3	0	3
II.	**Required Core Courses - 15 Credit Hours**				
	EDU 131	Child, Family, and Community	3	0	3
	EDU 163	Classroom Mgt. and Instruction	3	0	3
	EDU 271	Educational Technology	2	2	3
	EDU 285	Internship Exp-School Age	1	9	4
	EDU 289	Adv. Issues/School Age	2	0	2
III.	**Required Subject Courses - 12 Credit Hours**				
	EDU 118	Princ. and Prac of Inst Asst	3	0	3
	EDU 144	Child Development I	3	0	3
	EDU 145	Child Development II	3	0	3
	EDU 221	Children with Exceptional	3	0	3
IV.	**Other Major Required Courses - 29 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	EDU 119	Intro to Early Child Education	4	0	4
	EDU 146	Child Guidance	3	0	3
	EDU 151	Creative Activities	3	0	3
	EDU 184	Early Child Intro Pract	1	3	2
	EDU 214	Early Child Interm Pract	1	9	4
	EDU 259	Curriculum Planning	3	0	3
	EDU 281	Instruc Strat/Read and Writ	2	2	3
	EDU 284	Early Child Capstone Prac	1	9	4
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**72**

Electrical Systems Technology – Degree (A 35 13 0)

Curriculum Description
The Electrical Systems Technology curriculum is designed to provide training for persons interested in the installation and maintenance of electrical systems found in residential, commercial, and industrial facilities.

Coursework, most of which is hands-on, will include such topics as AC/DC theory, basic wiring practices, programmable logic controllers, industrial motor controls, applications of the National Electric Code, and other subjects as local needs require.

Graduates should qualify for a variety of jobs in the electrical field as an on-the-job trainee or apprentice assisting in the layout, installation, and maintenance of electrical systems.

Program Student Learning Outcomes

Graduates will be able to:

1. Explain electrical safety procedures
2. Create AC general lighting circuits as defined by the National Electrical Code
3. Create simple DC circuits
4. Demonstrate the installation of electrical conduits properly
5. Connect simple and moderate motor control circuits
6. Effectively use the National Electrical Code

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
		OR			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
		OR			
	MAT 143	Quantitative Literacy (2-2-3)			
		OR			
	MAT 152	Statistical Methods I (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Core Courses - 16 Credit Hours**				
	ELC 112	DC/AC Electricity	3	6	5
	ELC 113	Residential Wiring	2	6	4
	ELC 117	Motors and Controls	2	6	4
	ELC 128	Introduction to PLC	2	3	3
II.	**Required Subject Areas Courses - 12 Credit Hours**				
	ELC 114	Commercial Wiring	2	6	4
	ELC 115	Industrial Wiring	2	6	4
	ELC 118	National Electrical Code	1	2	2
	ELC 119	NEC Calculations	1	2	2
III.	**Other Major Required Courses - 25 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	ELC 135	Electrical Machines I	2	2	3
	ELC 228	PLC Applications	2	6	4
	ELC 229	Applications Project	1	3	2
	ELN 133	Digital Electronics	3	3	4
	ELN 229	Industrial Electronics	3	3	4
	ELN 231	Industrial Controls	2	3	3
		Technical Elective: (select 2 hours from the following)			2
		AHR 120 HVACR Maintenance (1-3-2)			
		AHR 160 Refrigerant Certification (1-0-1)			
		ALT 120 Renewable Energy Tech. (2-2-3)			
		DFT 111 Technical Drafting I (1-3-2)			
		DFT 111A Technical Drafting I Lab (0-3-1)			
		DFT 151 CAD I (2-3-3)			
		ELC 127 Software for Technicians (1-3-2)			
		ELC 132 Electrical Drawings (1-3-2)			
		ELC 220 Photovoltaic Sys Tech (2-3-3)			
		ELC 221 Advanced PV Sys Design (2-3-3)			
		HYD 110 Hydraulics/Pneumatics I (2-3-3)			
		MNT 222 Industrial Sys Schematics (1-2-2)			
		SST 110 Intro to Sustainability (3-0-3)			
		SST 120 Energy Use Analysis (2-2-3)			
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**69**

Electrical Systems Technology – Diploma (D 35 13 0)

I.	**General Education Requirements - 6 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
II.	**Required Core Courses - 25 Credit Hours**				
	ELC 112	DC/AC Electricity	3	6	5
	ELC 113	Basic Wiring I	2	6	4
	ELC 114	Commercial Wiring	2	6	4
	ELC 115	Industrial Wiring	2	6	4
	ELC 117	Motors and Controls	2	6	4
	ELC 118	National Electrical Code	1	2	2
	ELC 119	NEC Calculations	1	2	2
III.	**Other Major Required Courses - 9 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	ELC 135	Electrical Machines I	2	2	3
	ELN 231	Industrial Controls	2	3	3
Total Required Hours					**40**

Electrical Systems Technology – Certificate

Electrical Wiring Certificate – 17 Credit Hours (C 35 13 0 01)

ELC 112	DC/AC Electricity	3	6	5
ELC 113	Residential Wiring	2	6	4
ELC 114	Commercial Wiring	2	6	4
ELC 115	Industrial Wiring	2	6	4

Industrial Controls Certificate – 15 Credit Hours (C 35 13 0 02)

ELC 112	DC/AC Electricity	3	6	5
ELC 117	Motors and Controls	2	6	4
ELC 128	Introduction to PLC	2	3	3
ELN 231	Industrial Controls	2	3	3

Electronics Engineering Technology - Degree (A 40 20 0)

Curriculum Description

The Electronics Engineering Technology curriculum prepares students to apply basic engineering principles and technical skills to become technicians who design, build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, communication systems, and power electronic systems. Includes instruction in mathematics, basic electricity, solid-state fundamentals, digital concepts, and microprocessors or programmable logic controllers. Graduates should qualify for employment as electronics engineering technician, field service technician, instrumentation technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, and production control technician.

Program Student Learning Outcomes

Graduates will be able to:

1. Understand and mathematically demonstrate basic engineering-related laws and theories (e.g. Ohm's Law, Kirchhoff's Laws)
2. Demonstrate competency with field test instruments (e.g. Digital Multimeter, Oscilloscope)
3. Demonstrate competency with semiconductor applications (e.g.. Transistor theory, sensors, I.C.'s)
4. Understand and demonstrate basic digital logic design and troubleshooting (e.g.. Gate logic, digital devices)
5. Demonstrate competency with automation technology (e.g.. PLC programming, Microcontrollers)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Dis	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			

			Class Hours	Lab Hours	Credit Hours
		Humanities/Fine Arts Elective:	3	0	3
		Social/Behavioral Sciences Elective:	3	0	3
II.	**Technical Core Courses - 16 Credit Hour**				
	ELC 138	DC Circuit Analysis	3	3	4
	ELC 139	AC Circuit Analysis	3	3	4
	ELN 131	Analog Electronics I	3	3	4
	ELN 133	Digital Electronics	3	3	4
III.	**Program Major Required Courses - 13 Credit Hours**				
	ELC 128	Intro to PLC	2	3	3
	ELC 228	PLC Applications	2	6	4
	ELN 152	Fabrication Techniques	1	3	2
	ELN 232	Introduction to Microprocessors	3	3	4
IV.	**Other Major Required Courses - 29/30 Credit Hours**				
	Take all of the following courses:				
	CIS 110	Intro to Computers	2	2	3
	EGR 110	Intro to Engineering Tech	1	2	2
	EGR 285	Design Project	0	4	2
	ELC 127	Software for Technicians	1	3	2
	Automation				
	Choose one of the following courses:				
	ATR 211	Robot Programming	2	3	3
	ATR 215	Sensors and Transducers (2-3-3)			
	ATR 218	Work Cell Integration (2-3-3)			
	PC Support				
	Choose one of the following courses:				
	CET 111	Computer Upgrade/Repair I	2	3	3
	CTS 120	Hardware/Software Support (2-3-3)			
	Programming				
	Choose one of the following courses:				
	CET 161	Procedural Programming	2	3	3
	CSC 134	C++ Programming (2-3-3)			
	CSC 139	Visual BASIC Programming (2-3-3)			
	Mathematics				
	Choose one of the following courses:				
	MAT 122	Algebra/Trigonometry II	2	2	3
	MAT 152	Statistical Methods I (3-2-4)			
	MAT 172	Precalculus Trigonometry (3-2-4)			
	MAT 271	Calculus I (3-2-4)			
	Physics I				
	Choose one of the following courses:				
	PHY 131	Physics-Mechanics	3	2	4
	PHY 151	College Physics I (3-2-4)			
	Physics II				
	Choose one of the following courses:				
	PHY 132	Physics-Elect & Magnetism	3	2	4
	PHY 152	College Physics II (3-2-4)			
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**74-75**

Electronics Engineering Technology – Diploma (D 40 20 0)

I.	**General Education Requirements – 9 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
		OR			
	ENG 111	Writing and Inquiry (3-0-3)			
	MAT 110	Math Measurement & Literacy	2	2	3
		Social Science Elective	3	0	3
II.	**Technical Core Courses – 16 Credit Hours**				
	ELC 138	DC Circuit Analysis	3	3	4
	ELC 139	AC Circuit Analysis	3	3	4
	ELN 131	Analog Electronics I	3	3	4
	ELN 133	Digital Electronics	3	3	4
III.	**Program Major Required Courses – 5 Credit Hours**				
	ELC 128	Intro to PLC	2	3	3
	ELN 152	Fabrication Techniques	1	3	2
IV.	**Other Major Required Courses – 10 Credit Hours**				
	Take all of the following courses:				
	CIS 110	Intro to Computers	2	2	3
	ELC 127	Software for Technicians	1	3	2
	EGR 110	Intro to Engineering Tech	1	2	2
	PC Support				
	Choose one of the following courses:				
	CET 111	Computer Upgrade/Repair I	2	3	3
	CTS 120	Hardware/Software Support (2-3-3)			
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**41**

Electronics Engineering Technology – Certificate (C 40 20 0)

ELN 131	Analog Electronics I	3	3	4
ELC 138	DC Circuit Analysis	3	3	4
ELC 139	AC Circuit Analysis	3	3	4
EGR 110	Intro to Engineering Tech	1	2	2
ELN 152	Fabrication Techniques	1	3	2
Total Required Hours				**16**

Entrepreneurship - Degree (A 25 49 0)

Curriculum Description

The Entrepreneurship curriculum is designed to provide students with the knowledge and the skills necessary for employment and growth as self-employed business owners.

Course work includes developing a student's ability to make informed decisions as future business owners. Courses include entrepreneurial concepts learned in innovation and creativity, business funding, and marketing. Additional course work includes computers and economics.

Through these skills, students will have a sound education base in entrepreneurship for lifelong learning. Graduates are prepared to be self-employed and open their own businesses.

Program Student Learning Outcomes

Graduates will be able to:

1. Demonstrate the capacity to identify and acquire the financial resources needed for the creation and implementation of a new venture
2. Show an understanding of the creativity and innovation involved in the entrepreneurial process as it relates to new business startup

3. Define the ethical and legal framework in which business decisions are made
4. Develop advertising strategies with the goal of maximizing the firm's profits
5. Construct a business plan and essential financial documents for a small business
6. Demonstrate a knowledge of business operations, the business organization, and business procedures

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ENG 111	Writing & Inquiry	3	0	3
		Humanities elective	3	0	3
	COM 231	Public Speaking	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
	ECO 252	Principles of Macroeconomics	3	0	3
II.	**Required Core Courses - 28 Credit Hours**				
	ACC 120	Prin of Financial Acct	3	2	4
	BUS 110	Introduction to Business	3	0	3
	ETR 220	Innovation and Creativity	3	0	3
	ETR 230	Entrepreneur Marketing	3	0	3
	ETR 240	Funding for Entrepreneurs	3	0	3
	BUS 139	Entrepreneurship I	3	0	3
	BUS 245	Entrepreneurship II	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	ECO 251	Prin of Microeconomics	3	0	3
III.	**Other Major Required Courses – 22 Credit Hours**				
	ACC 121	Prin of Managerial Acct	3	2	4
	BUS 115	Business Law I	3	0	3
	BUS 137	Principles of Management	3	0	3
	BUS 260	Business Communication	3	0	3
	CTS 130	Spreadsheet	2	2	3
	WEB 140	Web Development Tools	2	2	3
		Elective (choose 3 credit hours)			
		ACC 129 Individual Income Taxes			
		ACC 180 Practices in Bookkeeping			
		BUS 153 Human Resource Management			
		BUS 253 Leadership and Mgt. Skills.			
		BUS 230 Small Business Management			
		BUS 255 Organizational Behavior in Bus			
		MKT 120 Principles of Marketing			
		MKT 123 Fundamentals of Selling			
		MKT 220 Advertising & Sales Promotion			
		CTS 115 Information Systems Business Concepts			
		CTS 125 Presentation Graphics			
IV.	**Other Required Hours - 2 Credit Hour**				
	ACA 115	Success and Study Skills	0	2	1
	COE 110	World of Work	1	0	1
Total Required Hours					**67/68**

Entrepreneurship - Certificate

Entrepreneurship - 13 Credit Hours (C 25 49 0)

ACC 120	Principles of Financial Accounting	3	2	4
BUS 137	Principles of Management	3	0	3
BUS 139	Entrepreneurship I	3	0	3
ETR 220	Innovation and Creativity	3	0	3

Healthcare Business Informatics - Degree (A 25 51 0)

Curriculum Description
The Healthcare Business Informatics curriculum prepares individuals for employment as specialists in installation, data management, data archiving/retrieval, system design and support, and computer training for medical information systems.

Students learn about the field through multidisciplinary coursework including the study of terminology relating to informatics, systems analysis, networking technology, computer/network security, data warehousing, archiving and retrieval of information, and healthcare computer infrastructure support.

Graduates should qualify for employment as database/data warehouse analysts, technical support professionals, informatics technology professionals, systems analysts, networking and security technicians, and computer maintenance professionals in the healthcare field.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ENG 111	Writing & Inquiry	3	0	3
	COM 231	Public Speaking	3	0	3
		Humanities Elective	3	0	3
	ECO 252	Principles of Macroeconomics	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 39 Credit Hours**				
	CTS 120	Hardware/Software Support	2	3	3
	HBI 110	Issues and Trends in HBI	3	0	3
	HBI 113	Survey of Med Insurance	3	0	3
	HBI 250	Data Mgmt and Utilization	2	2	3
	CIS 110	Introduction to Computers	2	2	3
	NOS 110	Operating System Concepts	2	3	3
	NET 125	Networking Basics	1	4	3
	DBA 110	Database Concepts	2	3	3
	MED 121	Medical Terminology I	3	0	3
	MED 122	Medical Terminology II	3	0	3
	OST 149	Medical Legal Issues	3	0	3
	BUS 110	Introduction to Business	3	0	3
	SEC 110	Security Concepts	2	2	3
III.	**Other Major Required Courses - 16 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	CIS 115	Intro to Prog & Logic	2	2	3
	CTS 285	Systems Analysis & Design	3	0	3
	HBI 289	HBI Project	1	4	3
	NOS 130	Windows Single User	2	2	3
III.	**Other Major Hours - 2 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
	COE 110	World of Work	1	0	1
Total Required Hours					**72/73**

Healthcare Management Technology - Degree (A 25 20 0)

Curriculum Description
The Healthcare Management Technology curriculum is designed to prepare students for employment in healthcare business and financial operations. Students will gain a comprehensive understanding of the application of management principles to the healthcare environment.

The curriculum places emphasis on planning, organizing, directing, and controlling tasks related to healthcare organizational objectives including the legal and ethical environment. Emphasis is placed on the development of effective communication, managerial, and supervisory skills.

Graduates may find employment in healthcare settings including hospitals, medical offices, clinics, long-term care facilities, and insurance companies. Graduates are eligible to sit for various certification exams upon completion of the degree with a combination of a minimum of two years administrative experience. Eligible certifications include, but are not limited to, the Professional Association of Healthcare Office Managers (PAHCOM), the Healthcare Financial Management Association (HFMA), the Certified Patient Account Manager (CPAM) and the Certified Manager of Patient Accounts (CMPA) examinations.

Program Student Learning Outcomes

Graduates will be able to:

1. Articulate the concepts of management within a healthcare service environment
2. Interpret and illustrate the principles of financial management within a healthcare environment
3. Process daily services, generate and interpret management reports and utilize key indicators for monitoring practice productivity
4. Understand and illustrate the importance of law and ethics in a healthcare setting
5. Discuss various reimbursement methodologies and articulate how methods impact the medical practice
6. Effectively communicate and interpret medical terminology in oral and written communications

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ENG 111	Writing & Inquiry	3	0	3
	ENG 112	Argument-Based Research	3	0	3
		Or			
	COM 231	Public Speaking	3	0	3
		Humanities Elective	3	0	3
	ECO 252	Principles of Macroeconomics	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 30 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	ACC 121	Principles of Managerial Accounting	3	2	4
	HMT 110	Intro to Healthcare Management	3	0	3
	HMT 210	Medical Insurance	3	0	3
	HMT 211	Long-Term Care Administration	3	0	3
	HMT 220	Healthcare Financial Management	4	0	4
	MED 121	Medical Terminology I	3	0	3
	MED 122	Medical Terminology II	3	0	3
	OST 149	Medical Legal Issues	3	0	3
III.	**Other Major Required Courses - 20/21 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	CTS 130	Spreadsheet	2	2	3
	BUS 153	Human Resource Management	3	0	3
	BUS 137	Principles of Management	3	0	3
	MKT 120	Principles of Marketing	3	0	3
	HMT 225	Practice Management Simulation	2	2	3
		Electives: (select one from the list below)			2/3
		BUS 260 DBA 110			
		OST 131 OST 286			
		WEB 140			
III.	**Other Major Hours - 2 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
	COE 110	World of Work	1	0	1
Total Required Hours					**67/69**

Industrial Systems Technology - Degree (A 50 24 0)

Curriculum Description
The Industrial Systems Technology curriculum is designed to prepare or upgrade individuals to safely service, maintain, repair, or install equipment. Instruction includes theory and skill training needed for inspecting, testing, troubleshooting, and diagnosing industrial systems.

Students will learn multi-craft technical skills in print reading, mechanical systems maintenance, electricity, hydraulics/pneumatics, welding, machining or fabrication, and includes various diagnostic and repair procedures. Practical application in these industrial systems will be emphasized and additional advanced course work may be offered.

Upon completion of this curriculum, graduates should be able to individually, or with a team, safely install, inspect, diagnose, repair, and maintain industrial process and support equipment. Students will also be encouraged to develop their skills as life-long learners.

Program Student Learning Outcomes
Graduates will be able to:
1. Understand and mathematically demonstrate basic engineering-related laws and theories (e.g. Pascal's Law, Equilibrium).
2. Demonstrate competency with test instruments (e.g. CMM, Calipers and Micrometers).
3. Understand and can demonstrate basic maintenance practices.
4. Demonstrate knowledge of workplace safety and ethics.
5. Demonstrate an understanding of the disciplines specific and critical for the safe and reasonable practice of welding.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
		OR			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Technical Core Courses - 21 Credit Hours**				
	BPR 111	Print Reading	1	2	2
	ELC 112	DC/AC Electricity	3	6	5
	HYD 110	Hydraulics/Pneumatics I	2	3	3
	ISC 121	Environmental Health & Safety	3	0	3
	MAC 141	Machine Applications I	2	6	4
	MNT 110	Intro to Maintenance Procedures	1	3	2
	WLD 112	Basic Welding Processes	1	3	2
III.	**Required Subject Area Courses - 12 Credit Hours**				
	ELC 111	Intro to Electricity	2	2	3
	ELC 128	Intro to PLC	2	3	3
	MAC 142	Machine Applications II	2	6	4
	MNT 222	Industrial Sys Schematics	1	2	2
IV.	**Other Major Required Courses - Choose 25 Credit Hours**				
	AHR 120	HVACR Maintenance	1	3	2
	AHR 130	HVAC Controls	2	2	3
	AHR 160	Refrigerant Certification	1	0	1
	CIS 110	Introduction to Computers	2	2	3
	CMT 120	Codes and Inspections	3	0	3
	CMT 210	Construction Management Fund.	3	0	3
	CMT 212	Total Safety Performance	3	0	3
	ELC 115	Industrial Wiring	2	6	4
	MAC 141A	Machining Applications I Lab	0	6	2
	MAC 142A	Machining Applications II Lab	0	6	2
	PFT 111	Piping & Valves	3	3	4
	PLU 111	Introduction to Basic Plumbing	1	3	2

			Class Hours	Lab Hours	Credit Hours
	PLU 211	Commercial/Ind Plumbing	2	2	3
	SST 110	Intro to Sustainability	3	0	3
	SST 120	Energy Use Analysis	2	2	3
	SST 140	Green Building & Design Concepts	3	0	3
	WLD 117	Industrial SMAW	1	4	3
	WOL 110	Basic Construction Skills	2	3	3
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**74**

Industrial Systems Technology – Certificates

Industrial Systems Technology – 18 Credit Hours (C 50 24 0 01)

AHR120	HVACR Maintenance	1	3	2
BPR 111	Print Reading	1	2	2
ELC 115	Industrial Wiring	2	6	4
ELC 128	Intro to PLC	2	3	3
HYD 110	Hydraulics/Pneumatics I	2	3	3
PLU 111	Introduction to Basic Plumbing	1	3	2
WLD 112	Basic Welding Processes	1	3	2

Industrial Systems – Pipefitting Technology – 12 Credit Hours (C 50 24 0 02)

PFT 111	Piping and Valves	3	3	4
WLD 112	Basic Welding Processes	1	3	2
WLD 117	Industrial SMAW	1	4	3
WOL 110	Basic Construction Skills	2	3	3

Manufacturing Technology - Degree (A 50 32 0)

Curriculum Description

The Manufacturing Technology curriculum prepares students to use basic engineering principles and technical skills to identify and resolve production problems in the manufacture of products. Includes instruction in machine operations and CNC principles, production line operations, instrumentation, computer-aided manufacturing (CAM) and other computerized production techniques, manufacturing planning, quality control, quality assurance and informational infrastructure. Graduates should qualify for employment as a manufacturing technician, quality assurance technician, CAD/CAM technician, team leader, or research and development technician.

Program Student Learning Outcomes

Graduates will be able to:

1. Demonstrate competency with test instruments (e.g.. CMM, Calipers and Micrometers)
2. Demonstrate competency with manufacturing techniques and processes (e.g.. Material processing, process flow)
3. Understand and demonstrate basic design concepts (e.g. CNC programming, machine design)
4. Demonstrate knowledge of workplace safety and ethics

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
		OR			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3

			Class	Lab	Credit

			Hours	Hours	Hours
II.	**Required Technical Core Courses - 8 Credit Hours**				
	DFT 111	Technical Drafting I	1	3	2
	ISC 121	Environmental Health and Safety	3	0	3
	ISC 132	Manufacturing Quality Control	2	3	3
III.	**Program Major Required Courses - 13 Credit Hours**				
	HYD 110	Hydraulics/Pneumatics I	2	3	3
	MAC 114	Intro to Metrology	2	0	2
	MAC 121	Introduction to CNC	2	0	2
	MEC 161	Manufacturing Processes I	3	0	3
	MEC 180	Engineering Materials	2	3	3
IV.	**Other Major Required Courses – Choose 8 Credit Hours**				
	BPR 121	Blueprint Reading: Mechanical	1	2	2
	CIS 110	Introduction to Computers	2	2	3
	DFT 111A	Technical Drafting I Lab	0	3	1
	DFT 121	Intro to GD&T	1	2	2
	DFT 152	CAD II	2	3	3
	DFT 154	Intro to Solid Modeling	2	3	3
	DFT 231	Jig and Fixture	1	2	2
	EGR 110	Intro to Engineering Tech	1	2	2
	MAC 151	Machining Calculations	1	2	2
	SST 110	Intro to Sustainability	3	0	3
	SST 120	Energy Use Analysis	2	2	3
	Choose one of the following Tracks				
	Track A (Manufacturing Technology) – 28 Credit Hours				
	DFT 112	Technical Drafting II	1	3	2
	DFT 112A	Technical Drafting II Lab	0	3	1
	DFT 151	CAD I	2	3	3
	ELC 111	Introduction to Electricity	2	2	3
	ELC 128	Introduction to PLC	2	3	3
	MAC 141	Machine Applications I	2	6	4
	MAC 141A	Machining Applications I Lab	0	6	2
	MEC 181	Introduction to CIM	2	0	2
	MEC 231	Computer Aided Manufacturing I	1	4	3
	MEC 232	Computer Aided Manufacturing II	1	4	3
	WLD 112	Basic Welding Processes	1	3	2
	Track B (Manufacturing Technology – Machining) – 28 Credit Hours				
	BPR 111	Print Reading	1	2	2
	MAC 122	CNC Turning	1	3	2
	MAC 124	CNC Milling	1	3	2
	MAC 141	Machine Applications I	2	6	4
	MAC 141A	Machining Applications I Lab	0	6	2
	MAC 142	Machine Applications II	2	6	4
	MAC 142A	Machining Applications II Lab	0	6	2
	MAC 222	Advanced CNC Turning	1	3	2
	MAC 224	Advanced CNC Milling	1	3	2
	MAC 233	Applications in CNC Machining	2	12	6
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**73**

Manufacturing Technology – Certificate

CNC Programming – 15 Credit Hours (C 50 32 0 01)					
	DFT 151	CAD I	2	3	3
	MAC 121	Introduction to CNC	2	0	2
	MAC 122	CNC Turning	1	3	2
	MAC 124	CNC Milling	1	3	2
	MEC 231	Comp-Aided Manufacturing I	1	4	3
	MEC 232	Comp-Aided Manufacturing II	1	4	3

			Class Hours	Lab Hours	Credit Hours
Manufacturing – 16 Credit Hours (C 50 32 0 02)					
	DFT 111	Technical Drafting I	1	3	2
	DFT 111A	Technical Drafting I Lab	0	3	1
	ISC 121	Environmental Health and Safety	3	0	3
	MAC 114	Intro to Metrology	2	0	2
	MAC 121	Introduction to CNC	2	0	2
	MEC 161	Manufacturing Processes I	3	0	3
	MEC 180	Engineering Materials	2	3	3

Mechanical Drafting Technology - Degree (A 50 34 0)

Curriculum Description

The Mechanical Drafting Technology curriculum prepares students to apply technical skills and advanced computer software and hardware to create working drawings, graphic representations and computer simulations for mechanical and industrial designs. Includes instruction in engineering graphics, specification interpretation, geometric dimensioning and tolerancing, drafting calculations, two dimensional and three dimensional engineering design, solids modeling, engineering animation, computer-aided drafting (CAD), computer-aided design (CADD) and manufacturing materials and processes. Graduates should qualify for employment in mechanical areas such as manufacturing, fabrication, research and development, and service industries.

Program Student Learning Outcomes

Graduates will be able to:

1. Utilize standard drafting instruments and equipment, including software, printers, and plotters
2. Understand and perform basic drawing principles including sketching, lettering dimensioning, geometric construction, and orthographic projections
3. Produce advanced level of drawings including section views, auxiliary views, and assembly drawings for the manufacturing and assembling of parts
4. Produce detailed working drawings and adhering to standards and guidelines based on physical design parameters
5. Interpret and apply basic geometric dimensioning and tolerance principles to drawings and prints.
6. Create residential/commercial building plans from given data using a CAD system and utilize technology to present designs with written and visual documents
7. Apply the general steps of the design process to generate a logical plan of action for the design of a new or improved innovative product and produce a technical report communicating the purpose of both the product and design process
8. Design a product for manufacturability and mock-up construction

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
		OR			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Technical Core Courses - 12 Credit Hours**				
	DFT 151	CAD I	2	3	3
	DFT 152	CAD II	2	3	3
	DFT 153	CAD III	2	3	3
	DFT 154	Intro Solid Modeling	2	3	3
III.	**Required Program Major Courses - 12 Credit Hours**				
	DFT 111	Technical Drafting I	1	3	2
	DFT 111A	Technical Drafting I Lab	0	3	1
	DFT 112	Technical Drafting II	1	3	2
	DFT 112A	Technical Drafting II Lab	0	3	1
	MEC 161	Manufacturing Processes I	3	0	3
	MEC 180	Engineering Materials	2	3	3

			Class Hours	Lab Hours	Credit Hours
IV.	**Other Major Required Courses - 13 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	DDF 211	Design Process I	1	6	4
	DDF 221	Design Drafting Project	0	4	2
	MNT 222	Industrial Sys Schematics	1	2	2
		Technical Elective – Choose 2 Credit Hours			2
		DFT 231 Jig & Fixture Design (1-2-2)			
		EGR 110 Intro. to Engineering Technology (1-2-2)			
		MNT 110 Intro to Maintenance Procedures (1-3-2)			
	Choose one of the following Tracks				
	Track A (Architectural) - 19 Credit Hours				
	ARC 111	Intro to Arch Technology	1	6	3
	ARC 114	Architectural CAD	1	3	2
	CST 111	Construction I	3	3	4
	CST 112	Construction II	3	3	4
	SST 110	Intro to Sustainability	3	0	3
	SST 140	Green Building & Design Concepts	3	0	3
	Track B (Mechanical) - 19 Credit Hours				
	DFT 121	Intro to Geometric Dimensioning and Tolerancing	1	2	2
	HYD 110	Hydraulics/Pneumatics I	2	3	3
	ISC 132	Mfg. Quality Control	2	3	3
	MAC 121	Introduction to CNC	2	0	2
	MAC 141	Machine Applications I	2	6	4
	MAC 141A	Machining Applications I Lab	0	6	2
	MEC 231	Computer Aided Manufacturing I	1	4	3
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**72**

Mechanical Drafting Technology - Diploma (D 50 34 0)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 6 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	MAT 110	Math Measurements & Literacy	2	2	3
		OR			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
II.	**Required Core Courses - 9 Credit Hours**				
	DFT 151	CAD I	2	3	3
	DFT 152	CAD II	2	3	3
	DFT 154	Intro Solid Modeling	2	3	3
III.	**Required Subject Courses - 9 Credit Hours**				
	DFT 111	Technical Drafting I	1	3	2
	DFT 111A	Technical Drafting I Lab	0	3	1
	DFT 112	Technical Drafting II	1	3	2
	DFT 112A	Technical Drafting II Lab	0	3	1
	MEC 180	Engineering Materials	2	3	3
IV.	**Other Major Required Courses - 18 Credit Hours**				
	ARC 111	Intro to Arch Technology	1	6	3
	ARC 114	Architectural CAD	1	3	2
	DFT 121	Intro to Geometric Dimensioning and Tolerancing	1	2	2
	ISC 132	Mfg. Quality Control	2	3	3
	MAC 121	Introduction to CNC	2	0	2
	MAC 141	Machine Applications I	2	6	4

		Class Hours	Lab Hours	Credit Hours
Technical Elective – Choose 2 Credit Hours				2
DFT 231	Jig & Fixture Design (1-2-2)			
EGR 110	Intro. to Engineering Technology (1-2-2)			
MAC 141A	Machining Appl. I Lab (0-6-2)			
MNT 110	Intro to Maintenance Procedures (1-3-2)			
MNT 222	Industrial Sys Schematics (1-2-2)			
Total Required Hours				**42**

Mechanical Drafting Technology - Certificate

Mechanical Drafting Technology - 15 Credit Hours (C 50 34 0)

DFT 111	Technical Drafting I	1	3	2
DFT 111A	Technical Drafting I Lab	0	3	1
DFT 112	Technical Drafting II	1	3	2
DFT 112A	Technical Drafting II Lab	0	3	1
DFT 151	CAD I	2	3	3
DFT 152	CAD II	2	3	3
MEC 180	Engineering Materials	2	3	3

Mechanical Engineering Technology - Degree (A 40 32 0)

Curriculum Description

The Mechanical Engineering Technology curriculum prepares students to use basic engineering principles and technical skills to design, develop, test, and troubleshoot projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, computer applications, critical thinking, planning and problem solving, and oral and written communications. Graduates of the curriculum will find employment opportunities in the manufacturing or service sectors of engineering technology. Engineering technicians may obtain professional certification by application to organizations such as ASQC, SME, and NICET.

Program Student Learning Outcomes

Graduates will be able to:

1. Understand and mathematically demonstrate basic engineering-related laws and theories (e.g.. Pascal's Law, Equilibrium)
2. Demonstrate competency with test instruments (e.g.. CMM, Calipers and Micrometers)
3. Demonstrate competency with manufacturing techniques and processes (e.g.. Material processing, process flow)
4. Understand and demonstrate basic design concepts (e.g. CNC programming, machine design)
5. Demonstrate knowledge of workplace safety and ethics

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Core Technical Courses - 24 Credit Hours**				
	DFT 151	CAD I	2	3	3
	DFT 154	Intro Solid Modeling	2	3	3
	EGR 250	Statics & Strength of Material	4	3	5
	HYD 110	Hydraulics/Pneumatics I	2	3	3
	MEC 161	Manufacturing Processes I	3	0	3
	MEC 180	Engineering Materials	2	3	3

			Class Hours	Lab Hours	Credit Hours
	PHY 131	Physics- Mechanics	3	2	4
		OR			
	PHY 151	College Physics I (3-2-4)			
III.	**Other Major Required Courses - 13 Credit Hours**				
	CIS 110	Intro to Computers	2	2	3
	ISC 121	Environmental Health and Safety	3	0	3
	ISC 132	Manufacturing Quality Control	2	3	3
	MAC 141	Machine Applications I	2	6	4
	Choose one of the following Tracks				
	Track A (Mechanical Engineering) – 22 Credit Hours				
	EGR 110	Intro to Engineering Tech.	1	2	2
	MAC 114	Intro to Metrology	2	0	2
	MAC 121	Introduction to CNC	2	0	2
	MAT 122	Algebra/Trigonometry II	2	2	3
		OR			
	MAT 172	Precalculus Trigonometry (3-2-4)			
	MEC 181	Introduction to CIM	2	0	2
	MEC 231	Comp-Aided Manufacturing I	1	4	3
	MEC 232	Computer Aided Manufacturing II	1	4	3
	MEC 270	Machine Design	3	3	4
	MEC 271	Machine Design Project	0	3	1
	Track B (Mechatronics) – 22 Credit Hours				
	EGR 285	Design Project	0	4	2
	ELC 112	DC/AC Electricity	3	6	5
	ELC 128	Intro to PLCs	2	3	3
	ELN 131	Analog Electronics I	3	3	4
	ELN 133	Digital Electronics	3	3	4
	PHY 132	Physics Electricity/Magnetism	3	2	4
	Track C (Mechanical Drafting) – 22 Credit hours				
	DDF 211	Design Process I	1	6	4
	DDF 221	Design Drafting Project	0	4	2
	DFT 111	Technical Drafting I	1	3	2
	DFT 111A	Technical Drafting I Lab	0	3	1
	DFT 112	Technical Drafting II	1	3	2
	DFT 112A	Technical Drafting II Lab	0	3	1
	DFT 121	Intro to GD&T	1	2	2
	DFT 152	CAD II	2	3	3
	MAC 121	Introduction to CNC	2	0	2
	MEC 231	Comp-Aided Manufacturing I	1	4	3
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**75-76**

Mechanical Engineering Technology – Certificate

Mechanical Engineering Technology – 18 Credit Hours (C 40 32 0)					
	DFT 151	CAD I	2	3	3
	HYD 110	Hydraulics/Pneumatics I	2	3	3
	ISC 132	Mfg Quality Control	2	3	3
	MEC 231	Comp-Aided Manufacturing I	1	4	3
	MEC 180	Engineering Materials	2	3	3
	MEC 161	Manufacturing Processes I	3	0	3

Medical Office Administration - Degree (A 25 31 0)

Curriculum Description
This curriculum prepares individuals for employment in medical and other health-care related offices.

Course work will include medical terminology; information systems; office management; medical coding, billing and insurance; legal and ethical issues; and formatting and word processing. Students will learn administrative and support functions and develop skills applicable in medical environments.

Employment opportunities are available in medical and dental offices, hospitals, insurance companies, laboratories, medical supply companies, and other health-care related organizations.

Program Student Learning Outcomes
Graduates will be able to:

1. Effectively communicate and interpret medical terminology in oral and written communications
2. Understand and illustrate the importance of law and ethics in a healthcare setting
3. Discuss various reimbursement methodologies and articulate how methods impact the medical practice
4. Exhibit proficiency in the use of medical office computer systems, specifically practice management and electronic medical record software
5. Demonstrate proficiency in office systems management

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 17 Credit Hours**				
	BIO 163	Basic Anatomy and Physiology I	4	2	5
	ENG 111	Writing & Inquiry	3	0	3
	ECO 252	Prin of Macroeconomics	3	0	3
	COM 231	Public Speaking	3	0	3
		Humanities Elective	3	0	3
II.	**Required Core Courses - 29 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	OST 131	Keyboarding	1	2	2
	OST 134	Text Entry & Formatting	2	2	3
	OST 164	Text Editing Applications	3	0	3
	OST 243	Medical Office Simulation	2	2	3
	OST 289	Administrative Office Management	2	2	3
	MED 121	Medical Terminology I	3	0	3
	MED 122	Medical Terminology II	3	0	3
	OST 148	Med Coding Billing & Insu	3	0	3
	OST 149	Med Legal Issues	3	0	3
III.	**Other Major Required Courses - 20/21 Credit Hours**				
	ACC 120	Prin of Financial Acct	3	2	4
	BUS 260	Business Communication	3	0	3
	OST 284	Emerging Technologies	1	2	2
	OST 286	Professional Development	3	0	3
IV.	**Additional Major Required Courses - Select Track A or B**				
	Track A				
	CTS 130	Spreadsheet	2	2	3
	OST 184	Records Management	2	2	3
	OST 136	Word Processing	2	2	3
	Track B				
	OST 247	Procedure Coding	1	2	2
	OST 248	Diagnostic Coding	1	2	2
	OST 249	CPC Certification	3	2	4
V.	**Other Required Hours - 2 Credit Hours**				
	ACA 115	Success & Study Skills	0	2	1
	WBL 110	World of Work	1	0	1
Total Required Hours					**68/69**

Medical Office Administration - Diploma (D 25 31 0)

I.	**General Education Requirements - 6 Credit Hours**				
	ENG 111	Expository Writing	3	0	3
	ECO 252	Principles of Macroeconomics	3	0	3
II.	**Core Courses - 29 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	OST 131	Keyboarding	1	2	2
	OST 134	Text Entry & Formatting	2	2	3
	MED 121	Medical Terminology I	3	0	3
	MED 122	Medical Terminology II	3	0	3
	OST 148	Med Coding Billing & Insu	3	0	3
	OST 149	Med Legal Issues	3	0	3
	OST 164	Text Editing Applications	3	0	3
	OST 243	Medical Office Simulation	2	2	3
	OST 289	Administrative Office Management	2	2	3
III.	**Other Major Required Courses - 7 Credit Hours**				
	ACC 120	Principles of Financial Accounting	3	2	4
	OST 286	Professional Development	3	0	3
IV.	**Other Required Hours - 2 Credit Hours**				
	ACA 115	Success & Study Skills	0	2	1
	WBL 110	World of Work	1	0	1
Total Required Hours					**44**

Medical Office Administration - Certificate

Medical Office Administration - 17 Credit Hours (C 25 31 0 01)

CIS 110	Introduction to Computers	2	2	3
OST 131	Keyboarding	1	2	2
MED 121	Medical Terminology I	3	0	3
MED 122	Medical Terminology II	3	0	3
OST 148	Med Coding Billing & Insu	3	0	3
OST 286	Professional Development	3	0	3

Medical Office Administration - Coding Certificate

Coding - 17 Credit Hours (C 25 31 0 02)

MED 121	Medical Terminology I	3	0	3
OST 148	Medical Coding, Billing and Insurance	3	0	3
MED 122	Medical Terminology II	3	0	3
OST 247	Procedure Coding	1	2	2
OST 248	Diagnostic Coding	1	2	2
OST 249	CPC Certification	3	2	4

Networking Technology - Degree (A 25 34 0)

Curriculum Description

The Networking Technology curriculum prepares individuals for employment supporting network infrastructure environments. Students will learn how to use technologies to provide reliable transmission and delivery of data, voice, image, and video communications in business, industry, and education.

Course work includes design, installation, configuration, and management of network infrastructure technologies and network operating systems. Emphasis is placed on the implementation and management of network software and the implementation and management of hardware such as switches and routers.

Graduates may find employment in entry-level jobs as local area network managers, network operators, network analysts, and network technicians. Graduates may also be qualified to take certification examinations for various network industry certifications, depending on their local program.

Program Student Learning Outcomes
Graduates will be able to:

1. Design network infrastructure technologies and network operating systems
2. Install network infrastructure technologies and network operating systems
3. Configure infrastructure technologies and network operating systems
4. Manage infrastructure technologies and network operating systems

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Courses - 15/16 Credit Hours**				
	General Education Requirements - 15 Credit Hours				
	ECO 252	Prin of Macroeconomics	3	0	3
	ENG 111	Expository Writing	3	0	3
		Humanities Elective	3	0	3
	COM 231	Public Speaking	3	0	3
	MAT 110	Mathematical Measurements & Literacy	2	2	3
		OR			
	MAT 143	Quantitative Literacy	2	2	3
		OR			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 45 Credit Hours**				
	BUS 110	Intorduction to Business	3	0	3
	CIS 110	Introduction to Computers	2	2	3
	CIS 115	Intro to Prog & Logic	2	3	3
	CTS 120	Hardware/Software Support	2	3	3
	DBA 110	Database Concepts	2	3	3
	NET 125	Networking Basics	1	4	3
	NET 126	Routing Basics	1	4	3
	NET 225	Routing and Switching I	1	4	3
	NET 226	Routing and Switching II	1	4	3
	NET 289	Networking Project	1	4	3
	NOS 110	Operating System Concepts	2	3	3
	NOS 120	Linux/UNIX Single User	2	2	3
	NOS 130	Windows Single User	2	2	3
	NOS 220	Linux/Unix Admin I	2	2	3
	SEC 110	Security Concepts	2	2	3
III.	**Other Major Required Courses - 3 Credit Hours**				
	CTS 285	Systems Analysis and Design	3	0	3
	NOS 230	Windows Admin I	2	2	3
IV.	**Other Required Hours - 2 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
	WBL 110	World of Work	1	0	1
Total Required Hours					**65/66**

Networking Technology - Certificate

Networking Technology - 18 Credit Hours (C 25 34 0)					
	NET 125	Networking Basics	1	4	3
	NET 126	Routing Basics	1	4	3
	NET 225	Routing & Switching I	1	4	3
	NET 226	Routing & Switching II	1	4	3
	SEC 110	Security Concepts	2	2	3
	NOS 110	Operating Systems Concepts	2	3	3

Occupational Education Associate - Degree (A 55 32 0)

Curriculum Description
The Occupational Education Associate curriculum is designed for individuals skilled and experienced in a trade or technical specialty who would like to receive an associate degree in preparation for teaching or other purposes.

Course work is designed to supplement previous education, training, and/or experience the individual has already attained.

Graduates of the program may find employment as instructors in the field of occupational education.

Program Student Learning Outcomes
Graduates will be able to:

1. Create environments that are healthy, respectful, supportive, and challenging to ALL children
2. Design and implement developmentally effective curriculum that addresses all domains of learning
3. Support and empower ALL children, families, and communities through trusting and respectful reciprocal relationships
4. Use authentic assessment responsibility to make informed decisions to guide ALL children's learning
5. Communicate effectively using standard written and verbal skills
6. Utilize technology to enhance learning for ALL children
7. Serve as a leader, advocate, and professional in the fields of early education

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 19 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 110	Math Measurement & Literacy	2	2	3
	PSY 150	General Psychology	3	0	3
		Humanities Elective	3	0	3
		Natural Science Elective (Choose one):			4
		BIO 111 General Biology I (3-3-4)			
		CHM 151 General Chemistry I (3-3-4)			
II.	**Required Core Courses - 21 Credit Hours**				
	EDU 175	Introduction to Trade & Ind Ed	3	0	3
	EDU 176	Occupational Analysis and Course Dev	3	0	3
	EDU 177	Instructional Methods	2	2	3
	EDU 179	Vocational Student Organizations	3	0	3
	EDU 271	Educational Technology	2	2	3
	EDU 281	Instruc Strat/Read and Writ	2	2	3
	ISC 121	Environmental Health & Safety	3	0	3
III.	**Other Major Required Courses - 34 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	EDU 161	Intro to Exceptional Child	3	0	3
	EDU 178	Facilities Organization & Planning	2	2	3
	EDU 275	Effective Teacher Training	2	0	2
	Specialty Area				23
	1. Through work experience or informal course work				
	2. Through formal training in field				
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**75**

Occupational Education Associate - Diploma (D 55 32 0)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education - 6 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	PSY 150	General Psychology	3	0	3
II.	**Required Core Courses - 21 Credit Hours**				
	EDU 175	Introduction to Trade & Ind Ed	3	0	3
	EDU 176	Occupational Analysis and Course Dev	3	0	3
	EDU 177	Instructional Methods	2	2	3
	EDU 179	Vocational Student Organizations	3	0	3
	EDU 271	Educational Technology	2	2	3
	EDU 281	Instruc Strat/Read and Writ	2	2	3
	ISC 121	Environmental Health & Safety	3	0	3
III.	**Other Major Required Courses - 8 Credit Hours**				
	EDU 178	Facilities Organization & Planning	2	2	3
	EDU 275	Effective Teacher Training	2	0	2
	CIS 110	Introduction to Computers	2	2	3
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**36**

Occupational Education Associate - Certificate

Occupational Education Associate - 18 Credit Hours (C 55 32 0)

EDU 175	Introduction to Trade & Ind Ed	3	0	3
EDU 177	Instructional Methods	2	2	3
EDU 179	Vocational Student Organizations	3	0	3
EDU 271	Educational Technology	2	2	3
EDU 281	Instruc Strat/Read and Writ	2	2	3
ISC 121	Environmental Health & Safety	3	0	3

Office Administration - Degree (A 25 37 0)

Curriculum Description

The Office Administration curriculum prepares individuals for positions in administrative support careers. It equips office professionals to respond to the demands of a dynamic computerized workplace. Students will complete courses designed to develop proficiency in the use of integrated software, oral and written communication, analysis and coordination of office duties and systems, and other support topics. Emphasis is placed on non-technical as well as technical skills. Graduates should qualify for employment in a variety of positions in business, government, and industry. Job classifications range from entry-level to supervisor to middle management.

Program Student Learning Outcomes

Graduates will be able to:

1. Key, format, and edit business documents according to professional guidelines and industry standards
2. Analyze the ability to understand the office environment, procedures, and policies
3. Display appropriate communication skills within the office environment
4. Develop business documents utilizing appropriate word processing software.
5. Develop business documents utilizing appropriate spreadsheet software.
6. Develop business documents utilizing appropriate presentation software.

1.	**General Education Requirements - 15 Credit Hours**				
	ECO 252	Prin of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
	COM 231	Public Speaking	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Humanities Elective	3	0	3

			Class Hours	Lab Hours	Credit Hours
II.	**Required Core Courses - 15 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	OST 134	Text Entry and Formatting	2	2	3
	OST 164	Text Editing Applications	3	0	3
	OST 184	Records Management	2	2	3
	OST 289	Administrative Office Management	2	2	3
III.	**Other Major Required Courses - 32 Credit Hours**				
	ACC 120	Prin of Financial Acct	3	2	4
	BUS 115	Business Law I	3	0	3
	OST 153	Office Finance Solutions	1	2	2
	BUS 125	Personal Finance	3	0	3
	CTS 130	Spreadsheet	2	2	3
	CIS 165	Desktop Publishing I	2	2	3
	OST 131	Keyboarding	1	2	2
	OST 136	Word Processing	2	2	3
	OST 284	Emerging Technologies	1	2	2
	OST 286	Professional Development	3	0	3
	BUS 260	Business Communication	3	0	3
	WBL 110	World of Work	1	0	1
IV.	**Additional Major Required Courses -5/6 credit hours -Select Tract A or B**				
	Track A				
	CTS 125	Presentation Graphics	2	2	3
	DBA 110	Database Concepts	2	3	3
	Track B				
	OST 140	Internet Comm/Research	1	2	2
	WEB 214	Social Media	2	2	3
V.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**68/69**

Office Administration - Diploma (D 25 37 0)

I.	**General Education - 6 Credit Hours**				
	ENG 111	Writing & Inquiry	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
II.	**Required Core Courses - 15 Credit Hours**				
	CIS 110	Introduction to Computers	2	2	3
	OST 134	Text Entry and Formatting	2	2	3
	OST 164	Text Editing Applications	3	0	3
	OST 184	Records Management	2	2	3
	OST 289	Administrative Office Management	2	2	3
III.	**Other Major Required Courses - 22 Credit Hours**				
	ACC 120	Prin of Financial Acct	3	2	4
	OST 153	Office Finance Solutions	1	2	2
	BUS 125	Personal Finance	3	0	3
	CTS 125	Presentation Graphics	2	2	3
	OST 131	Keyboarding	1	2	2
	OST 136	Word Processing	2	2	3
	OST 286	Professional Development	3	0	3
	OST 284	Emerging Technologies	1	2	2
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**44**

Office Administration - Certificate

Office Administration - 14 Credit Hours (C 25 37 0)

CIS 110	Introduction to Computers	2	2	3
OST 131	Keyboarding	1	2	2
OST 134	Text Entry and Formatting	2	2	3
OST 136	Word Processing	2	2	3
OST 184	Records Management	2	2	3

Office Administration – Virtual Office Certificate 13 Credit Hours (C 25 37 0 01)

CIS 110	Introduction to Computers	2	2	3
OST 136	Word Processing	2	2	3
OST 153	Office Finance Solutions	3	0	2
OST 284	Emerging Technologies	1	2	2
WEB 214	Social Media	2	2	3

Office Administration - Specialist Certificate - 15 Credit Hours (C 25 37 0 02)

CIS 110	Introduction to Computers	2	2	3
OST 136	Word Processing	2	2	3
DBA 110	Database Concepts	2	3	3
CTS 130	Spreadsheet	2	2	3
CTS 125	Presentation Graphics	2	2	3

Office Administration – Social Media Specialist Certificate – 13 Credit Hours (C 25 37 0 03)

CIS 110	Introduction to Computers	2	2	3
OST 140	Internet Comm/Research	1	2	2
OST 284	Emerging Technologies	1	2	2
OST 286	Professional Development	3	0	3
WEB 214	Social Media	2	2	3

Paralegal Technology - Degree (A 25 38 0)

Curriculum Description

The Paralegal Technology curriculum prepares individuals to work under the supervision of attorneys by performing routine legal tasks and assisting with substantive legal work. A paralegal/legal assistant may not practice law, give legal advice, or represent clients in a court of law.

Coursework includes substantive and procedural legal knowledge in the areas of civil litigation, legal research and writing, real estate, family law, wills, estates, trusts, and commercial law. Required courses also include subjects such as English, mathematics, and computer utilization.

Graduates are trained to assist attorneys in probate work, investigations, public records search, drafting and filing legal documents, research, and office management. Employment opportunities are available in private law firms, governmental agencies, banks, insurance agencies, and other business organizations.

Program Student Learning Outcomes

Graduates will be able to:

1. Use written and oral discussion to discover and to articulate ideas
2. Identify and state problems, issues, arguments, and questions contained in a body of information
3. Demonstrate organization and documentation skills
4. Demonstrate the ability to locate, retrieve, and interpret public records
5. Demonstrate knowledge and application of the ethical standards of the practice of law
6. Demonstrate legal research and writing skills
7. Demonstrate and apply knowledge of relevant substantive and procedural authority

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Courses - 18/19 credit hours**				
	*ENG 111	Expository Writing	3	0	3
	+ENG 112	Argument-Based Research	3	0	3
	*ENG 114	Prof. Research and Reporting	3	0	3
		*Hum/Fine Arts Electve	3	0	3

			Class Hours	Lab Hours	Credit Hours
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
	*Social/Behavioral Science elective		3	0	3
II.	**Major Core Courses - 48 credit hours**				
	+LEX 110	Intro. To Paralegal Study	2	0	2
	+LEX 120	Legal Research/Writing I	2	2	3
	+LEX 130	Civil Injuries	2	0	2
	+LEX 140	Civil Litigation I	3	0	3
	+LEX 150	Commercial Law	2	2	3
	+LEX 210	Real Property I	2	0	2
	+LEX 240	Family Law	2	0	2
	+LEX 250	Wills, Estates, and Trusts	2	2	3
III.	**Other Major Hours**				
	*ACC 120	Prin of Financial Acct	3	2	4
	*CIS 110	Introduction to Computers	2	2	3
	*OST 136	Word Processing	2	2	3
	+LEX 121	Legal Research & Writing I	2	2	3
	+LEX 141	Civil Litigation II	2	2	3
	+LEX 160	Criminal Law & Procedure	2	2	3
	+LEX 211	Real Property II	1	4	3
	+LEX 270	Law Office Mgt./Tech.	1	2	2
	+LEX 280	Ethics and Professionalism	2	0	2
	Select 2 hours from the following:				
	+LEX 170	Administrative Law	2	0	2
	+LEX 220	Corporate Law	2	0	2
	+LEX 260	Bankruptcy & Collections	2	0	2
	+LEX 292	Selected Topics in Para. Tech.	1	2	2
Total Required Hours					**66/67**

* = *Conducted at Isothermal Community College* + = *Conducted at Western Piedmont Community College*

Sustainability Technologies – Degree (A 40 37 0)

Curriculum Description

The Sustainability Technologies curriculum is designed to prepare individuals for employment in environmental, construction, renewable energy, or related industries, where key emphasis is placed on energy production and waste reduction along with sustainable technologies.

Course work includes renewable energy, green building technology, and environmental technologies. Additional topics may include sustainability, energy management, waste reduction, renewable energy, site assessment, and environmental responsibility.

Graduates should qualify for positions within the renewable energy, construction, and/or environmental industries. Employment opportunities exist in both the government and private industry sectors where graduates may function as renewable energy technicians, sustainability consultants, environmental technicians, or green building supervisors.

Program Student Learning Outcomes

Graduates will be able to:

1. Utilize the developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues in renewable and natural resource management.
2. Assess, analyze, synthesize, and evaluate information objectively and deal professionally and ethically with clients, the public, and agency personnel.
3. Recognize and interpret natural and renewable resource laws and policies.
4. Demonstrate hands-on experience in renewable resource sampling, inventory, and measurement techniques.
5. Apply critical thinking and problem-solving skills in formulating and evaluating alternative solutions to complex problems in natural and renewable resource management and recommending and defending best alternatives.
6. Recognize and interpret natural and renewable resource problems and opportunities for change.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements – 19/20 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
	PHY 131	Physics – Mechanics	3	2	4
		OR			
	PHY 151	College Physics I (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Core Courses – 12 Credit Hours**				
	BIO 140	Environmental Biology	3	0	3
	SST 110	Intro to Sustainability	3	0	3
	SST 120	Energy Use Analysis	2	2	3
	SST 210	Issues in Sustainability	3	0	3
III.	**Required Subject Courses – 12 Credit Hours**				
	ALT 120	Renewable Energy Tech.	2	2	3
	ALT 250	Thermal Systems	2	2	3
	ELC 220	Photovoltaic Sys Tech	2	3	3
	SST 130	Modeling Renewable Energy	2	2	3
IV.	**Other Major Required Courses – 29 Credit Hours**				
	ARC 112	Constr. Matls & Methods	3	2	4
	BIO 140A	Environmental Biology Lab	0	3	1
	CIS 110	Introduction to Computers	2	2	3
	CST 131	OSHA/Safety/Certification	2	2	3
	CST 221	Statics/Structures	3	3	4
	ELC 112	DC/AC Electricity	3	6	5
	ELC 221	Advanced PV Sys Design	2	3	3
	SST 140	Green Building & Design Concepts	3	0	3
	SST 250	Sustain Capstone Project	1	6	3
V.	**Other Required Hours – 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**73-74**

Sustainability Technologies – Diploma (D 40 37 0)

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements– 10/11 Credit Hours**				
	ENG 111	Writing Inquiry	3	0	3
	MAT 121	Algebra/Trigonometry I	2	2	3
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
	PHY 131	Physics – Mechanics	3	2	4
		OR			
	PHY 151	College Physics (3-2-4)			
II.	**Required Core Courses – 12 Credit Hours**				
	BIO 140	Environmental Biology	3	0	3
	SST 110	Intro to Sustainability	3	0	3
	SST 120	Energy Use Analysis	2	2	3
	SST 210	Issues in Sustainability	3	0	3
II.	**Required Subject Courses – 12 Credit Hours**				
	ALT 120	Renewable Energy Tech.	2	2	3
	ELC 220	Photovoltaic Sys Tech	2	3	3
	ALT 250	Thermal Systems	2	2	3
	SST 130	Modeling Renewable Energy	2	2	3

			Class Hours	Lab Hours	Credit Hours
III.	**Other Major Required Courses – 7 Credit Hours**				
	BIO 140A	Environmental Biology Lab	0	3	1
	ELC 221	Advanced PV Sys Design	2	3	3
	SST 140	Green Building & Design Concepts	3	0	3
Total Required Hours					**41/42**

Sustainability Technologies – Certificate

Sustainability Technologies – 13 Credit Hours (C 40 37 0)				
BIO 140	Environmental Biology	3	0	3
BIO 140A	Environmental Biology Lab	0	3	1
SST 110	Intro to Sustainability	3	0	3
SST 120	Energy Use Analysis	2	2	3
SST 210	Issues in Sustainability	3	0	3
Alternative Energies – 12 Credit Hours (C 40 37 0 02)				
ALT 120	Renewable Energy Tech.	2	2	3
ELC 220	Photovoltaic Sys Tech	2	3	3
ALT 250	Thermal Systems	2	2	3
SST 130	Modeling Renewable Energy	2	2	3

Web Technologies - Degree (A 25 29 0)

Curriculum Description

The Web Technologies curriculum prepares graduates for careers in the information technology arena using computers and distributed computing to disseminate and collect information via the web. Course work in this program covers the terminology and use of computers, network devices, networks, servers, databases, applications, programming languages, as well as web applications, site development and design. Studies will provide opportunity for students to learn related industry standards. Graduates should qualify for career opportunities as designers, administrators, or developers in the areas of web application, websites, web services, and related areas of distributed computing.

Program Student Learning Outcomes

Graduates will be able to:

1. Demonstrate planning techniques for building professional websites.
2. Employ industry standard techniques for designing effective web content.
3. Create professional website layouts and designs.
4. Understand website security concerns.
5. Use industry standard tools including but not limited to Dreamweaver, HTML, Scripting, and web based technologies to create a professional website.
6. Demonstrate an understanding of the basic concepts of web marketing, e-commerce, and the social/technical evolution of web based technologies.

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ECO 252	Principles of Macroeconomics	3	0	3
	ENG 111	Writing & Inquiry	3	0	3
		Humanities Elective	3	0	3
	COM 231	Public Speaking	3	0	3
	MAT 110	Mathematical Measurement and Literacy	2	2	3
		Or			
	MAT 143	Quantitative Literacy	2	2	3
		Or			
	MAT 152	Statistical Methods I	3	2	4
II.	**Required Core Courses - 36 Credit hours**				
	CIS 115	Intro to Programming and Logic	2	3	3
	DBA 110	Database Concepts	2	3	3
	WEB 110	Internet/Web Fundamentals	2	2	3
	WEB 115	Web Markup and Scripting	2	2	3
	WEB 210	Web Design	2	2	3

			Class Hours	Lab Hours	Credit Hours
	WEB 225	Content Management Systems	2	2	3
	WEB 250	Database Driven Websites	2	2	3
	BUS 110	Introduction to Business	3	0	3
	NET 125	Networking Basics	1	4	3
	WEB 140	Web Development Tools	2	2	3
	WEB 182	PHP Programming	2	2	3
	WEB 285	Emerging Web Technologies	2	2	3
III.	**Other Major Required Courses - 15 Credit Hours**				
	SEC 110	Security Concepts	2	2	3
	CTS 285	Systems Analysis & Design	3	0	3
	NOS 110	Operating System Concepts	2	3	3
		*Electives: (choose a minimum of 6 credit hours)			6
		BUS 230 Small Business Mgmt			
		CSC 134 C++ Programming			
		CSC 139 Visual Basic programming			
		CIS 110 Introduction to Computers			
		GRD 151 Computer Design Basics			
		NET 126 Routing Basics			
		NOS 120 Linux/UNIX Admin I			
		NOS 130 Windows Single User			
IV.	**Other Required Hours - 2 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
	WBL 110	World of Work	1	0	1
Total Required Hours					**68/69**

Web Technologies – Certificate

Web Technologies - 12 Credit Hours (C 25 29 0)

SEC 110	Security Concepts	2	2	3
WEB 115	Web Markup and Scripting	2	2	3
WEB 210	Web Design	2	2	3
WEB 140	Web Development Tools	2	2	3

Emerging Web Technologies – Certificate

Emerging Web Technologies - 12 Credit Hours (C 25 29 0 01)

WEB 115	Web Markup and Scripting	2	2	3
WEB 210	Web Design	2	2	3
WEB 140	Web Development Tools	2	2	3
WEB 285	Emerging Web Technologies	2	2	3

Welding Technology - Degree (A 50 42 0)

Curriculum Description

The Welding Technology curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metalworking industry.

Instruction includes consumable and non-consumable electrode welding and cutting processes. Courses may include math, print reading, metallurgy, welding inspection, and destructive and non-destructive testing providing the student with industry-standard skills developed through classroom training and practical application.

Graduates of the Welding Technology curriculum may be employed as entry-level technicians in welding and metalworking industries. Career opportunities also exist in construction, manufacturing, fabrication, sales, quality control, supervision, and welding-related self-employment.

Program Student Learning Outcomes

Graduates will be able to:

1. Understand the disciplines specific and critical for the safe and reasonable practice of welding
2. Demonstrate the abilities, attributes and characteristics desired by the construction industry, including effective relationship skills and effective self-presentation to demonstrate employability, and key workplace skills such as critical thinking and problem solving
3. Possess the intellectual abilities, the exercise of good judgment, and the prompt completion of all responsibilities required for the certification process associated with the AWS certification
4. Develop mature, sensitive, effective, and professional relationships with other students, faculty members, department administrators, industry partners, and potential employers
5. Conditioned, physically and mentally ability to tolerate taxing workloads and display flexibility to learning and functioning under stress when faced with uncertainties inherent to the welding occupation
6. Demonstrate knowledge of the machines, tools and equipment with understanding of their design, use, maintenance, and safety procedures for the protection of the people and property
7. Understand the materials, production processes, quality control, and cost for maximizing the effective manufacturing goods and the welding process
8. Differentiate coupon performance task monitoring and assessing of daily performance of oneself and others, organizing, seeking instructional cretic
9. Observe, recreate, imitate the task with reliable expertise with high quality and minimal instruction, and demonstrate to other learners and instructors

			Class Hours	Lab Hours	Credit Hours
I.	**General Education Requirements - 15/16 Credit Hours**				
	ENG 111	Writing and Inquiry	3	0	3
	ENG 112	Writing/Research in the Disc	3	0	3
		OR			
	COM 231	Public Speaking (3-0-3)			
	MAT 110	Math Measurement & Literacy	2	2	3
		OR			
	MAT 121	Algebra/Trigonometry I (2-2-3)			
		OR			
	MAT 171	Precalculus Algebra (3-2-4)			
		Humanities/Fine Arts Elective	3	0	3
		Social/Behavioral Sciences Elective	3	0	3
II.	**Required Core Courses - 18 Credit Hours**				
	WLD 110	Cutting Processes	1	3	2
	WLD 115	SMAW (stick) Plate	2	9	5
	WLD 121	GMAW (MIG) FCAW/Plate	2	6	4
	WLD 131	GTAW (TIG) Plate	2	6	4
	WLD 141	Symbols and Specifications	2	2	3
III.	**Other Major Required Courses - 36 Credit Hours**				
	BPR 111	Print Reading	1	2	2
	CIS 110	Introduction to Computers	2	2	3
	WLD 116	SMAW (Stick) Plate/Pipe	1	9	4
	WLD 122	GMAW (MIG) Plate/Pipe	1	6	3
	WLD 132	GTAW (TIG) Plate/Pipe	1	6	3
	WLD 143	Welding Metallurgy	1	2	2
	WLD 151	Fabrication I	2	6	4
	WLD 215	SMAW (Stick) Pipe	1	9	4
	WLD 231	GTAW (Tig) Pipe	1	6	3
	WLD 261	Certification Practices	1	3	2
	WLD 262	Inspection and Testing	2	2	3
	WOL 110	Basic Construction Skills	2	3	3
IV.	**Other Required Hours - 1 Credit Hour**				
	ACA 115	Success & Study Skills	0	2	1
Total Required Hours					**70/71**

Welding Technology - Diploma (D 50 42 0)

I.	**General Education Requirements - 6 Credit Hours**				
	ENG 101	Applied Communications I	3	0	3
		OR			
	ENG 111	Writing and Inquiry (3-0-3)			
	MAT 110	Math Measurement & Literacy	2	2	3
	MAT 121	Algebra/Trigonometry I (2-2-3)			
II.	**Required Core Courses - 18 Credit Hours**				
	WLD 110	Cutting Processes	1	3	2
	WLD 115	SMAW (stick) Plate	2	9	5
	WLD 121	GMAW (MIG) FCAW/Plate	2	6	4
	WLD 131	GTAW (TIG) Plate	2	6	4
	WLD 141	Symbols and Specifications	2	2	3
III.	**Other Major Required Courses - 23 Credit Hours**				
	BPR 111	Print Reading	1	2	2
	WLD 116	SMAW (Stick) Plate/Pipe	1	9	4
	WLD 122	GMAW (MIG) Plate/Pipe	1	6	3
	WLD 132	GTAW (TIG) Plate/Pipe	1	6	3
	WLD 143	Welding Metallurgy	1	2	2
	WLD 215	SMAW (Stick) Pipe	1	9	4
	WLD 261	Certification Practices	1	3	2
	WOL 110	Basic Construction Skills	2	3	3
Total Required Hours					**47**

Welding Technology – Certificate (C 50 42 0)

Basic Welding - 16 Credit Hours (C 50 42 0 01)

BPR 111	Print Reading	1	2	2
WLD 110	Cutting Processes	1	3	2
WLD 115	SMAW (stick) Plate	2	9	5
WLD 116	SMAW (Stick) Plate/Pipe	1	9	4
WOL 110	Basic Construction Skills	2	3	3

**If students successfully complete all modules, upon completion of this certificate they will earn Level I Welding NCCER credential.

Advanced Welding – 16 Credit Hours (C 50 42 0 02)

WLD 121	GMAW (MIG) FCAW/Plate	2	6	4
WLD 122	GMAW (MIG) Plate/Pipe	1	6	3
WLD 131	GTAW (TIG) Plate	2	6	4
WLD 141	Symbols and Specifications	2	2	3
WLD 143	Welding Metallurgy	1	2	2

**If students successfully complete all modules, upon completion of this certificate they will earn Level II Welding NCCER credential.

Advanced Welding and Inspection Processes– 15 Credit Hours (C 50 42 0 03)

WLD 132	GTAW (TIG) Plate/Pipe	1	6	3
WLD 215	SMAW (Stick) Pipe	1	9	4
WLD 231	GTAW (Tig) Pipe	1	6	3
WLD 261	Certification Practices	1	3	2
WLD 262	Inspection and Testing	2	2	3

**If students successfully complete all modules, upon completion of this certificate they will earn Level III Welding NCCER credential.

COURSE DESCRIPTIONS

The courses listed on the following pages represent the current curriculum offerings in Arts and Sciences, Business Sciences, and Applied Sciences and Technology.

1. The courses are listed in alphabetical order by a 3-letter subject (example - BUS for business; ANT for anthropology).
2. The courses are assigned a 3-digit number (example ACA 115)
3. Any course number less than 100 will not earn credit hours toward graduation.
4. The course title follows the number (example - ACA 115 Success & Study Skills)
5. The number of contact and credit hours follow the title (example ACA 115 Success & Study Skills 0 2 1). The first number represents the number of lecture hours per week; the second represents the number of lab, shop, clinical, or practicum hours per week; the last represents the number of credit hours assigned to the course.

ACADEMIC RELATED (Lecture Lab/Shop Credit)

ACA 115 Success & Study Skills (0 2 1)
Prerequisites: None
Corequisites: None
This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

ACA 122 College Transfer Success (1 0 1)
Prerequisites: None
Corequisites: None
This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college policies and culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ACCOUNTING

ACC 120 Principles of Financial Accounting (3 2 4)
Prerequisites None
Corequisites: None
This course introduces business decision-making accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ACC 121 Principles of Managerial Accounting (3 2 4)
Prerequisites: ACC 120
Corequisites: None
This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ACC 129 Individual Income Taxes (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms.

ACC 180 Practices in Bookkeeping (3 0 3)
Prerequisites: ACC 120
Corequisites: None
This course provides advanced instruction in bookkeeping and record-keeping functions. Emphasis is placed on mastering adjusting entries, correction of errors, depreciation, payroll, and inventory. Upon completion, students should be able to conduct all key bookkeeping functions for small business.

ACC 220 Intermediate Accounting I (3 2 4)
Prerequisites: ACC 120
Corequisites: None
This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and extensive analysis of balance sheet components. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.

AIR CONDITIONING, HEATING AND REFRIGERATION

AHR 120 HVACR Maintenance (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces the basic principles of industrial air conditioning and heating systems. Emphasis is placed on preventive maintenance procedures for heating and cooling equipment and related components. Upon completion, students should be able to perform routine preventive maintenance tasks, maintain records, and assist in routine equipment repairs.

AHR 130 HVAC Controls (2 2 3)
Prerequisites: AHR 111, ELC 111 or ELC 112
Corequisites: None
This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls, control schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls.

AHR 151 HVAC Duct Systems I (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work.

AHR 160 Refrigerant Certification (1 0 1)
Prerequisites: None
Corequisites: None
This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations.

AHR 210 Residential Building Code (1 2 2)
Prerequisites: None
Corequisites: None
This course covers the residential building codes that are applicable to the design and installation of HVAC systems. Topics include current residential codes as applied to HVAC design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of residential building codes that apply to specific areas of the HVAC trade.

AHR 211 Residential System Design (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

ALTERNATIVE ENERGY TECHNOLOGY

ALT 120 Renewable Energy Tech (2 2 3)
Prerequisites: None
Corequisites: None
This course provides an introduction to multiple technologies that allow for the production and conservation of energy from renewable sources. Topics include hydo-electric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact on humans and their environment.

ALT 250 Thermal Systems (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces concepts, tools, techniques, and materials used to convert thermal energy into a viable, renewable energy resource. Topics include forced convection, heat flow and exchange, radiation, the various elements of thermal system design, regulations, and system installation and maintenance. Upon completion, students should be able to demonstrate an understanding of geothermal and solar thermal systems and corresponding regulations.

ANTHROPOLOGY

ANT 210 General Anthropology (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

ANT 220 Cultural Anthropology (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

ARCHITECTURE

ARC 111 Introduction to Architectural Technology (1 6 3)
Prerequisites: None
Corequisites: None
This course introduces basic architectural drafting techniques, lettering, use of architectural and engineer scales, and sketching. Topics include orthographic, axonometric, and oblique drawing techniques using architectural plans, elevations, sections, and details; reprographic techniques; and other related topics. Upon completion, students should be able to prepare and print scaled drawings within minimum architectural standards.

ARC 112 Constr Matls & Methods (3 2 4)
Prerequisites: None
Corequisites: None
This course introduces construction materials and methodologies. Topics include construction terminology, traditional and alternative materials and their properties, manufacturing processes, construction techniques, and other related topics. Upon completion, students should be able to detail construction assemblies and identify construction materials and properties.

ARC 114 Architectural CAD (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces basic architectural CAD techniques. Topics include basic commands and system hardware and software. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards.

ARC 131 Building Codes (2 2 3)
Prerequisites: ARC-112 or CAR-111
Corequisites: None
This course covers the methods of researching building codes for specific projects. Topics include residential and commercial building codes. Upon completion, students should be able to determine the code constraints governing construction projects.

ARC 132 Specifications & Contracts (2 0 2)
Prerequisites: ARC-112
Corequisites: None
This course covers the development of written specifications and the implications of different contractual arrangements. Topics include specification development, contracts, bidding material research, and agency responsibilities. Upon completion, students should be able to write a specification section and demonstrate the ability to interpret contractual responsibilities.

ART

ART 111 Art Appreciation (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 114 Art History Survey 1 (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 115 Art History Survey 1I (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 118 Art by Women (3 0 3)
Prerequisites: None
Corequisites: None
This course provides an analytical study of the works of representative female artists. Emphasis is placed on the historical and cultural contexts, themes, and aesthetic features of individual works. Upon completion, students should be able to interpret, analyze, and discuss selected works. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 121 Two-Dimensional Design (0 6 3)
Prerequisites: None
Corequisites: None
This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 131 Drawing I (0 6 3)
Prerequisites: None
Corequisites: None
This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 132 Drawing II (0 6 3)
Prerequisites: ART 131
Corequisites: None
This course continues instruction in the language of drawing and the use of various materials. Emphasis is placed on experimentation in the use of drawing techniques, media, and graphic materials. Upon completion, students should be able to demonstrate increased competence in the expressive use of graphic form and techniques. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 140 Basic Painting (0 4 2)
Prerequisites: None
Corequisites: None
This course introduces the mechanics of painting. Emphasis is placed on the exploration of painting media through fundamental techniques. Upon completion, students should be able to demonstrate a basic understanding and application of painting. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 240 Painting I (0 6 3)
Prerequisites: None
Corequisites: None
This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ART 241 Painting II (0 6 3)
Prerequisites: ART 240
Corequisites: None
This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

ASTRONOMY

AST 111 Descriptive Astronomy (3 0 3)
Prerequisites: None
Corequisites: AST 111A
This course introduces an overall view of modern astronomy. Topics include an overview of the solar system, the sun, stars, galaxies, and the larger universe. Upon completion, students should be able to demonstrate an understanding of the universe around them. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AST 111A Descriptive Astronomy Lab (0 2 1)
Prerequisites: None
Corequisites: AST 111
This course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 111 and which provide practical experience. Upon completion, students should be able to demonstrate an understanding of the universe around them. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AST 151 General Astronomy I (3 0 3)
Prerequisites: DMA 010, 020, 030, 040 and 050 (L)
Corequisites: 151A
This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets, and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AST 151A General Astronomy I Lab (0 2 1)
Prerequisites: None
Corequisites: AST 151
The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AST 152 General Astronomy II (3 0 3)
Prerequisites: AST 151/151A
Corequisites AST 152A
This course is a continuation of AST 151 with primary emphasis beyond the solar system. Topics include the sun, stars, galaxies, and the larger universe, including cosmology. Upon completion, students should be able to demonstrate a working knowledge of astronomy. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AST 152A General Astronomy II Lab (0 2 1)
Prerequisites: AST 151/151A
Corequisites: AST 152
The course is a laboratory to accompany AST 152. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 152 and which provide practical experience. Upon completion, students should be able to demonstrate a working knowledge of astronomy. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AST 251 Observational Astronomy (1 3 2)
Prerequisites: AST 111 or AST 152
Corequisites: None
This course covers the operation of the telescope and related observatory equipment. Emphasis is placed on the use of the telescope and related observatory equipment, including techniques of data collection, measurements, and data analysis. Upon completion, students should be able to set up a telescope and use the coordinate system to locate objects, collect data, and make measurements with the telescope. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

AUTOMATION & ROBOTICS

ATR 211 Robot Programming (2 3 3)
Prerequisites: None
Corequisites: None
This course provides the operational characteristics of robots and programming in their respective languages. Topics include robot programming, teach pendants, PLC integration, operator interfaces, the interaction of external sensors, machine vision, network systems, and other related devices. Upon completion, students should be able to program and demonstrate the operation of various robots.

ATR 215 Sensors and Transducers (2 3 3)
Prerequisites: None
Corequisites: None
This course provides the theory and application of sensors typically found in an automated manufacturing system. Topics include physical properties, operating range, and other characteristics of numerous sensors and transducers used to detect temperature, pressure, position, and other desired physical parameters. Upon completion, students should be able to properly interface a sensor to a PLC, PC, or process control system.

ATR 218 Work Cell Integration (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces high technology systems which are currently being used in new automated manufacturing facilities. Topics include integration of robots and work cell components, switches, proxes, vision and photoelectric sensors, with the automated control and data gathering systems. Upon completion, students should be able to install, program, and troubleshoot an automated manufacturing cell and its associated data communications systems.

AUTOMOTIVE BODY REPAIR

AUB 111 Painting & Refinishing I (2 6 4)
Prerequisites: None
Corequisites: None
This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

AUB 112 Painting & Refinishing II (2 6 4)
Prerequisites: AUB 111
Corequisites: None
This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.

AUB 114 Special Finishes (1 2 2)
Prerequisites: AUB 111
Corequisites: None
This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards.

AUB 121 Non-Structural Damage I (1 4 3)
Prerequisites: None
Corequisites: None
This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/ replacing of body panels to accepted standards.

AUB 122 Non-Structural Damage II (2 6 4)
Prerequisites: None
Corequisites: None
This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware.

AUB 131 Structural Damage I (2 4 4)
Prerequisites: None
Corequisites: None
This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/moderate structural damage.

AUB 132 Structural Damage II (2 6 4)
Prerequisites: AUB 131
Corequisites: None
This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards.

AUB 136 Plastics & Adhesives (1 4 3)
Prerequisites: None
Corequisites: None
This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards.

AUB 150 Automotive Detailing (1 3 2)
Prerequisites: None
Corequisites: None
This course covers the methods and procedures used in automotive detailing facilities. Topics include safety, engine, interior and trunk compartment detailing, buffing/polishing exterior surfaces, and cleaning and reconditioning exterior trim, fabrics, and surfaces. Upon completion, students should be able to improve the overall appearance of a vehicle.

AUB 160 Body Shop Operations (1 0 1)
Prerequisites: None
Corequisites: None
This course introduces the day-to-day operations of autobody repair facilities. Topics include work habits and ethics, customer relations, equipment types, materials cost and control, policies and procedures, shop safety and liabilities, and other related topics. Upon completion, students should be able to understand the general operating policies and procedures associated with an autobody repair facility.

AUB 162 Autobody Estimating (1 2 2)
Prerequisites: None
Corequisites: None
This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report.

BANKING AND FINANCE

BAF 110 Principles of Banking (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the fundamentals of bank functions in a descriptive fashion. Topics include banks and the monetary system, the relationship of banks to depositors, the payment functions, bank loans and accounting, regulations, and examinations. Upon completion, students should be able to demonstrate an understanding of the business of banking from a broad perspective.

BAF 131 Fundamentals of Bank Lending (3 0 3)
Prerequisites: ACC 120
Corequisites: None
This course introduces the basic knowledge and skills needed to be an effective lender. Topics include the functions of the loan interview and credit investigation, the "C"s of credit, elements of loan documentation, and warning signs of problem loans. Upon completion, students should be able to demonstrate an understanding of the credit functions and regulatory issues affecting this key banking function. *This course is a unique concentration requirement of the Banking and Finance concentration in the Business Administration program.*

BAF 141 Law & Banking: Principles (3 0 3)
Prerequisites: None
Corequisites: None
This course provides an overview of the legal aspects of banking and the legal framework within which banks function. Topics include the court system, consumer protection, tangible and intangible property ownership, and the legalities and regulations of bank transactions. Upon completion, students should be able to discuss the non-technical aspects of the legal system and how these affect the bank's organization and operation. *This course is a unique concentration requirement of the Banking and Finance concentration in the Business Administration program.*

BAF 222 Money and Banking (3 0 3)
Prerequisites: None
Corequisites: None
This course provides a fundamental treatment of how money and banks function in the US and world economies. Topics include the roles of money in the US economy, the functions of the Federal Reserve Board, and the workings of monetary and fiscal policies. Upon completion, students should be able to explain how the monetary economy functions, how banks are creators of money, and the impact of the Federal Reserve. *This course is a unique concentration requirement of the Banking and Finance concentration in the Business Administration program.*

BIOLOGY

BIO 110 Principles of Biology (3 3 4)
Prerequisites: None
Corequisites: None
This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, taxonomy, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life. *Under the Comprehensive Articulation Agreement, this course satisfies the general education Natural Science requirement for the AA and AFA degrees. It does not satisfy the general education Natural Science requirement for the AS degree.*

BIO 111 General Biology I (3 3 4)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

BIO 112 General Biology II (3 3 4)
Prerequisites: BIO 111
Corequisites: None
This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

BIO 120 Introductory Botany (3 3 4)
Prerequisites: BIO 110 or BIO 111
Corequisites: None
This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

BIO 140 Environmental Biology (3 0 3)
Prerequisites: None
Corequisites: BIO 140A
This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

BIO 140A Environmental Biology Lab (0 3 1)
Prerequisites: None
Corequisites: BIO 140
This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. *This course is intended for all Associate degree programs. This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

BIO 155 Nutrition (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BIO 163 Basic Anatomy and Physiology (4 2 5)
Prerequisites: DRE 097 or satisfactory placement test scores (L)
Corequisites: None
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships. *This course is designed for certificate and diploma programs. This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BIO 168 Anatomy and Physiology I (3 3 4)
Prerequisites: DRE 097 (L)
Corequisites: None
This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their relationships. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BIO 169 Anatomy and Physiology II (3 3 4)
Prerequisites: BIO 168
Corequisites: None
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BIO 175 General Microbiology (2 2 3)
Prerequisites: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168
Corequisites: None
This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques. This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

BIO 275 Microbiology (3 3 4)
Prerequisites: BIO 110, 111, 112, BIO 163, BIO 165, or BIO 168
Corequisites: None
This course covers principles of microbiology and the impact these organisms have on man the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, mircobial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BLUEPRINT READING

BPR 111 Print Reading (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces the basic principles of print reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic prints and visualize the features of a part or system.

BPR 121 Blueprint Reading: Mechanical(1 2 2)
Prerequisites: BPR 111 or MAC 131
Corequisites: None
This course covers the interpretation of intermediate blueprints. Topics include tolerancing, auxiliary views, sectional views, and assembly drawings. Upon completion, students should be able to read and interpret a mechanical working drawing.

BPR 130 Print Reading: Construction (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the interpretation of prints and specifications that are associated with design and construction projects. Topics include interpretation of documents for foundations, floor plans, elevations, and related topics. Upon completion, students should be able to read and interpret construction prints and documents.

BROADCAST PRODUCTION

BPT 110 Introduction to Broadcasting (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the field of broadcasting and other electronic media. Emphasis is placed on the history, development, and current status of radio, television, and related industries. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, revenue sources, historical development, and on-going operation of broadcasting and related industries.

BPT 111 Broadcast Law & Ethics (3 0 3)
Prerequisites: None
Corequisites: None
This course covers judicial, legislative, and administrative policies pertinent to the ethical and legal operation of broadcast and other electronic media organizations. Emphasis is placed on legal and ethical issues including First Amendment protection, FCC regulations, copyright, and libel laws. Upon completion, students should be able to demonstrate an understanding of the historical significance and modern-day application of important broadcast laws and policies.

BPT 112 Broadcast Writing (3 2 4)
Prerequisites: None
Corequisites: None
This course introduces proper copy and script writing techniques and formats for radio, television, and other electronic media. Emphasis is placed on creating effective scripts for programs and promotional materials, including commercial and public radio service announcements for a specific target audience. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.

BPT 113 Broadcast Sales (3 0 3)
Prerequisites: None
Corequisites: None
This course covers sales principles applicable to radio, television, cable, and other electronic media. Emphasis is placed on prospecting and servicing accounts, developing clients, and preparing sales presentations. Upon completion, students should be able to create a sales presentation based upon standard ratings reports, prospect for new customers, and understand account management.

BPT 115 Public Relations (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the art and science of analyzing trends, predicting their consequences, counseling organizations, and implementing actions to serve organizational and public interests. Emphasis is placed on identifying public needs, conducting and analyzing research, writing and communicating information, maintaining media relations, and creating an organizational crisis plan. Upon completion, students should be able to summarize public relations history, conduct research, develop press releases, create printed material, and formulate a crisis plan.

BPT 121 Broadcast Speech I (2 3 3)
Prerequisites: None
Corequisites: None
This course covers basic preparation and performance of on-air talents' speaking quality. Emphasis is placed on developing a pleasant and efficient voice with techniques applied to taped news, features, commercial copy, and announcing. Upon completion, students should be able to show improvement and aptitude in proper articulation, pronunciation, rate of delivery, pitch, breathing techniques, inflection, projection, and phrasing.

BPT 131 Audio/Radio Production I (2 6 4)
Prerequisites: None
Corequisites: None
This course covers the creation, development, production, and presentation of audio programming elements for broadcast and/or other electronic media applications. Emphasis is placed on the proper operation of professional audio equipment and the study of basic physical behavior and perceptual effects of sound. Upon completion, students should be able to correctly operate audio recording and playback equipment and demonstrate an understanding of the basic components of sound.

BPT 132 Audio/Radio Production II (2 6 4)
Prerequisites: BPT 131
Corequisites: None
This course cover the use of advanced audio production techniques in broadcast and/or other electronic media applications. Topics include basic audio signal processing equipment and analog and digital professional audio recording and playback equipment. Upon completion, students should be able to optimize the use of professional audio equipment in the production of effective audio programming.

BPT 135 Radio Performance I (0 6 2)
Prerequisites: None
Corequisites: None
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

BPT 136 Radio Performance II (0 6 2)
Prerequisites: BPT 135
Corequisites: None
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

BPT 137 Radio Performance III (0 6 2)
Prerequisites: BPT 136
Corequisites: None
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

BPT 138 Radio Performance IV (0 6 2)
Prerequisites: BPT 137
Corequisites: None
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

BPT 139 Radio Performance V (0 6 2)
Prerequisites: BPT 138
Corequisites: None
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

BPT 140 Introduction to TV Systems (2 0 2)
Prerequisites: None
Corequisites: None
This course introduces technical systems that allow production, transmission, and reception of television and other video media. Emphasis is placed on identifying components and equipment, describing their function within the video chain, and troubleshooting problems within the signal flow. Upon completion, students should be able to demonstrate an understanding of components and equipment in the video chain and provide basic preventive maintenance on equipment.

BPT 210 Broadcast Management (3 0 3)
Prerequisites: None
Corequisites: None
This course covers management duties within the fields of broadcasting and other electronic media. Emphasis is placed on the management of broadcast stations and cable systems, including financial, personnel, news, sales, and promotion management. Upon completion, students should be able to demonstrate knowledge of successful station operation, including key management concepts and strategies.

BPT 215 Broadcast Programming (3 0 3)
Prerequisites: None
Corequisites: None
This course covers programming methods, research, and resources needed to provide programs for radio, television, cable, and satellite target audiences. Topics include market research and analysis; local, network, and public station programming and program sources; and scheduling procedures for electronic media. Upon completion, students should be able to develop a programming format or schedule.

BPT 220 Broadcast Marketing (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces broadcast marketing, including cultivating an audience, building an identity, and servicing customers. Topics include the use of effective promotional tools, marketing research, rating analysis, and the development of a unified marketing plan. Upon completion, students should be able to develop a broadcast marketing plan.

BPT 231 Video/TV Production I (2 6 4)
Prerequisites: None
Corequisites: None
This course covers the language of film/video, shot composition, set design, lighting, production planning, scripting, editing, and operation of video and television production equipment. Emphasis is placed on mastering the body of knowledge and techniques followed in producing all forms of video and television production. Upon completion, students should be able to produce basic video and television productions in a team environment.

BPT 232 Video/TV Production II (2 6 4)
Prerequisites: BPT 231
Corequisites: None
This course covers advanced video and television production. Emphasis is placed on field production, post-production, digital video effects, graphics, and multi-camera productions. Upon completion, students should be able to create productions that optimize the use of studio, field, and post-production equipment.

BPT 235 TV Performance I (0 6 2)
Prerequisites: None
Corequisites: None
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

BPT 236 TV Performance II (0 6 2)
Prerequisites: BPT 235
Corequisites: None
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

BPT 237 TV Performance III (0 6 2)
Prerequisites: BPT 236
Corequisites: None
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

BPT 238 TV Performance IV (0 6 2)
Prerequisites: BPT 237
Corequisites: None
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

BPT 239 TV Performance V (0 6 2)
Prerequisites: BPT 238
Corequisites: None
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

BPT 241 Broadcast Journalism I (3 2 4)
Prerequisites: None
Corequisites: None
This course introduces broadcast journalism, including the gathering, writing, delivery, editing, and production of news stories and reports. Emphasis is placed on proper news writing skills, including the creation of good leads and complete stories in the production of radio voices and reports. Upon completion, students should be able to write broadcast news scripts and produce radio news reports and newscasts.

BPT 242 Broadcast Journalism II (3 2 4)
Prerequisites: BPT 241
Corequisites: None
This course provides an opportunity to gather, write, edit, and produce broadcast news reports. Emphasis is placed on producing professional broadcast news reports, including script writing, gathering, and editing. Upon completion, students should be able to produce and record professional broadcast news stories.

BPT 250 Institutional Video (2 3 3)
Prerequisites: None
Corequisites: None
This course covers development and production of non-broadcast video productions for clients. Emphasis is placed on satisfying client objectives, including interviewing, research, site surveying, script review, photography, and post-production. Upon completion, students should be able to plan, write, shoot, and edit an institutional video designed to meet a client's objectives.

BPT 255 Computer-Based Production (2 3 3)
Prerequisites: CIS 110 or CIS 111
Corequisites: None
This course covers digital systems used for video, audio, and multimedia production. Emphasis is placed on computer-based tools integrating digital production with analog broadcast-related production. Upon completion, students should be able to understand and operate basic tools for video graphics, video capture, multimedia authoring, sound capture, and digital audio production.

BPT 260 Multi-Track Recording (2 2 3)
Prerequisites: BPT 132
Corequisites: None
This course covers the application of audio production techniques in a multi-track recording setting. Emphasis is placed on proper use of control room equipment and mix-down of multiple sound sources on both analog and digital recorders. Upon completion, students should be able to produce creative music or supplemental works using sound engineering techniques.

BPT 285 Broadcast Prod Capstone (1 6 3)
Prerequisites: BPT 132 or BPT 232
Corequisites: None
This course provides an opportunity to complete a broadcast production from the design phase through implementation with minimal instructor support. Emphasis is placed on planning/budgets, production, post-production and distribution. Upon completion, students should be able to plan, produce and distribute a broadcast production.

BUSINESS

BUS 110 Introduction to Business (3 0 3)
Prerequisites: None
Corequisites: None
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BUS 115 Business Law I (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BUS 125 Personal Finance (3 0 3)
Prerequisites: None
Corequisites; None
This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan.

BUS 137 Principles of Management (3 0 3)
Prerequisites: None
Corequisites: None
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

BUS 139 Entrepreneurship I (3 0 3)
Prerequisites: None
Corequisites: None
This course provides an introduction to the principles of entrepreneurship. Topics include self-analysis of entrepreneurship readiness, the role of entrepreneur in economic development, legal problems, organizational structure, sources of financing, budgeting, and cash flow. Upon completion, students should have an understanding of the entrepreneurial process and issues faced by entrepreneurs.

BUS 153 Human Resource Management (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns.

BUS 225 Business Finance (2 2 3)
Prerequisites: ACC 120
Corequisites: None
This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.

BUS 230 Small Business Management (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan.

BUS 245 Entrepreneurship II (3 0 3)
Prerequisites: BUS 139
Corequisites: None
This course is designed to allow the student to develop a business plan. Topics include the need for a business plan, sections of the plan, writing the plan, and how to find assistance in preparing the plan. Upon completion, students should be able to design and implement a business plan based on sound entrepreneurship principles.

BUS 253 Leadership and Management Skills (3 0 3)
Prerequisites: None
Corequisites: None
This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness.

BUS 255 Organizational Behavior in Business (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the impact of different management practices and leadership styles on worker satisfaction and morale, organizational effectiveness, productivity, and profitability. Topics include a discussion of formal and informal organizations, group dynamics, motivation, and managing conflict and change. Upon completion, students should be able to analyze different types of interpersonal situations and determine an appropriate course of action.

BUS 260 Business Communication (3 0 3)
Prerequisites: ENG 111; OST 131 or CIS 110 (L)
Corequisites: None
This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place.

BUS 280 REAL Small Business (4 0 4)
Prerequisites: None
Corequisites: None
This course introduces hands-on techniques and procedures for planning and opeing a small business, including the personal qualities needed for entrepreneurship. Emphasis is placed on market research, finance, time management, and day-to-day activities of owning/ operating a small business. Upon completion, student should be able to write and implement a viable business plan and seek funding.

CABINETMAKING

CAB 111 Cabinetmaking I (4 9 7)
Prerequisites: None
Corequisites: None
This course introduces wood technology, materials, purchasing, estimating, design considerations, and cabinet construction. Topics include wood identification and use, hand tools, safe machine operation, glue and clamping, abrasives, wood joinery, kitchen and bath layout, laminates, and finishing techniques. Upon completion, students should be able to select and process materials; make sound production decisions; and design, lay out, construct, and install cabinets.

CARPENTRY

CAR 110 Introduction to Carpentry (2 0 2)
Prerequisites: None
Corequisites: None
This course introduces the student to the carpentry trade. Topics include duties of a carpenter, hand and power tools, building materials, construction methods, and safety. Upon completion, students should be able to identify hand and power tools, common building materials, and basic construction methods.

CAR 111 Carpentry I (3 15 8)
Prerequisites: None
Corequisites: None
This course introduces the theory and construction methods associated with the building industry, including framing, materials, tools, and equipment. Topics include safety, hand/power tool use, site preparation, measurement and layout, footings and foundations, construction framing, and other related topics. Upon completion, students should be able to safely lay out and perform basic framing skills with supervision.

CAR 112 Carpentry II (3 15 8)
Prerequisites: CAR 111
Corequisites: None
This course covers the advanced theory and construction methods associated with the building industry including framing and exterior finishes. Topics include safety, hand/power tool use, measurement and layout, construction framing, exterior trim and finish, and other related topics. Upon completion, students should be able to safely frame and apply exterior finishes to a residential building with supervision.

CAR 113 Carpentry III (3 9 6)
Prerequisites: CAR 111
Corequisites: None
This course covers interior trim and finishes. Topics include safety, hand/power tool use, measurement and layout, specialty framing, interior trim and finishes, cabinetry, and other related topics. Upon completion, students should be able to safely install various interior trim and finishes in a residential building with supervision.

CAR 116 Metal Framing (1 3 2)
Prerequisites: None
Corequisites: None
This course covers basic metal framing associated with residential and light construction. Topics include methods and procedures for framing floor, wall, and roof sections and other related topics. Upon completion, students should be able to properly install various metal framing components.

CAR 150 Concrete Construction (2 9 5)
Prerequisites: None
Corequisites: None
This course covers methods of erecting forms and placing concrete. Topics include safety, hand/power tool use, blueprints, rigging, form construction, reinforcement, and placement. Upon completion students should be able to demonstrate skills in concrete construction procedures and processes with supervision.

COMPUTER ENGINEERING TECHNOLOGY

CET 111 Computer Upgrade/Repair I (2 3 3)
Prerequisites: None
Corequisites: None
This course covers repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include CPU/memory/bus identification, disk subsystems, hardware/software installation/configuration, common device drivers, data recovery, system maintenance, and other related topics. Upon completion, students should be able to safely repair and/or upgrade computer systems to perform within specifications.

CET 161 Procedural Programming (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces procedural computer programming for Engineering applications. Emphasis is placed on event-driven programming methods, including creating and manipulating data, sequencing, iteration, and blocking of code. Upon completion, students should be able to design, code, test and debug at a beginning level.

CET 242 High Performance Comp (2 3 3)
Prerequisites: None
Corequisites: None
This course covers advanced concepts associated with high performance computing and network technologies. Topics include render farms, clusters, parallelism and grid services. Upon completion, the student should be able to install, manage, and troubleshoot a network cluster and a grid.

CET 245 Internet Servers (2 3 3)
Prerequisites: None
Corequisites: None
This course covers the setup and management of Internet server hardware and software. Topics include TCP/IP, FTP, SMTP, and HTTP; installation and configuration of server software for web, FTP, DNS, mail, and other services. Upon completion, students should be able to set up and maintain Internet servers.

CET 251 Software Eng Principles (3 3 4)
Prerequisites: None
Corequisites: None
This course introduces the methodology used to manage the development process for complex software systems. Topics include the software life cycle, resource allocation, team dynamics, design techniques, and tools that support these activities. Upon completion, students should be able to design and build robust software in a team setting.

CHEMISTRY

CHM 131 Introduction to Chemistry (3 0 3)
Prerequisites: DMA 010, 020, 030, 040 and 050 or satisfactory placement test scores (L)
Corequisites: CHM 131A
This course introduces the fundamental concepts of inorganic chemistry. Topics include measurement, matter and energy, atomic and molecular structure, nuclear chemistry, stoichiometry, chemical formulas and reactions, chemical bonding, gas laws, solutions, and acids and bases. Upon completion, students should be able to demostrate a basic understanding of chemistry as it applies to other fields. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

CHM 131A Introduction to Chemistry Laboratory (0 3 1)
Prerequisites: DMA 010, 020, 030, 040 and 050 or satisfactory placement test scores (L)
Corequisites: CHM 131
This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

CHM 132 Organic and Biochemistry (3 3 4)
Prerequisites: CHM 131 & 131A or CHM 151
Corequisites: None
This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related professional fields. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

CHM 151 General Chemistry I (3 3 4)
Prerequisites: DMA 010, 020, 030, 040, 050, 060, 070 and 080 or satisfactory placement test scores (L)
Corequisites: None
This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

CHM 152 General Chemistry II (3 3 4)
Prerequisites: CHM 151
Corequisites: None
This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ionic and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and complexions. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed to pursue further study in chemistry and related professional fields. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

CHM 251 Organic Chemistry I (3 3 4)
Prerequisites: CHM 152
Corequisites: None
This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CHM 252 Organic Chemistry II (3 3 4)
Prerequisites: CHM 251
Corequisites: None
This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CHM 261 Quantitative Analysis (2 6 4)
Prerequisites: CHM 152
Corequisites: None
This course introduces classical methods of chemical analysis with an emphasis on laboratory techniques. Topics include statistical data treatment; stoichiometric and equilibrium calculations; and titrimetric, gravimetric, acid-base, oxidation-reduction, and complexometric methods. Upon completion, students should be able to perform classical quantitative analytical procedures. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CHM 271 Biochemical Principles (3 0 3)
Prerequisites: CHM 252
Corequisites: CHM 271A
The course covers fundamental principles of biochemistry. Topics include structures, properties, reactions, and mechanisms of biomacromolecules including amino acids, peptides, proteins, carbohydrates and nucleic acids, enzymatic metabolic pathways, and biochemical genetics. Upon completion, students should be able to demonstrate an understanding of fundamental biochemical processes. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CHM 271A Biochemical Principles Laboratory (0 3 1)
Prerequisites: CHM 252
Corequisites: CHM 271
This course is a laboratory for CHM 271. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 271. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 271. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

INFORMATION SYSTEMS

CIS 110 Introduction to Computers (2 2 3)
Prerequisites: None Corequisites: None
This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

CIS 115 Introduction to Programming & Logic (2 3 3)
Take One Set:
Prerequisites: Set 1: DMA-010, DMA-020, DMA-030, and DMA-040;
Set 2: MAT-060* and MAT-070;
Set 3: MAT-060* and MAT-080;
Set 4: MAT-060* and MAT-090;
Set 5: MAT-095;
Set 6: MAT-120;
Set 7: MAT-121;
Set 8: MAT-161;
Set 9: MAT-171;
Set 10: MAT-175
Corequisites: None
This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

CIS 165 Desktop Publishing I (2 2 3)
Prerequisites: OST 136 or proficiency in word processing
Corequisites: None
This course provides an introduction to desktop publishing software capabilities. Emphasis is placed on efficient use of a page layout software package to create, design, and print publications; hardware/software compatibility; and integration of specialized peripherals. Upon completion, students should be able to prepare publications given design specifications.

CRIMINAL JUSTICE

CJC 100 Basic Law Enforcement Training (9 30 19)
Prerequisites: None
Corequisites: None
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination. *This is a certificate-level course.*

CJC 111 Introduction to Criminal Justice (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CJC 112 Criminology (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response.

CJC 113 Juvenile Justice (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition.

CJC 120 Interviews/Interrogations (1 2 2)
Prerequisites: None
Corequisites: None
This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavior and legal perspectives. Upon completion, students should be able to conduct interviews/interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims.

CJC 121 Law Enforcement Operations (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CJC 122 Community Policing (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing.

CJC 131 Criminal Law (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.

CJC 132 Court Procedure & Evidence (3 0 3)
Prerequisites: None
Corequisites: None
This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence.

CJC 141 Corrections (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CJC 151 Intro to Loss Prevention (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.

CJC 212 Ethics & Community Relations (3 0 3)
Prerequisites: None
Corequisites: None
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations.

CJC 221 Investigative Principles (3 2 4)
Prerequisites: None
Corequisites: None
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.

CJC 222 Criminalistics (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the functions of the forensic laboratory and its relationship to successful criminal investigations and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.

CJC 223 Organized Crime (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the evolution of traditional and non-traditional organized crime and its effect on society and the criminal justice system. Topics include identifying individuals and groups involved in organized crime, areas of criminal activity, legal and political responses to organized crime, and other related topics. Upon completion, students should be able to identify the groups and activities involved in organized crime and the responses of the criminal justice system.

CJC 225 Crisis Intervention (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous, or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution.

CJC 231 Constitutional Law (3 0 3)
Prerequisites: None
Corequisites: None
The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.

CJC 232 Civil Liability (3 0 3)
Prerequisites: None
Corequisites: None
This course covers liability issues for the criminal justice professional. Topics include civil rights violations, tort liability, employment issues, and other related topics. Upon completion, students should be able to explain civil trial procedures and discuss contemporary liability issues.

CJC 255 Issues in Crim Justice App (3 0 3)
Prerequisites: CJC 111, CJC 221, and CJC 231
Corequisites: None
This course provides an opportunity to exhibit interpersonal and technical skills required for application of criminal justice concepts in contemporary practical situations. Emphasis is placed on critical thinking and integration of theory and practical skills components. Upon completion, students should be able to demonstrate the knowledge required of any entry-level law enforcement officer.

CONSTRUCTION MANAGEMENT

CMT 120 Codes and Inspections (3 0 3)
Prerequisites: None
Corequisites: None
This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects.

CMT 210 Construction Management Fund (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the student to the fundamentals of effective supervision emphasizing professionalism through knowledge and applied skills. Topics include safety, planning and scheduling, contracts, problem-solving, communications, conflict resolution, recruitment, employment laws and regulations, leadership, motivation, teamwork, discipline, setting objectives, and training. Upon completion, students should be able to demonstrate the basic skills necessary to be successful as a supervisor in the construction industry.

CMT 212 Total Safety Performance (3 0 3)
Prerequisites: None
Corequisites: CMT 210
This course covers the importance of managing safety and productivity equally by encouraging people to take individual responsibility for safety and health in the workplace. Topics include safety management, controlling construction hazards, communicating and enforcing policies, OSHA compliance, personal responsibility and accountability, safety planning, training, and personal protective equipment. Upon completion, the student should be able to properly supervise safety at a construction jobsite and qualify for OSHA Training Certification.

COMMUNICATION

COM 231 Public Speaking (3 0 3)
Prerequisites: None
Corequisites: None
This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

COM 251 Debate I (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the principles of debate. Emphasis is placed on argument, refutation, research, and logic. Upon completion, students should be able to use research skills and logic in the presentation of ideas within the context of formal debate. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

COSMETOLOGY

COS 111 Cosmetology Concepts I (4 0 4)
Prerequisites: None
Corequisites: COS 112
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

COS 112 Salon I (0 24 8)
Prerequisites: None
Corequisites: COS 111
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

COS 113 Cosmetology Concepts II (4 0 4)
Prerequisites: None
Corequisites: COS 114
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 114 Salon II (0 24 8)
Prerequisites: None
Corequisites: COS 113
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

COS 115 Cosmetology Concepts III (4 0 4)
Prerequisites: None
Corequisites: COS 116
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 116 Salon III (0 12 4)
Prerequisites: None
Corequisites: COS 115
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

COS 117 Cosmetology Concepts IV (2 0 2)
Prerequisites: None
Corequisites: COS 118
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.

COS 118 Salon IV (0 21 7)
Prerequisites: None
Corequisites: COS 117
This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.

COS 119 Esthetics Concepts I (2 0 2)
Prerequisites: None
Corequisites: None
This course covers the concepts of esthetics. Topics include orientation, anatomy, physiology, hygiene, sterilization, first aid, chemistry, basic dermatology, and professional ethics. Upon completion, students should be able to demonstrate an understanding of the concepts of esthetics and meet course requirements.

COS 120 Esthetics Salon I (0 18 6)
Prerequisites: None
Corequisites: None
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting.

COS 121 Manicure/Nail Technology I (4 6 6)
Prerequisites: None
Corequisites: None
This course covers techniques of nail technology, hand and arm massage, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriology, product knowledge, salesmanship, manicures, artificial applications, pedicures, massage, and other related topics. Upon completion, students should be able to safely and competently perform nail care, including manicures, pedicures, massage, decorating, and artificial applications in a salon setting.

COS 125 Esthetics Concepts II (2 0 2)
Prerequisites: None
Corequisites: None
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, makeup, and color analysis. Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.

COS 126 Esthetics Salon II (0 18 6)
Prerequisites: None
Corequisites: None
This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, massage therapy, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians.

COS 222 Manicure/Nail Technology II (4 6 6)
Prerequisites: COS 121
Corequisites: None
This course covers advanced techniques of nail technology and hand and arm massage. Topics include OSHA/safety, product knowledge, customer service, salesmanship, artificial applications, nail art, and other related topics. Upon completion, students should be able to demonstrate competence necessary for the licensing examination, including advanced nail care, artificial enhancements, and decorations.

COS 223 Contemporary Hair Coloring (1 3 2)
Prerequisites: COS 111 and COS 112
Corequisites: None
This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a client's color needs and safely and competently perform color applications and correct problems.

COS 224 Trichology and Chemistry (1 3 2)
Prerequisites: None
Corequisites: None
This course is a study of hair and the interaction of applied chemicals. Emphasis is placed on pH actions and the reactions and effects of chemical ingredients. Upon completion, students should be able to demonstrate an understanding of chemical terminology, pH testing, and chemical reactions on hair.

COS 225 Advanced Contemporary Hair Coloring (1 3 2)
Prerequisites: COS 223
Corequisites: None
This course covers advanced techniques in coloring applications and problem solving situations. Topics include removing unwanted color, replacing pigment and re-coloring, removing coating, covering gray and white hair, avoiding color fading, and poor tint results. Upon completion, students should be able to apply problem-solving techniques in hair coloring situations.

COS 240 Contemporary Design (1 3 2)
Prerequisites: COS 111 and COS 112
Corequisites: None
This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.

COS 250 Computerized Salon Ops (1 0 1)
Prerequisites: None
Corequisites: None
This course introduces computer and salon software. Emphasis is placed on various computer and salon software applications. Upon completion, students should be able to utilize computer skills and software applications in the salon setting.

COS 251 Manicure Instructor Concepts (8 0 8)
Prerequisites: None
Corequisites: None
This course introduces manicuring instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervision techniques, and assess student classroom performance.

COS 252 Manicure Instructor Practicum (0 15 5)
Prerequisites: None
Corequisites: COS 251
This course covers supervisory and instructional skills for teaching manicuring students in a laboratory setting. Topics include demonstrations of services, supervision, student assessment, and other related topics. Upon completion, students should be able to demonstrate competence in the areas covered by the Manicuring Instructor Licensing Examination and meet program completion requirements.

COS 253 Esthetics Instructor Concepts I (6 15 11)
Prerequisites: None
Corequisites: None
This course introduces esthetic instructional concepts and skills. Topics include orientation, theories of education, unit planning, daily lesson plans, laboratory management, student assessment in a laboratory setting. Upon completion, students should be able to demonstrate esthetic services and instruct and objectively assess student performance in a classroom setting.

COS 254 Esthetics Instructor Concepts II (6 15 11)
Prerequisites: None
Corequisites: None
This course covers advanced esthetic instructional concepts and skills. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools, record keeping and other related topics. Upon completion, students should be able to demonstrate competencies in the areas covered by the Esthetics Instructor Licensing Examination and meet program requirements.

COS 271 Instructor Concepts I (5 0 5)
Prerequisites: None
Corequisites: COS 272
This course introduces the basic cosmetology instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervisory techniques, and assess student performance in a classroom setting.

COS 272 Instructor Practicum I (0 21 7)
Prerequisites: None
Corequisites: COS 271
This course covers supervisory and instructional skills for teaching entry-level cosmetology students in a laboratory setting. Topics include demonstrations of services, supervision, and entry-level student assessment. Upon completion, students should be able to demonstrate salon services and instruct and objectively assess the entry-level student.

COS 273 Instructor Concepts II (5 0 5)
Prerequisites: COS 271 and COS 272
Corequisites: COS 274
This course covers advanced cosmetology instructional concepts. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools, record keeping, and other related topics. Upon completion, students should be able to develop lesson plans, demonstrate supervision techniques, assess student performance in a classroom setting, and keep accurate records.

COS 274 Instructor Practicum II (0 21 7)
Prerequisites: COS 271 and COS 272
Corequisites: COS 273
This course is designed to develop supervisory and instructional skills for teaching advanced cosmetology students in a laboratory setting. Topics include practical demonstrations, supervision, and advanced student assessment. Upon completion, students should be able to demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements.

COMPUTER SCIENCE

CSC 134 C++ Programming (2 3 3)
Prerequisites: CIS 115 or ELN 232 & DMA 010, DMA 040, DMA 050 (L)
Corequisites: None
This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CSC 139 Visual BASIC Programming (2 3 3)
Prerequisites: CIS 115 or ELN 232 & DMA 010, DMA 040, DMA 050 (L)
Corequisites: None
This course introduces event-driven computer programming using the Visual BASIC programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, forms, sequential files, and other related topics. Upon completion, students should be able to design, code, test, and debug Visual BASIC language programs. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CSC 234 Advanced C++ Programming (2 3 3)
Prerequisites: CSC 134
Corequisites: None
This course is a continuation of CSC 134 using C++ with structured programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, subprograms, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions.

CSC 239 Advanced Visual BASIC Programming (2 3 3)
Prerequisites: CSC 139
Corequisites: None
This course is a continuation of CSC 139 using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

CSC 289 Programming Capstone Project (1 4 3)
Prerequisites: CTS 285
Corequisites: None
This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete a project from the definition phase through implementation.

CONSTRUCTION

CST 111 Construction I (3 3 4)
Prerequisites: None
Corequisites: None
This course covers standard and alternative building methods to include wall framing. Topics include safety and footings, foundations, floor framing systems, and wall framing systems commonly used in the construction industry. Upon completion, students should be able to safely erect all framing necessary to begin roof framing.

CST 112 Construction II (3 3 4)
Prerequisites: CST 111
Corequisites: None
This course covers building methods and materials used to dry-in a building. Topics include safety, ceiling/roof framing applications, roof finishes, windows, and exterior doors. Upon completion, students should be able to safely erect different roof types and properly install windows and exterior doors, roofing, and exterior finish materials.

CST 131 OSHA/Safety/Certification (2 2 3)
Prerequisites: None
Corequisites: None
This course covers the concepts of work site safety. Topics include OSHA regulations, tool safety, and certifications which relate to the construction industry. Upon completion, students should be able to identify and maintain a safe working environment based on OSHA regulations and maintain proper records and certifications.

CST 211 Construction Surveying (2 3 3)
Prerequisites: MAT 121 or MAT 171
Corequisites: None
This course covers field surveying applications for residential and commercial construction. Topics include building layout and leveling, linear measurement and turning angles, plumbing vertical members, and topographic and utilities surveys. Upon completion, students should be able to properly and accurately use surveying equipment to lay out residential and commercial buildings.

CST 221 Statics/Structures (3 3 4)
Prerequisites: MAT 121 or MAT 171, and ARC 112 or CAR 112 or CST 112
Corequisites: None
This course covers the principles of statics and strength of materials as applied to structural building components. Topics include forces on columns, beams, girders, and footings and connection points when timber, steel, and concrete members are used. Upon completion, students should be able to accurately analyze load conditions present in structural members.

CST 241 Planning/Estimating (2 2 3)
Prerequisites: BPR 130, MAT 121 or MAT 171
Corequisites: None
This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project.

CST 244 Sustainable Building Design (2 3 3)
Prerequisites: None
Corequisites: None
This course is designed to increase student knowledge about integrating sustainable design principles and green building technologies into mainstream residential construction practices. Emphasis is placed on reducing negative environmental impact and improving building performance, indoor air quality and the comfort of a building's occupants. Upon completion, students should be able to identify principles of green building, environmental efficiency and conservation of natural resources in relation to basic construction practices.

CST 251 Electrical Wiring Systems (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces residential and commercial electrical wiring systems. Topics include safety, care and use of tools and materials, use of NEC, circuit planning, over current protection, and installation of conduits, cables, and conductors. Upon completion, students should be able to correctly identify tools, materials, and procedures for electrical installation.

COMPUTER INFORMATION TECHNOLOGY

CTS 115 Information Systems Business Concept (3 0 3)
Prerequisites: None
Corequisites: None
The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

CTS 120 Hardware/Software Support (2 3 3)
Prerequisites: CIS 110
Corequisites: None
This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

CTS 125 Presentation Graphics (2 2 3)
Prerequisites: CIS 110
Corequisites: None
This course provides hands-on experience with a graphics presentation package. Topics include terminology, effective chart usage, design and layout, integrating hardware components, and enhancing presentations with text, graphics, audio and video. Upon completion, students should be able to design and demonstrate an effective presentation.

CTS 130 Spreadsheet (2 2 3)
Prerequisites: CIS 110 or CIS 111 or OST 137
Corequisites: None
This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.

CTS 155 Technical Support Functions (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Emphasis is placed on technical support management techniques and support technologies. Upon completion, students should be able to determine the best technologies to support and solve actual technical support problems.

CTS 217 Computer Training Support (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces computer training and support techniques. Topics include methods of adult learning, training design, delivery, and evaluation, creating documentation, and user support methods. Upon completion, students should be able to design and implement training and provide continued support for computer users.

CTS 220 Adv. Hard/Software Support (2 3 3)
Prerequisites: CTS 120
Corequisites: None
This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic networking on personal computers.

CTS 285 Systems Analysis & Design (3 0 3)
Prerequisites: CIS 115
Corequisites: None
This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.

CTS 289 System Support Project (1 4 3)
Prerequisites: CTS 285
Corequisites: None
This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation.

DATABASE MANAGEMENT

DBA 110 Database Concepts (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

DESIGN DRAFTING

DDF 211 Design Process I (1 6 4)
Prerequisites: None
Corequisites: None
This course emphasizes design processes for finished products. Topics include data collection from manuals and handbooks, efficient use of materials, design sketching, specifications, and vendor selection. Upon completion, students should be able to research and plan the design process for a finished product.

DDF 221 Design Drafting Project (0 4 2)
Prerequisites: DFT 111, DFT 112, and DFT 151
Corequisites: None
This course incorporates ideas from concept to final design. Topics include reverse engineering, design for manufacturability, and mock-up construction. Upon completion, students should be able to generate working drawings and models based on physical design parameters.

DESIGN CREATIVE

DES 135 Prin & Elem of Design I (2 4 4)
Prerequisites: None
Corequisites: None
This course introduces the basic concepts and terminology of design as they relate to the design profession. Topics include line, pattern, space, mass, shape, texture, color, unity, variety, rhythm, emphasis, balance, proportion, scale, and function. Upon completion, students should be able to demonstrate an understanding of the principles covered through hands-on application.

DRAFTING

DFT 111 Technical Drafting I (1 3 2)
Prerequisites: None
Corequisites: DFT 111A (Local)
This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorials drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices.

DFT 111A Technical Drafting I Lab (0 3 1)
Prerequisites: None
Corequisites DFT 111
This course provides a laboratory setting to enhance basic drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 111. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 111.

DFT 112 Technical Drafting II (1 3 2)
Prerequisites: DFT 111
Corequisites: DFT 112A (Local)
This course provides for advanced drafting practices and procedures. Topics include detailed working drawings, hardware, fits and tolerances, assembly and sub-assembly, geometric dimensioning and tolerancing, intersections, and developments. Upon completion, students should be able to produce detailed working drawings.

DFT 112A Technical Drafting II Lab (0 3 1)
Prerequisites: DFT 111/111A (Local)
Corequisites DFT 112
This course provides a laboratory setting to enhance advanced drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 112. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 112.

DFT 121 Introduction to Geometric Dimensioning & Tolerancing (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces basic geometric dimensioning and tolerancing principles. Topics include symbols, annotation, theory, and applications. Upon completion, students should be able to interpret and apply basic geometric dimensioning and tolerancing principles to drawings.

DFT 151 CAD I (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

DFT 152 CAD II (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.

DFT 153 CAD III (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data.

DFT 154 Introduction Solid Modeling (2 3 3)
Prerequisites: None
Corequisites: None
This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing.

DFT 231 Jig and Fixture Design (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces the study of jigs and fixtures. Topics include different types, components, and uses of jigs and fixtures. Upon completion, students should be able to analyze, design, and complete a set of working drawings for a jig or fixture.

DEVELOPMENTAL MATH

Initial student placement in MAT 050 and DMA courses is based on the Placement Guidelines on page 15. Students should begin developmental math courses at the appropriate level indicated by placement test scores.

MAT 050 Basic Math Skills (3 2 4)*
Prerequisites: None
Corequisites: None
This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems.

DMA 010 Operations With Integers (0.75 0.50 1)*
Prerequisites: Satisfactory Placement Test Score or MAT 050
Corequisites: None
This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions.

DMA 020 Fractions and Decimals (0.75 0.50 1)*
Prerequisites: DMA 010
Corequisites: None
This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals.

DMA 030 Proportion/Ratio/Rate/Percent (0.75 0.50 1)*
Prerequisites: DMA 010 and DMA 020
Corequisites: None
This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent, proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems.

DMA 040 Expressions/Linear Equations/ Inequalities (0.75 0.50 1)*
Prerequisites: DMA 010 through DMA 030
Corequisites: None
This course provides a conceptual study of problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities.

DMA 050 Graphs/Equations of Lines (0.75 0.50 1)*
Prerequisites: DMA 010 through DMA 040
Corequisites: None
This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables.

DMA 060 Polynomial/Quadratic Applications (0.75 0.50 1)*
Prerequisites: DMA 010 through DMA 050
Corequisites: None
This course provides a conceptual study of problems involving graphic and algebraic representations of quadratics. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications.

DMA 070 Rational Expressions/Equations (0.75 0.50 1)*
Prerequisites: DMA 010 through DMA 060
Corequisites: None
This course provides a conceptual study of problems involving graphic and algebraic representations of rational equations. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications.

DMA 080 Radical Expressions/Equations (0.75 0.50 1)*
Prerequisites: DMA 010 through DMA 070
Corequisites: None
This course provides a conceptual study of the manipulation of radicals and the application of radical equations to real-world problems. Topics include simplifying and performing operations with radical expressions and rational exponents, solving equations, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with radical applications.

*These credits are institutional credits only and cannot be used for graduation. They are used for determining hour load for payment, eligibility for financial aid, or classification as a full-time student.

DEVELOPMENTAL ENGLISH

Initial student placement in DRE courses is based on the Placement Guidelines on page 15. Students should begin developmental English courses at the appropriate level indicated by placement test scores.

DRE 096 Integrated Reading and Writing (2.50 1 3)*
Prerequisites: Placement Score
Corequisites: None
This course develops proficiency in specific integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are primarily taught at the introductory level using texts primarily in a Lexile® range of 860 to 1010. Upon completion, students should be able to apply those skills toward understanding a variety of academic and career-related texts and composing effective paragraphs.

DRE 097 Integrated Reading Writing II (2.50 1 3)*
Prerequisites: DRE 096
Corequisites: None
This course develops proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught at a reinforcement level using texts primarily in a Lexile® range of 960 to 1115. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of complex academic and career texts and composing essays incorporating relevant, valid evidence.

DRE 098 Integrated Reading Writing III (2.50 1 3)*
Prerequisites: DRE 097
Corequisites: None
This course develops proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught using texts primarily in the Lexile® range of 1100 to 1320 in order to prepare students to be career and college ready. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay.

*These credits are institutional credits only and cannot be used for graduation. They are used for determining hour load for payment, eligibility for financial aid, or classification as a full-time student.

ECONOMICS

ECO 251 Principles of Microeconomics (3 0 3)
Prerequisites: DMA 010, DMA 040, DMA 050 (L)
Corequisites: None
This course introduces economic analysis of individuals, business, and industry choices in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

ECO 252 Principles of Macroeconomics (3 0 3)
Prerequisites: DMA 010, DMA 020, DMA 030 (L)
Corequisites: None
This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

EDUCATION

EDU 118 Principles and Practices of Instructional Assistant (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers the instructional assistant's role in the educational system. Topics include history of education, professional responsibilities and ethics, cultural diversity, communication skills, and identification of the optimal learning environment. Upon completion, students should be able to describe the supporting role of the instructional assistant, demonstrate positive communication skills, and discuss educational philosophy.

EDU 119 Introduction to Early Childhood Education (4 0 4)
Prerequisites: None
Corequisites: None
This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for all children. Topics include historical foundations, program types, career options, professionalism and creating inclusive environments and curriculum responsive to the needs of all children and families. Upon completion, students should be able to design career plans and develop schedules, environments and activity plans appropriate for all children.

EDU 131 Child, Family, and Community (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers the development of partnerships between culturally and linguistically diverse families, children, schools and communities. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. Upon completion, students should be able to explain appropriate relationships between families, educators, and professionals that enhance development and educational experiences of all children.

EDU 144 Child Development I (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course includes the theories of child development, needs, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.

EDU 145 Child Development II (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.

EDU 146 Child Guidance (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors.

EDU 151 Creative Activities (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments.

EDU 153 Health, Safety and Nutrition (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations.

EDU 154 Social, Emotional and Behavioral Development (3 0 3)
Prerequisites: (EDU 144 and EDU 145) or (PSY 244 and PSY 245)
Corequisites: DRE 097
This course covers the emotional/social development of children and the causes, expressions, prevention and management of challenging behaviors in all children. Emphasis is placed on caregiver/family/child relationships, positive emotional/social environments, developmental concerns, risk factors, and intervention strategies. Upon completion, students should be able to identify factors influencing emotional/social development, utilizing screening measures, and designing positive behavioral supports.

EDU 161 Introduction to Exceptional Children (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers children with exceptionalities as life long learners within the context of the community, school and family. Emphasis is placed on inclusion, legal, social/political, environmental, and cultural issues relating to the teaching of children with exceptionalities. Upon completion, students should be able to demonstrate knowledge of identification processes, inclusive techniques, and professional practices and attitudes.

EDU 163 Classroom Management & Instruction (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers management and instructional techniques with school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and instructional strategies that enhance the teaching/learning process and promote students' academic success.

EDU 175 Introduction to Trade and Industrial Education (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course introduces the philosophy, scope, and objectives of industrial education. Topics include the development of industrial education, employment opportunities, current events, current practices, and emerging trends. Upon completion, students should be able to describe the history, identify current practices, and describe current trends in industrial education.

EDU 176 Occupational Analysis and Course Development (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers the principles and techniques of analyzing occupations to select suitable competencies and teaching methods for learning activities. Topics include occupational analysis, instructional methods, competency identification, and curriculum writing. Upon completion, students should be able to identify competencies, organize instructional materials, and select appropriate instructional methods.

EDU 177 Instructional Methods (2 2 3)
Prerequisites: None
Corequisites: DRE 097
This course covers instructional methods in technical education with emphasis on competency-based instruction. Topics include writing objectives, industrial methods, and determining learning styles. Upon completion, students should be able to select and demonstrate the use of a variety of instructional methods.

EDU 178 Facilities, Organization and Planning (2 2 3)
Prerequisites: None
Corequisites: DRE 097
This course is a study of the problems related to educational facilities planning, layout, and management. Emphasis is placed on applying basic principles to actual projects relating to specific occupational areas. Upon completion, students should be able to lay out an educational facility for an occupational area and develop a plan for the facilities.

EDU 179 Vocational Student Organization (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers planning and organizing vocational youth clubs by understanding the structure and operating procedures to use club activities for personal and professional growth. Topics include self-assessment to set goals, club structure, election and installation of officers, club activities, function of committees, running meetings, contest preparation, and leadership skills. Upon completion students should be able to set personal goals, outline club structure, elect and install officers.

EDU 184 Early Childhood Introduction Practicum (1 3 2)
Prerequisites: EDU 119 Corequisites: DRE 097
This course introduces students to early childhood settings and applying skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting in the implementation of developmentally appropriate activities/environments for all children; and modeling reflective/professional practices. Upon completion, students should be able to demonstrate developmentally appropriate interactions with children and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU 185 Cognitive and Language Act (3 0 3)
Prerequisites: None
Corequisites: DRE 097
This course covers methods of developing cognitive and language/communication skills in children. Emphasis is placed on planning the basic components of language and cognitive processes in developing curriculum activities. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate developmentally appropriate curriculum activities.

EDU 214 Early Childhood Intermediate Practicum (1 9 4)
Prerequisites: EDU 119, (EDU 144 or PSY 244), EDU 146, EDU 184 (Local)
Corequisites: DRE 098
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting with the implementation of developmentally appropriate activities and environments for all children; modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU 216 Introduction to Education (3 2 4)
Prerequisites: None
Corequisites: DRE 098
This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational trends and issues, curriculum development, and observation and participation in public school classrooms. Upon completion, students should be able to relate classroom observations to the roles of teachers and schools and the process of teacher education.

EDU 221 Children with Exceptional (3 0 3)
Prerequisites: (EDU 144 and EDU 145) or (PSY 244 and PSY 245)
Corequisites: DRE 098
This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize diverse abilities, describe the referral process, and depict collaboration with families/professionals to plan/implement, and promote best practice.

EDU 223 Specific Learning Disability (3 0 3)
Prerequisites: (EDU 144 and EDU 145) or (PSY 244 and PSY 245)
Corequisites: DRE 098
This course provides a comprehensive study of characteristics, alternative assessments, teaching strategies, placement options, inclusion, and family intervention for children with specific learning disabilities. Topics include causes, assessment instruments, learning strategies, and collaborative/inclusion methods for children with specific learning disabilities. Upon completion, students should be able to assist in identifying, assessing, and providing educational interventions for children with specific learning disabilities and their families.

EDU 234 Infants, Toddlers, and Twos (3 0 3)
Prerequisites: EDU 119
Corequisites: DRE 098
This course covers the unique needs and rapid changes that occur in the first three years of life and the inter-related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families.

EDU 248 Developmental Delays (3 0 3)
Prerequisites: (EDU 144 and EDU 145) or (PSY 244 and PSY 245)
Corequisites: DRE 098
This course covers the causes and assessment of developmental delays and individualized instruction and curriculum for children with developmental delays. Emphasis is placed on definition, characteristics, assessment, educational strategies, inclusion, family involvement, and services for children with developmental delays. Upon completion, students should be able to identify, assess, and plan educational intervention strategies for children with developmental delays and their families.

EDU 252 Math and Science Activities (3 0 3)
Prerequisites: None
Corequisites: DRE 098
This course introduces discovery experiences in math and science. Topics include concepts, facts, phenomena, and skills in each area. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate developmentally appropriate curriculum materials.

EDU 254 Music and Movement for Child (1 2 2)
Prerequisites: None
Corequisites: DRE 098
This course covers the use of music and creative movement for children. Topics include a general survey of the basic elements of music and planning, designing, and implementing music and movement experiences for creative learning. Upon completion, students should be able to use voice and various musical instruments to provide musical and movement activities for children.

EDU 259 Curriculum Planning (3 0 3)
Prerequisites: EDU 119
Corequisites: DRE 098
This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to evaluate children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments.

EDU 261 Early Childhood Administration I (3 0 3)
Prerequisites: None
Corequisites: DRE 098 and EDU 119
This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards.

EDU 262 Early Childhood Administration II (3 0 3)
Prerequisites: EDU 261
Corequisites: DRE 098 and EDU 119
This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy. Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs.

EDU 271 Educational Technology (2 2 3)
Prerequisites: None
Corequisites: DRE 098
This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with exceptionalities, facilitation of assessment/ evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments.

EDU 275 Effective Teaching Training (2 0 2)
Prerequisites: None
Corequisites: DRE 098
This course provides specialized training using an experienced-based approach to learning. Topics include instructional preparation and presentation, student interaction, time management, learning expectations, evaluation, and curriculum principles and planning. Upon completion, students should be able to prepare and present a six-step lesson plan and demonstrate ways to improve students' time-on-task.

EDU 280 Language and Literacy Experience (3 0 3)
Prerequisites: None
Corequisites: DRE 098
This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences.

EDU 281 Instructor Strategies: Reading and Writing (2 2 3)
Prerequisites: None
Corequisites: DRE 098
This course covers concepts, resources, and methods for teaching reading and writing to elementary through middle-grade children. Topics include the importance of literacy, learning styles, skills assessment, various reading and writing approaches and instructional strategies. Upon completion, students should be able to assess, plan, implement and evaluate school-age literacy experiences as related to the North Carolina Standard Course of Study.

EDU 284 Early Childhood Capstone Practicum (1 9 4)
Prerequisites: EDU 119, (EDU 144 or PSY 244), (EDU 145 or PSY 245), EDU 146, EDU 151, EDU 184 (Local), EDU 214 (Local)
Corequisites: DRE 098
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/ professional behaviors as indicated by assignments and onsite faculty visits. *This course is required in the student's last semester (Local).*

EDU 285 Internship Experience-School Age (1 9 4)
Prerequisites: (EDU 144 or PSY 244), (EDU 145 or PSY 245), (EDU 118 or EDU 216), and EDU 163
Corequisites: DRE 098
This course is designed to allow students to apply skills in a quality public or private school environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/ involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate lesson plans/assessments, appropriate guidance techniques, ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU 289 Advanced Issues/School Age (2 0 2)
Prerequisites: None
Corequisites: DRE 098
This course covers advanced topics and issues that relate to school-age programs. Emphasis is placed on current advocacy issues, emerging technology, professional growth, ethics, and organizations for providers/teachers working with school-age populations. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues surrounding school-aged populations.

ENGINEERING

EGR 110 Introduction to Engineering Technology (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals.

EGR 250 Statics/Strength of Mater (4 3 5)
Prerequisites: MAT 121 or MAT 171
Corequisites: None
This course includes vector analysis, equilibrium of force systems, friction, sectional properties, stress/strain, and deformation. Topics include resultants and components of forces, moments and couples, free-body diagrams, shear and moment diagrams, trusses, frames, beams, columns, connections, and combined stresses. Upon completion, students should be able to analyze simple structures.

EGR 285 Design Project (0 4 2)
Prerequisites: None
Corequisites: None
This course provides the opportunity to design an instructor-approved project using previously acquired skills. Emphasis is placed on selection, proposal, design, testing, and documentation of the approved project. Upon completion, students should be able to present and demonstrate projects.

ELECTRICAL

ELC 111 Introduction to Electricity (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronic majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

ELC 112 DC/AC Electricity (3 6 5)
Prerequisites: None
Co-requisites: None
This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, and analyze simple DC/AC circuits.

ELC 113 Residential Wiring (2 6 4)
Prerequisites: None
Corequisites: None
This course introduces the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical print reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with residential electrical installations.

ELC 114 Commercial Wiring (2 6 4)
Prerequisites: None
Co-requisites: None
This course provides instruction in the application of electrical tools, materials, and test equipment associated with commercial electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with commercial electrical installations.

ELC 115 Industrial Wiring (2 6 4)
Prerequisites: None
Corequisites: None
This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.

ELC 117 Motors and Controls (2 6 4)
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.

ELC 118 National Electrical Code (1 2 2)
Prerequisites: None
Corequisites: None
This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.

ELC 119 NEC Calculations (1 2 2)
Prerequisites: None
Corequisites: None
This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.

ELC 127 Software for Technicians (1 3 2)
Prerequisites: ELC 111, ELC 112, or ELC 138 (Local)
Co-requisites: None
This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics- related applications.

ELC 128 Introduction to Programmable Logic Controller (PLC) (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/ installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to understand basic PLC systems and create simple programs.

ELC 132 Electrical Drawings (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces the technical documentation that is typically found or used in the industrial environment. Topics include interpretation of service manuals, freehand sketching, orthographic views and dimensions, and print reading. Upon completion, students should be able to interpret technical documents and prints and use basic drafting skills to prepare usable field drawings..

ELC 135 Electrical Machines (2 2 3)
Prerequisites: None
Co-requisites: None
This course covers magnetic circuits, transformers, DC/AC machines, and the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC machine circuits.

ELC 138 DC Circuit Analysis (3 3 4)
Prerequisites: None
Corequisites: None
This course introduces DC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, and analyze DC circuits; and properly use test equipment.

ELC 139 AC Circuit Analysis (3 3 4)
Prerequisites: None
Corequisites: None
This course introduces AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include AC voltages, circuit analysis laws and theorems, reactive components and circuits, transformers, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret AC circuit schematics; analyze and troubleshoot AC circuits; and properly use test equipment.

ELC 220 Photovoltaic Sys Tech (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces the concepts, tools, techniques, and materials needed to understand systems that convert solar energy into electricity with photovoltaic (pv) technologies. Topics include site analysis for system integration, building codes, and advances in photovoltaic technology. Upon completion, students should be able to demonstrate an understanding of the principles of photovoltaic technology and current applications.

ELC 221 Adv PV Sys Designs (2 3 3)
Prerequisites: ELC 220
Corequisites: None
This course introduces specific elements in photovoltaic (pv) systems technologies including efficiency, modules, inverters, charge controllers, batteries, and system installation. Topics include National Electrical Code (NEC), electrical specifications, photovoltaic system components, array design and power integration requirements that combine to form a unified structure. Upon completion, students should be able to demonstrate an understanding of various photovoltaic designs and proper installation of NEC compliant solar electric power systems.

ELC 228 Programmable Logic Controller (PLC) Applications (2 6 4)
Prerequisites: ELC 128 (Local)
Corequisites: None
This course covers programming and applications of programmable logic controllers. Emphasis is placed on programming techniques, networking, specialty I/O modules, and system troubleshooting. Upon completion, students should be able to specify, implement, and maintain complex PLC controlled systems.

ELC 229 Applications Project (1 3 2)
Prerequisites: None
Corequisites: None
This course provides an individual and/or integrated team approach to a practical project as approved by the instructor. Topics include project selection and planning, implementation and testing, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented project.

ELECTRONICS

ELN 131 Analog Electronics I (3 3 4)
Prerequisites: ELC 112 (Local) or ELC 138 (Local)
Co-requisites: None
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog circuits using appropriate techniques and test equipment.

ELN 133 Digital Electronics (3 3 4)
Prerequisites: None
Corequisites: None
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

ELN 152 Fabrication Techniques (1 3 2)
Prerequisites: None
Corequisites: None
This course covers the fabrication methods required to create a prototype product from the initial circuit design. Topics include CAD, layout, sheet metal working, component selection, PC board layout and construction, reverse engineering, soldering, and other related topics. Upon completion, students should be able to design and construct an electronic product with all its associated documentation.

ELN 229 Industrial Electronics (3 3 4)
Prerequisites: ELC 112 (Local)
Corequisites: None
This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices. Upon completion, students should be able to construct and/or troubleshoot these devices for proper operation in an industrial electronic circuit.

ELN 231 Industrial Controls (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret schematics and demonstrate an understanding of electromechanical and electronic control of rotating machinery.

ELN 232 Introduction to Microprocessors (3 3 4)
Prerequisites: None
Corequisites: None
This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.

ELN 233 Microprocessor Systems (3 3 4)
Prerequisites: ELN 232 (Local)
Corequisites: None
This course covers the application and design of microprocessor control systems. Topics include control and interfacing of systems using AD/DA, serial/parallel I/O, communication protocols, and other related applications. Upon completion, students should be able to design, construct, program, verify, analyze, and troubleshoot fundamental microprocessor interface and control circuits using related equipment.

EMERGENCY MEDICAL SCIENCE

EMS 110 EMT-Basic (5 6 0 7)
Prerequisites: None
Corequisites: None
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT-Basic certification.

EMS 120 Intermediate Intervention (2 3 0 3)
Prerequisites: Take EMS 110
Corequisites: EMS 121, EMS 130, and EMS 131
This course is designed to provide the necessary information for interventions appropriate to the EMT-Intermediate and is required for intermediate certification. Topics include automated external defibrillation, basic cardiac electrophysiology, intravenous therapy, venipuncture, acid-base balance, and fluids and electrolytes. Upon completion, students should be able to properly establish an IV line, obtain venous blood, utilize AEDs, and correctly interpret arterial blood gases.

EMS 121 EMS Clinical Practicum I (0 0 6 2)
Prerequisites: EMS 110
Corequisites: EMS 120, EMS 130, and EMS 131
This course is the initial hospital and field internship and is required for intermediate and paramedic certification. Emphasis is placed on intermediate-level care. Upon completion, students should be able to demonstrate competence with intermediate-level skills.

EMS 130 Pharmacology I for EMS (1 3 0 2)
Prerequisites: EMS 110
Corequisites: EMS 120 and EMS 131
This course introduces the fundamental principles of pharmacology and medication administration and is required for intermediate and paramedic certification. Topics include terminology, pharmacokinetics, pharmacodynamics, weights, measures, drug calculations, legislation, and administration routes. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.

EMS 131 Adv Airway Management (1 2 0 2)
Prerequisites: EMS 110
Corequisites: EMS 120 and EMS 130
This course is designed to provide advanced airway management techniques and is required for intermediate and paramedic certification. Topics include respiratory anatomy and physiology, airway, ventilation, adjuncts, surgical intervention, and rapid sequence intubation. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance.

EMS 140 Rescue Scene Management (1 3 0 2)
Prerequisites: None
Corequisites: None
This course introduces rescue scene management and is required for paramedic certification. Topics include response to hazardous material conditions, medical incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

EMS 150 Emerg Vehicles & EMS Comm (1 3 0 2)
Prerequisites: None
Corequisites: None
This course examines the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment and is required for paramedic certification. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs.

EMS 210 Adv. Patient Assessment (1 3 0 2)
Prerequisites: EMS 120, EMS 121, EMS 130, and EMS 131
Corequisites: None
This course covers advanced patient assessment techniques and is required for paramedic certification. Topics include initial assessment, medical-trauma history, field impression, complete physical exam process, on-going assessment, and documentation skills. Upon completion, students should be able to utilize basic communication skills and record and report collected patient data.

EMS 220 Cardiology (2 6 0 4)
Prerequisites: EMS 120, EMS 130, and EMS 131
Corequisites: None
This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, rhythm interpretation, cardiac pharmacology, and patient treatment. Upon completion, students should be able to certify at the Advanced Cardiac Life Support Provider level utilizing American Heart Association guidelines.

EMS 221 EMS Clinical Practicum II (0 0 9 3)
Prerequisites EMS 121
Corequisites None
This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

EMS 230 Pharmacology II for EMS (1 3 0 2)
Prerequisites: EMS 130
Corequisites: None
This course explores the fundamental classification and action of common pharmacologic agents. Emphasis is placed on the action and use of compounds most commonly encountered in the treatment of chronic and acutely ill patients. Upon completion, students should be able to demonstrate general knowledge of drugs covered during the course.

EMS 231 EMS Clinical Pract III (0 0 9 3)
Prerequisites: EMS 221
Corequisites: None
This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

EMS 235 EMS Management (2 0 0 2)
Prerequisites: None
Corequisites: None
This course stresses the principles of managing a modern emergency medical service system. Topics include structure and function of municipal governments, EMS grantsmanship, finance, regulatory agencies, system management, legal issues, and other topics relevant to the EMS manager. Upon completion, students should be able to understand the principles of managing emergency medical service delivery systems.

EMS 240 Special Needs Patients (1 2 0 2)
Prerequisites: EMS 120, EMS 121, EMS 130, and EMS 131
Corequisites: None
This course includes concepts of crisis intervention and techniques of dealing with special needs patients and is required for paramedic certification. Topics include behavioral emergencies, abuse, assault, challenged patients, personal well-being, home care, and psychotherapeutic pharmacology. Upon completion, students should be able to recognize and manage frequently encountered special needs patients.

EMS 241 EMS Clinical Practicum IV (0 0 9 3)
Prerequisites: EMS 231
Corequisites: None
This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic.

EMS 250 Adv. Medical Emergencies (2 3 0 3)
Prerequisites: EMS 120, EMS 121, EMS 130, and EMS 131
Corequisites: None
This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include pulmonology, neurology, endocrinology, anaphylaxis, gastroenterology, toxicology, and environmental emergencies integrating case presentation and emphasizing pharmacotherapeutics. Upon completion, students should be able to recognize and manage frequently encountered medical conditions based upon initial patient impression.

EMS 260 Advanced Trauma Emergencies (1 3 0 2)
Prerequisites: EMS 120, EMS 121, EMS 130, and EMS 131
Corequisites: None
This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include hemorrhage control, shock, burns, and trauma to head, spine, soft tissue, thoracic, abdominal, and musculoskeletal areas with case presentations utilized for special problems situations. Upon completion, students should be able to recognize and manage trauma situations based upon patient impressions and should meet requirements of BTLS or PHTLS courses.

EMS 270 Life Span Emergencies (2 2 0 3)
Prerequisites: EMS 120, EMS 130, and EMS 131
Corequisites: None
This course, required for paramedic certification, covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmacological therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies and certify at the Pediatric Advanced Life Support Provider level.

EMS 285 EMS Capstone (1 3 0 2)
Prerequisites: EMS 220, EMS 250, and EMS 260
Corequisites: None
This course provides an opportunity to demonstrate problem-solving skills as a team leader in simulated patient scenarios and is required for paramedic certification. Emphasis is placed on critical thinking, integration of didactic and psychomotor skills, and effective performance in simulated emergency situations. Upon completion, students should be able to recognize and appropriately respond to a variety of EMS-related events.

ENGLISH

ENG 101 Applied Communications I (3 0 3)
Prerequisites: None
Corequisites: None
This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling. Upon completion, students should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace. *This is a diploma-level course.*

ENG 111 Writing and Inquiry (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores
Corequisites: None
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in English composition.*

ENG 112 Writing/Research in the Disc (3 0 3)
Prerequisites: ENG 111
Corequisites: None
This course, the second in a series of two, introduces research techniques, documentation styles, and writing strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented writing and research projects. Upon completion, students should be able to evaluate and synthesize information from primary and secondary sources using documentation appropriate to various disciplines. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. This course is also available through the Virtual Learning Community (VLC).*

ENG 231 American Literature I (3 0 3)
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

ENG 232 American Literature II (3 0 3)
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

ENG 241 British Literature I (3 0 3)
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

ENG 242 British Literature II (3 0 3)
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

ENG 261 World Literature I (3 0 3)
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from their literary beginnings through the seventeenth century. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

ENG 262 World Literature II (3 0 3)
Prerequisites: ENG 112, ENG 113, or ENG 114
Corequisites: None
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from the eighteenth century to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

ENTREPRENEURSHIP

ETR 220 Innovation and Creativity (3 0 3)
Prerequisites: None
Corequisites: None
This course provides a study of developing and enhancing individual and organizational creativity and innovation. Topics include that innovation needs to be applied to products, services, and processes to increase competitive advantages and add value to businesses. Upon completion, students should be able to apply innovation and creativity principles in the work place.

ETR 230 Entrepreneur Marketing (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the techniques to correctly research and define the target market to increase sales for start up businesses or to expand current businesses. Topics include how to target market and meet customers' needs with a limited budget in the early stages of the life of a start up business. Upon completion, students should be able to demonstrate an understanding of how to correctly target market for a start-up business with limited resources.

ETR 240 Funding for Entrepreneurs (3 0 3)
Prerequisites: ACC 120
Corequisites: None
This course provides a focus on the financial issues and needs confronting entrepreneurs attempting to grow their businesses by attracting startup and growth capital. Topics include sources of funding including: angel investors, venture capital, IPO's, private placement, banks, suppliers, buyers, partners, and the government. Upon completion, students should be able to demonstrate an understanding of how to effectively finance a business venture.

ETR 270 Entrepreneurship Issues (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces current and emerging entrepreneurship issues and opportunities. Topics include franchising, import/export, small business taxes, legal structures, negotiations, contract management, and time management. Upon completion, students should be able to apply a variety of analytical and decision-making requirements to start a new business.

FILM AND VIDEO PRODUCTION

FVP 227 Multimedia Production (2 3 3)
Prerequisites: None
Corequisites: None
This course covers technical terms used in the multimedia industry and introduces skills related to digital manipulation of audio and video materials. Emphasis is placed on technical terms used in multimedia work and integration of sound, video, graphics, and text into a single production. Upon completion, students should be able to define technical terms in multimedia work and work with a variety of computer hardware and software.

GEOLOGY

GEL 111 Introductory Geology (3 2 4)
Prerequisites None
Corequisites: None
This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

GEOGRAPHY

GEO 111 World Regional Geography (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

GRAPHIC DESIGN

GRD 110 Typography I (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.

GRD 121 Drawing Fundamentals I (1 3 2)
Prerequisites: None
Corequisites: None
This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works.

GRD 131 Illustration I (1 3 2)
Prerequisites: ART 131 or DES 125 or GRD 121
Corequisites: None
This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork.

GRD 132 Illustration II (1 3 2)
Prerequisites: GRD 131
Corequisites: None
This course is a continuation of GRD 131. Topics include editorial, product, fashion, and advertising illustrations. Upon completion, students should be able to demonstrate increased proficiency in creating quality illustrations from conceptualization through finished artwork.

GRD 133 Illustration III (1 3 2)
Prerequisites: GRD 132
Corequisites: None
This course is designed to strengthen visual techniques and conceptual approaches to illustration. Emphasis is placed on advanced rendering techniques, requirements, and limitations. Upon completion, students should be able to create comprehensive illustrations that meet client/printer requirements.

GRD 141 Graphic Design I (2 4 4)
Prerequisites: None
Corequisites: None
This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.

GRD 142 Graphic Design II (2 4 4)
Prerequisites: DES 135 or GRD 141 or ART 121
Corequisites: None
This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various designs, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.

GRD 151 Computer Design Basics (1 4 3)
Prerequisites: None
Corequisites: None
This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.

GRD 152 Computer Design Technology I (1 4 3)
Prerequisites: GRD 151
Corequisites: None
This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present their work.

GRD 153 Computer Design Technology II (1 4 3)
Prerequisites: GRD 152
Corequisites: None
This course covers advanced theories and practices in the field of computer design. Emphasis is placed on advanced use of color palettes, layers, and paths. Upon completion, students should be able to creatively produce designs and articulate their rationale.

GRD 160 Photo Fundamentals I (1 4 3)
Prerequisites: None
Corequisites: None
This course introduces basic camera operations, roll film processing, and photographic print production. Topics include contrast, depth-of-field, subject composition, enlarger operation, and density control. Upon completion, students should be able to produce photographic prints with acceptable density values and quality.

GRD 161 Photo Fundamentals II (1 4 3)
Prerequisites: GRD 160
Corequisites: None
This course is a continuation of GRD 160. Topics include conversions, toning, color, specialized equipment, lighting, processing, and other methods and materials. Upon completion, students should be able to demonstrate proficiency in producing photographic prints.

GRD 162 Photography Portfolio (1 4 3)
Prerequisites: GRD 161
Corequisites: None
This course provides an opportunity to develop a portfolio through research and review of previous photographic works. Topics include visual communication skills and presentation of works. Upon completion, students should be able to prepare and present a portfolio of their photographic works.

GRD 167 Photographic Imaging I (1 4 3)
Prerequisites: None
Corequisites: None
This course introduces basic camera operations and photographic production. Topics include subject composition, depth of field, shutter control, light control, color, photo-finishing, and digital imaging, correction and output. Upon completion, students should be able to produce traditional and/or digital photographic prints with acceptable technical and compositional quality.

GRD 168 Photographic Imaging II (1 4 3)
Prerequisites: GRD 167
Corequisites: None
This course introduces advanced camera operations and photographic production. Topics include lighting, specialized equipment, digital image correction and output, and other methods and materials. Upon completion, students should be able to demonstrate proficiency in producing high quality photographic prints.

GRD 210 Airbrush I (1 2 2)
Prerequisites: None
Corequisites: None
This course covers the mechanics of airbrushing. Topics include care and maintenance of equipment, spraying techniques and surfaces, and selection of materials. Upon completion, students should be able to produce work demonstrating competent use of an airbrush.

GRD 233 Product Illustration (1 3 2)
Prerequisites: GRD 131 and GRD 152
Corequisites: None
This course covers the rendering and illustration of products for commercial purposes. Topics include viewpoint, styles, media, and subjects such as household, industrial, hardware, and sporting goods. Upon completion, students should be able to illustrate products using traditional line, continuous-tone, and digital media.

GRD 241 Graphic Design III (2 4 4)
Prerequisites: DES 136 or GRD 142
Corequisites: None
This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.

GRD 242 Graphic Design IV (2 4 4)
Prerequisites: GRD 241
Corequisites: None
This course is a continuation of GRD 241. Emphasis is placed on using advanced media techniques, concepts, strategies, and professionalism in all aspects of design. Upon completion, students should be able to conceptualize, create, and produce designs for reproduction.

GRD 263 Illustrative Imaging (1 4 3)
Prerequisites: GRD 151 or GRA 151
Corequisites: None
This course covers the creative manipulation of images utilizing digital techniques of masking, layering, airbrushing, and painting. Topics include the aesthetic analysis of visual imagery as well as the legalities of manipulating images. Upon completion, students should be able to utilize software applications to creatively manipulate and illustratively build digital images which accomplish design objectives.

GRD 280 Portfolio Design (2 4 4)
Prerequisites: GRD 142 and GRD 152 or GRA 152
Corequisites: None
This course covers the organization and presentation of a design/advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a résumé and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

GRD 281 Design of Advertising (2 0 2)
Prerequisites: None
Corequisites: None
This course explores the origins, roles, scope, forms, and development of advertising. Emphasis is placed on advertising development from idea through production and the interrelationship of marketing to types of advertising, media, and organizational structure. Upon completion, students should be able to demonstrate an understanding of the complexities and relationships involved in advertising design.

HEALTH

HEA 110 Personal Health/Wellness (3 0 3)
Prerequisites: None
Corequisites: None
This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

HEA 112 First Aid and CPR (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

HEA 120 Community Health (3 0 3)
Prerequisites: None
Corequisites: None
This course provides information about contemporary community health and school hygiene issues. Topics include health education and current information about health trends. Upon completion, students should be able to recognize and devise strategies to prevent today's community health problems. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

HEALTHCARE BUSINESS INFORMATICS

HBI 110 Issues and Trends in HBI (3 0 3)
Prerequisites: None
Corequisites: None
This course is a survey of current and emerging technology applications and data standards in the healthcare industry. Topics include the history, implementation, use, management, and impact of information technology in healthcare settings. Upon completion, students should have an understanding of the current trends and issues in healthcare informatics.

HBI 113 Survey of Med Insurance (3 0 3)
Prerequisites: None
Co-requisites: None
This course is a survey of the healthcare insurance system. Emphasis is placed on the foundation necessary for understanding the healthcare delivery system, terminology and practices of healthcare insurance, and provider reimbursement. Upon completion, students should have an understanding of healthcare insurance and how outcomes are addressed through healthcare informatics.

HBI 250 Data Mgmt and Utilization (2 2 3)
Prerequisites: DBA 110, or DBA 120, or DBA 210
Corequisites: None
This course covers the management and usage of data in healthcare settings according to current practices in healthcare informatics. Topics include data warehousing, data integrity, data security, data mining, and report generating in healthcare settings. Upon completion, students should be able to demonstrate an understanding of using healthcare data to support reporting and decision making in healthcare settings.

HBI 289 HBI Project (1 4 3)
Prerequisites: HBI 250
Corequisites: None
This course provides an opportunity to complete a significant healthcare business informatics project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a healthcare informatics project from the definition phase through implementation.

HEALTHCARE MANAGEMENT

HMT 110 Intro to Healthcare Mgt (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the functions, practices, organizational structures, and professional issues in healthcare management. Emphasis is placed on planning, controlling, directing, and communicating within health and human services organizations. Upon completion, students should be able to apply the concepts of management within a healthcare service environment.

HMT 210 Medical Insurance (3 0 3)
Prerequisites: MED 122 or OST 142
Corequisites: None
This course introduces the concepts of medical insurance. Topics include types and characteristics of third-party payers, coding concepts, payment systems, and manual/electronic claims form preparation. Upon completion, students should be able to process third-party claims forms.

HMT 211 Long-Term Care Admin (3 0 3)
Prerequisites: HMT 110
Corequisites: None
This course introduces the administration of long-term care facilities and services. Emphasis is placed on nursing home care, home health care, hospice, skilled nursing facilities, and other long-term care services. Upon completion, students should be able to administer state and national standards and regulations as they apply to long-term care.

HMT 220 Healthcare Financial Mgmt (4 0 4)
Prerequisites: HMT 110 and ACC 121
Corequisites: None
This course covers the methods and techniques utilized in the financial management of healthcare programs. Topics include cost determination, pricing of services, financial statement analysis, forecasting/projections, third-party billing, reimbursement, Medicare, Medicaid, and budgeting. Upon completion, students should be able to interpret and apply the principles of financial management in a healthcare environment.

HMT 225 Practice Mgmt. Simulation (2 2 3)
Prerequisites: HMT 210
Corequisites: HMT 220
This course introduces medical systems used to process and analyze information in the automated office. Emphasis is placed on daily processing of patient services, management reporting used to monitor productivity, and interactive database reporting and analysis. Upon completion, students should be able to process daily services, generate and interpret management reports and utilize key indicators for monitoring practice productivity.

HISTORY

HIS 111 World Civilizations I (3 0 3)
Prerequisites: DRE 097 or satisfactory placement test scores (L)
Corequisites: None
This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

HIS 112 World Civilizations II (3 0 3)
Prerequisites: DRE 097 or satisfactory placement test scores (L)
Corequisites: None
This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

HIS 131 American History I (3 0 3)
Prerequisites: DRE 097 or satisfactory placement test scores (L)
Corequisites: None
This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

HIS 132 American History II (3 0 3)
Prerequisites: DRE 097 or satisfactory placement test scores
Corequisites: None
This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

HIS 226 The Civil War (3 0 3)
Prerequisites: DRE 097 (L)
Corequisites: None
This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

HUMANITIES

HUM 115 Critical Thinking (3 0 3)
Prerequisites: DRE 098 (L)
Corequisites: None
This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course may meet the SACS humanities requirement for AAS degree programs.*

HUM 120 Cultural Studies (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the distinctive features of a particular culture. Topics include are, history, music, literature, politics, philosophy , and religion. Upon completion, students should be able to appreciate the unique character of the study culture. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

HUM 122 Southern Culture (3 0 3)
Prerequisites: None
Corequisites: None
This course explores the major qualities that make the South a distinct region. Topics include music, politics, literature, art, religion, race relations, and the role of social class in historical and contemporary contexts. Upon completion, students should be able to identify the characteristics that distinguish Southern culture. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).*

HUM 130 Myth in Human Culture (3 0 3)
Prerequisites: None
Corequisites: None
This course provides an in-depth study of myths and legends. Topics included the varied sources of myths and their influence ont he individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

HUM 170 The Holocaust (3 0 3)
Prerequisites: None
Corequisites: None
This course provides a survey of the destruction of European Jewry by the Nazis during World War II. Topics include the anti-Semitic ideology, bureaucratic structures, and varying conditions of European occupation and domination under the Third Reich. Upon completion, students should be able to demonstrate an understanding of the historical, social, religious, political, and economic factors which cumulatively resulted in the Holocaust. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

HUM 211 Humanities I (3 0 3)
Prerequisites: ENG 111
Corequisites: None
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

HUM 212 Humanities II (3 0 3)
Prerequisites: ENG 111
Corequisites: None
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

HUM 220 Human Values and Meaning (3 0 3)
Prerequisites: ENG 111
Corequisites: None
This course presents some major dimensions of human experience as reflected in art, music, literature, philosophy, and history. Topics include the search for identity, the quest for knowledge, the need for love, the individual and society, and the meaning of life. Upon completion, students should be able to recognize interdisciplinary connections and distinguish between open and closed questions and between narrative and scientific models of understanding. *This course is intended for all Associate degree programs. This course may satisfy the SACS humanities requirement.*

HYDRAULICS

HYD 110 Hydraulics/Pneumatics I (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting.

INDUSTRIAL SCIENCE

ISC 121 Environmental Health and Safety (3 0 3)
Prerequisites: None
Corequisites: None
This course covers workplace environmental health and safety concepts. Emphasis is placed on managing the implementation and enforcement of environmental health and safety regulations and on preventing accidents, injuries, and illnesses. Upon completion, students should be able to demonstrate an understanding of basic concepts of environmental health and safety.

ISC 132 Manufacturer Quality Control (2 3)3
Prerequisites: None
Corequisites: None
This course introduces quality concepts and techniques used in industry. Topics include elementary statistics and probability, process control, process capability, and quality improvement tools. Upon completion, students should be able to demonstrate an understanding of the concepts and principles of quality and apply them to the work environment.

MACHINING

MAC 114 Introduction to Metrology (2 0 2)
Prerequisites: None
Corequisites: None
This course introduces the care and use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

MAC 121 Introduction to Computer Numerical Controls (CNC) (2 0 2)
Prerequisites: None
Corequisites: None
This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

MAC 122 CNC Turning (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.

MAC 124 CNC Milling (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

MAC 141 Machining Applications I (2 6 4)
Prerequisites: None
Corequisites: None
This course provides an introduction to a variety of material-working processes that are common to the machining industry. Topics include safety, process-specific machining equipment, measurement devices, set-up and layout instruments, and common shop practices. Upon completion, students should be able to safely demonstrate basic machining operations, accurately measure components, and effectively use layout instruments.

MAC 141A Machining Appl I Lab (0 6 2)
Prerequisites: None
Corequisites: None
This course provides an introduction to a variety of material-working processes, in a laboratory setting, that are common to the machining industry. Topics include safety, process-specific machining equipment, measurement devices, set-up and layout instruments, and common shop practices. Upon completion, students should be able to safely demonstrate basic machining operations, accurately measure components, and effectively use layout instruments.

MAC 142 Machining Applications II (2 6 4)
Prerequisites: None
Corequisites: None
This course provides instruction in the wide variety of processes associated with machining. Topics include safety, equipment set-up, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish.

MAC 142A Machining Appl II Lab (0 6 2)
Prerequisites: None
Corequisites: None
This course provides laboratory instruction in the wide variety of processes associated with machining. Topics include safety, equipment setup, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish.

MAC 151 Machining Calculations (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MAC 222 Advanced CNC Turning (1 3 2)
Prerequisites: MAC 122 (Local)
Corequisites: None
This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

MAC 224 Advanced CNC Milling (1 3 2)
Prerequisites: MAC 124 (Local)
Corequisites: None
This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

MAC 233 Appl in CNC Machining (2 12 6)
Prerequisites: None
Corequisites: None
This capstone course provides students the opportunity to apply skills learned throughout the curriculum. Emphasis is placed on production of parts and assemblies using modern CNC machine tools. Upon completion, students should be able to manufacture complex parts using a variety of CNC machine tools.

MASONRY

MAS 140 Introduction to Masonry (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces basic principles and practices of masonry. Topics include standard tools, materials, and practices used in basic masonry and other related topics. Upon completion, students should be able to demonstrate an understanding of masonry and be able to use basic masonry techniques.

MATHEMATICS

MAT 110 Math Measurement & Literacy (2 2 3)
Prerequisities: DMA-010, DMA-020, and DMA-030
Corequisites: None
This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.

MAT 121 Algebra/Trigonometry I (2 2 3)
Prerequisities: DMA-010, 020, 030, 040, 050, and 060
Corequisites: None
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

MAT 122 Algebra/Trigonometry II (2 2 3)
Prerequisities: MAT-121
Corequisites: None
This course is designed to cover concepts in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, transformations of functions, Law of Sines, Law of Cosines, vectors, and statistics. Upon completion, students should be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

MAT 143 Quantitative Literacy (2 2 3)
Prerequisities: DMA 010, 020, 030, 040, 050, and DRE-098
Corequisites: None
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 152 Statistical Methods I (3 2 4)
Prerequisities: DMA 010, 020, 030, 040, 050, and DRE-098
Corequisites: None
This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 171 Precalculus Algebra (3 2 4)
Prerequisities: Take One Set:
Set 1: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060, DMA-070, and DMA-080
Set 2: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, and DMA-065
Set 3: MAT-121
Corequisites: None
This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 172 Precalculus Trigonometry (3 2 4)
Prerequisites: MAT 171
Corequisites: None
This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 263 Brief Calculus (3 2 4)
Prerequisites: MAT 171
Corequisites: None
This course is designed to introduce concepts of differentiation and integration and their applications to solving problems. Topics include graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 271 Calculus I (3 2 4)
Prerequisites: MAT 172
Corequisites: None
This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 272 Calculus II (3 2 4)
Prerequisites: MAT 271
Corequisites: None
This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 273 Calculus III (3 2 4)
Prerequisites: MAT 272
Corequisites: None
This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in mathematics.*

MAT 280 Linear Algebra (2 2 3)
Prerequisites: MAT 271
Corequisites: None
This course provides an introduction to linear algebra topics. Emphasis is placed on the development of abstract concepts and applications for vectors, systems of equations, matrices, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to linear algebra-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MAT 285 Differential Equations (2 2 3)
Prerequisites: MAT 272
Corequisites: None
This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first-order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and LaPlace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MECHANICAL

MEC 161 Manufacturing Processes I (3 0 3)
Prerequisites: None
Corequisites: None
This course provides the fundamental principles of value-added processing of materials into usable forms for the customer. Topics include material properties and traditional and non-traditional manufacturing processes. Upon completion, students should be able to specify appropriate manufacturing processing for common engineering materials.

MEC 180 Engineering Materials (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre- and post-manufacturing processes, and material selection of ferrous and non-ferrous metals, plastics, composites, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications.

MEC 181 Introduction to Computer Integrated Manufacturing (CIM) (2 0 2)
Prerequisites: None
Corequisites: None
This course introduces the elements of computer-integrated manufacturing(CIM). Topics include statistical process control, computer-aided design and manufacturing, numeric control, and flexible systems. Upon completion, students should be able to explain the major components of computer-integrated manufacturing.

MEC 231 Computer-Aided Manufacturing I (1 4 3)
Prerequisites: None
Corequisites: None
This course introduces computer-aided design/manufacturing (CAD/CAM) applications and concepts. Topics include software, programming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/CAM applications.

MEC 232 Computer-Aided Manufacturing II (1 4 3)
Prerequisites: MEC 231
Corequisites: None
This course provides an in-depth study of CAM applications and concepts. Emphasis is placed on the manufacturing of complex parts using computer-aided manufacturing software. Upon completion, students should be able to manufacture complex parts using CAM software.

MEC 270 Machine Design (3 3 4)
Prerequisites: EGR 250 or EGR 251 and EGR 252
Corequisites: None
This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles.

MEC 271 Machine Design Project (0 3 1)
Prerequisites: None
Corequisites: MEC 270
This course provides an opportunity for involvement in the practical application of machine design by development of a project. Emphasis is placed on the design and engineering processes required to complete an approved project. Upon completion, students should be able to demonstrate the ability to progress from conceptual design to completed project.

MEDICAL ASSISTING

MED 121 Medical Terminology I (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatments of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

MED 122 Medical Terminology II (3 0 3)
Prerequisites: MED 121
Corequisites: None
This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatments of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

MARKETING AND RETAILING

MKT 120 Principles of Marketing (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making.

MKT 122 Visual Merchandising (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays. *This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.*

MKT 123 Fundamentals of Selling (3 0 3)
Prerequisites: None
Corequisites: None
This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered.

MKT 125 Buying and Merchandising (3 0 3)
Prerequisites: None
Corequisites: None
This course includes an analysis of the organization for buying-what, when and how to buy-and the principles of effective inventory and stock control. Topics include organization for buying, analysis of buyers' responsibilities, pricing, inventory control, planning, cost effectiveness, and vendor relationships. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application.

MKT 220 Advertising and Sales Promotion (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application.

MKT 222 Credit Procedures (3 0 3)
Prerequisites: None
Corequisites: None
This course covers areas of collection that provide an understanding of the expertise needed to manage collection operations. Topics include principles and practices in the extension of credit, collection procedures, and laws pertaining to credit extension and collection. Upon completion, students should be able to demonstrate an understanding of the concepts covered.

MKT 223 Customer Service (3 0 3)
Prerequisites: None
Corequisites: None
This course stresses the importance of customer relations in the business world. Emphasis is placed on learning how to respond to complex customer requirements and to efficiently handle stressful situations. Upon completion, students should be able to demonstrate the ability to handle customer relations.

MKT 225 Marketing Research (3 0 3)
Prerequisites: MKT 120
Corequisites: None
This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results. *This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.*

MKT 226 Retail Applications (3 0 3)
Prerequisites: None
Corequisites: None
This course is designed to develop occupational competence through participation in case studies, group work, and simulations. Emphasis is placed on all aspects of store ownership and operation, including securing financial backing and a sufficient market share. Upon completion, students should be able to demonstrate an understanding of concepts covered through application. *This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.*

MAINTENANCE

MNT 110 Introduction to Maintenance Procedures (1 3 2)
Prerequisites: None
Corequisites: None
This course covers basic maintenance fundamentals for power transmission equipment. Topics include equipment inspection, lubrication, alignment, and other scheduled maintenance procedures. Upon completion, students should be able to demonstrate knowledge of accepted maintenance procedures and practices according to current industry standards.

MNT 222 Industrial Systems Schematics (1 2 2)
Prerequisites: None
Corequisites:` None
This course covers the reading and drawing of schematics and diagrams. Emphasis is placed on water and gas plumbing, hydraulic and pneumatic circuits, electrical circuits, and welding diagrams. Upon completion, students should be able to interpret and construct industrial schematics and diagrams.

MUSIC

MUS 110 Music Appreciation (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

MUS 112 Introduction to Jazz (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

MUS 113 American Music (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces various musical styles, influences, and composers of the United States from pre-Colonial times to the present. Emphasis is placed on the broad variety of music particular to American culture. Upon completion, students should be able to demonstrate skills in basic listening and understanding of American music. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

MUS 114 Non-Western Music (3 0 3)
Prerequisites: None
Corequisites: None
This course provides a basic survey of the music of the non-Western world. Emphasis is place on non-traditional instruments, sources, and performing practices. Upon completion, student should be able to demonstrate skills in basic listening and understanding of the art of non-Western music. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

MUS 121 Music Theory I (3 2 4)
Prerequisites: None
Corequisites: None
This course provides an in-depth introduction to melody, rhythm, and harmony. Emphasis is placed on fundamental melodic, rhythmic, and harmonic analysis, introduction to part writing, rear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 122 Music Theory II (3 2 4)
Prerequisites: MUS 121
Corequisites: None
This course is a continuation of studies begun in MUS 121. Emphasis is placed on advanced melodic, rhythmic, and harmonic analysis and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 131 Chorus I (0 2 1)
Prerequisites: Appropriate vocal proficiency
Corequisites: None
This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 132 Chorus II (0 2 1)
Prerequisites: MUS 131
Corequisites: None
This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education core and/or elective course requirement.*

MUS 141 Ensemble I (0 2 1)
Prerequisites: Audition
Corequisites: None
This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. The ensemble courses will feature show choir literature. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 142 Ensemble II (0 2 1)
Prerequisites: MUS 141
Corequisites: None
This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 151V Class Music I (0 2 1)
Prerequisites: None
Corequisites: None
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS 151V is the first of two class voice courses. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 152V Class Music II (0 2 1)
Prerequisites: MUS 151
Corequisites: None
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS 152V is a continuation of class voice 1. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 161 Applied Music I (0 2 1)
Prerequisites: Audition (L)
Corequisites: None
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 162 Applied Music II (0 2 1)
Prerequisites: MUS 161
Corequisites: None
This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 231 Chorus III (0 2 1)
Prerequisites: MUS 132
Corequisites: None
This course is a continuation of MUS 132. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 232 Chorus IV (0 2 1)
Prerequisites: MUS 231
Corequisites: None
This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 241 Ensemble III (0 2 1)
Prerequisites: MUS 142
Corequisites: None
This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 242 Ensemble IV (0 2 1)
Prerequisites: MUS 241
Corequisites: None
This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 261 Applied Music III (0 2 1)
Prerequisites: MUS 162
Corequisites: None
This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

MUS 262 Applied Music IV (0 2 1)
Prerequisites: MUS 261
Corequisites: None
This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

NETWORKING TECHNOLOGY

NET 125 Networking Basics (1 4 3)
Prerequisites: None
Corequisites: None
This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

NET 126 Routing Basics (1 4 3)
Prerequisites: NET 125
Corequisites: None
This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs.

NET 225 Routing and Switching I (1 4 3)
Prerequisites: NET 126
Corequisites: None
This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP.

NET 226 Routing and Switching II (1 4 3)
Prerequisites: NET 225
Corequisites: None
This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, channels, and function groups, and describe the Spanning Tree protocol.

NET 289 Networking Project (1 4 3)
Prerequisites: None
Corequisites: NET 226
This course provides an opportunity to complete a significant networking project from the design phase through implentation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation.

NETWORKING OPERATING SYSTEM

NOS 110 Operating System Concepts (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is place on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

NOS 120 Linux/UNIX Single User (2 2 3)
Prerequisites: NOS 110
Corequisites: None
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.

NOS 130 Windows Single User (2 2 3)
Prerequisites: NOS 110
Corequisites: None
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment.

NOS 220 Linux/UNIX Administration I (2 2 3)
Prerequisites: NOS 120
Corequisites: None
This course introduces the Linux file system, group administration, and system hardware controls. Topics include installation, creation and maintaining file systems, NIS client and DHCP client configuration, NFS, SMB/Samba, Configure X, Gnome, KDE, basic memory, processes, and security. Upon completion, students should be able to perform system administration tasks including installation, configuring and attaching a new Linux workstation to an existing network.

NOS 230 Windows Administration I (2 2 3)
Prerequisites: NOS 130
Corequisites: None
This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups, and Managing/Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.

NURSING

NUR 101 Practical Nursing I (7 6 6 11)
Prerequisites: Enrollment in the Practical Nursing program
Corequisites: None
This course introduces concepts as related to the practical nurse's caregiver and discipline-specific roles. Emphasis is placed on the nursing process, legal/ethical/professional issues, wellness/illness patterns, and basic nursing skills. Upon completion, students should be able to demonstrate beginning understanding of nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.

NUR 102 Practical Nursing II (8 0 12 12)
Prerequisites: NUR 101 (Local)
Corequisites: BIO 168 (Local)
This course includes more advanced concepts as related to the practical nurse's caregiver and discipline-specific roles. Emphasis is placed on the nursing process, delegation, cost effectiveness, legal/ethical/professional issues, and wellness/illness patterns. Upon completion, students should be able to begin participating in the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.

NUR 103 Practical Nursing III (6 0 12 10)
Prerequisites: NUR 101, NUR 102, BIO 168 (Local)
Corequisites: BIO 169 (Local)
This course focuses on use of nursing/related concepts by practical nurses as providers of care/members of discipline in collaboration with health team members. Emphasis is placed on the nursing process, wellness/illness patterns, entry-level issues, accountability, advocacy, professional development, evolving technology, and changing health care delivery systems. Upon completion, students should be able to use the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.

NUR 107 LPN Refresher (9 0 9 1)2
Prerequisite: Previous LPN Licensure
Correquisite: None
This refresher course is designed to provide an independent didactic review for the previously licensed practical nurse whose license has lapsed. Emphasis is placed on common medical-surgical conditions and nursing interventions, including mental health principles, pharmacological concepts, and safe clinical practice. Upon completion, students will be eligible to apply for reinstatement of licensure.

NUR 111 Introduction to Health Concepts (4 6 6 8)
Prerequisites: Acceptance into the Associate Degree Nursing Program as a generic student
Corequisites: BIO 168 (if not already completed)
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 112: Health-Illness Concepts (3 0 6 5)
Prerequisites: NUR 111
Corequisites: BIO 169 (if not already completed)
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/coping, health-wellness-illness, communication, caring interventions, managing care, safety, quality improvement, and informatics. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 113: Family Health Concepts (3 0 6 5)
Prerequisites: NUR 114, Psy 241
Corequisites: BIO 175
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of oxygenation, sexuality, reproduction, grief/loss, mood/affect, behaviors, development, family, health-wellness-illness, communication, caring interventions, managing care, safety, and advocacy. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 114: Holistic Health Concepts (3 0 6 5)
Prerequisites: NUR 111
Corequisites: None
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/coping, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 211: Health Care Concepts (3 0 6 5)
Prerequisites: NUR 111
Corequisites: None
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 212: Health System Concepts (3 0 6 5)
Prerequisites: NUR 114, PSY 241
Corequisites: BIO 175
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 213: Complex Health Concepts (4 3 15 10)
Prerequisites: NUR 111, NUR 112, NUR 113, NUR 114, NUR 211, NUR 212
Corequisites: None
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.

NUR 214 Nursing Transition Concepts (3 0 3 4)
Prerequisites: Acceptance into the Associate Degree Nursing Program as an advanced placement student
Co requisite: NUR 211
This course is designed to introduce concepts within the three domains of the individual, healthcare, and nursing as the LPN transitions to the ADN role. Emphasis is placed on the concepts within each domain including evidenced-based practice, quality improvement, communication, safety, interdisciplinary team, clinical decision-making, informatics, assessment, caring, and health-wellness-illness. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

OPERATIONS MANAGEMENT

OMT 112 Materials Management (3 0 3)
Prerequisites:
Corequisites: None
This course covers the basic principles of materials management. Emphasis is placed on the planning, procurement, movement, and storage of materials. Upon completion, students should be able to demonstrate an understanding of the concepts and techniques related to materials management. *This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.*

OMT 260 Issues in Operations Management (3 0 3)
Prerequisites: ISC 121, ISC 210, OMT 112, and ISC 132 or ISC 221
Corequisites: None
This course presents a variety of topics that highlight contemporary problems and issues related to operations management. Emphasis is placed on production and operations planning, environmental health and safety, materials management, and quality systems. Upon completion, students should be able to demonstrate the ability to make decisions and resolve problems in an operations management environment. *This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.*

OFFICE SYSTEMS TECHNOLOGY

OST 131 Keyboarding (1 2 2)
Prerequisites: None
Corequisites: None
This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to key at an acceptable speed and accuracy level using the touch system.

OST 134 Text Entry & Formatting (2 2 3)
Prerequisites: OST 131 (L)
Corequisites: None
This course is designed to provide the skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability.

OST 136 Word Processing (2 2 3)
Prerequisites: None
Corequisites: None
This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment.

OST 140 Internet Comm/Research (1 2 2)
Prerequisites: None
Corequisites: None
This course provides a working knowledge of Internet usage and research for the modern office. Emphasis is placed on using search engines, email, Web sites, Web servers, communication services, and e-business to obtain information vital to the current office environment. Upon completion, students should be able to use the Internet to research any office topics required for employment.

OST 148 Medical Coding Billing and Insurance (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim.

OST 149 Medical Legal Issues (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.

OST 153 Office Finance Solutions (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces basic bookkeeping concepts. Topics include entering data in accounts payable and receivable, keeping petty cash records, maintaining inventory, reconciling bank statements, running payroll, and generating simple financial reports. Upon completion, students should be able to demonstrate competence in the entry and manipulation of data to provide financial solutions for the office.

OST 164 Text Editing Applications (3 0 3)
Prerequisites: None
Corequisites: None
This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

OST 184 Records Management (2 2 3)
Prerequisites: None
Corequisites: None
This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

OST 243 Medical Office Simulation (2 2 3)
Prerequisites: OST 148, OST 131 (L)
Corequisites: None
This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.

OST 247 Procedure Coding (1 2 2)
Prerequisites: MED 121
Corequisites: MED 122 (L) (Optional)
This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS coding systems. Upon completion, students should be able to properly code procedures and services performed in a medical facility.

OST 248 Diagnostic Coding (1 2 2)
Prerequisites: MED 121
Corequisites: MED 122 (L) (Optional)
This course provides an in-depth study of diagnostic coding for the medical office. Emphasis is placed on ICD coding system. Upon completion, students should be able to properly code diagnoses in a medical facility.

OST 249 CPC Certification (3 2 4)
Prerequisites: OST 247 and OST 248
Corequisites: None
This course provides instruction that will prepare students to sit for the American Association of Professional Coders (AAPC) CPC Exam. Topics include diagnostic and procedural coding. Upon completion, students should be able to sit for the AAPC CPC Exam.

OST 284 Emerging Technologies (1 2 2)
Prerequisites: None
Corequisites: None
This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to understand the importance of keeping abreast of technological changes that affect the office professional.

OST 286 Professional Development (3 0 3)
Prerequisites: None
Corequisites: None
This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society.

OST 289 Administrative Office Management (2 2 3)
Prerequisites: OST 134 or OST 136, and OST 164
Corequisites: None
This course is designed to be a capstone course for the office professional and provides a working knowledge of modern office procedures. Emphasis is placed on scheduling, telephone procedures, travel arrangements, event planning, office design, and ergonomics. Upon completion, students should be able to adapt in an office environment.

PHYSICAL EDUCATION

PED 110 Fit and Well for Life (1 2 2)
Prerequisites: None
Corequisites: None
This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health-related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 113 Aerobics I (0 3 1)
Prerequisites: None
Corequisites: None
This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 117 Weight Training I (0 3 1)
Prerequisites: None
Corequisites: None
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program.. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 120 Walking for Fitness (0 3 1)
Prerequisites: None
Corequisites: None
This course introduces fitness through walking. Emphasis is placed on stretching, conditioning excercies, proper clothing, fluid needs, and injury prevention. Upon completion, students should be able to participate in a recerational walking program.. *This course has been approved to satisfy the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 128 Golf-Beginning (0 2 1)
Prerequisites: None
Corequisites: None
This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 130 Tennis-Beginning (0 2 1)
Prerequisites: None
Corequisites: None
This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 137 Badminton (0 2 1)
Prerequisites: None
Corequisites: None
This course covers the fundamentals of badminton. Emphasis is placed on the basics of serving, clears, drops, drives, smashes, and the rules and strategies of singles and doubles. Upon completion, students should be able to apply these skills in playing situations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 143 Volleyball-Beginning (0 2 1)
Prerequisites: None
Corequisites: None
This course covers the fundamentals of volleyball. Emphasis is placed on the basics of serving, passing, setting, spiking, blocking, and the rules and etiquette of volleyball. Upon completion, students should be able to participate in recreational volleyball. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 152 Swimming-Beginning (0 2 1)
Prerequisites: None
Corequisites: None
This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 153 Swimming-Intermediate (0 2 1)
Prerequisites: PED 152
Corequisites: None
This course is designed for those who have mastered basic swimming skills. Emphasis is placed on refining basic skills and learning new swim strokes. Upon completion, students should be able to demonstrate the four basic strokes, the scissors kick, the underwater swim, and other related skills. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 155 Water Aerobics (0 3 1)
Prerequisites: None
Corequisites: None
This course introduces rhythmic aerobic activities performed in water. Emphasis is placed on increasing cardiovascular fitness levels, muscular strength, muscular endurance, and flexibility. Upon completion, students should be able to participate in an individually-paced exercise program. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 160 Canoeing-Basic (0 2 1)
Prerequisites: PED 152
Corequisites: None
This course provides basic instruction for the beginning canoeist. Emphasis is placed on safe and correct handling of the canoe and rescue skills. Upon completion, students should be able to demonstrate basic canoeing, safe-handling, and self-rescue skills. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PED 219 Disk Golf (0 2 1)
Prerequisites: None
Corequisites: None
This course introduces the fundamentals of disc golf. Emphasis is placed on basic throwing techniques, putting, distance driving, scoring, and single and doubles play. Upon completion, students should be able to perform the skills required in playing situations. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

PIPE FITTING

PFT 111 Piping & Valves (3 3 4)
Prerequisites: None
Corequisites: None
This course introduces the terminology, uses, types, and components of metallic and non-metallic industrial piping systems. Topics include identification and application of valves and fittings, joining techniques, drawing interpretation, and the safe installation of piping systems. Upon completion, students should be able to select the proper materials and equipment to safely construct basic industrial piping systems in accordance with design drawing.

PHILOSOPHY

PHI 215 Philosophical Issues (3 0 3)
Prerequisites: ENG 111
Corequisites: None
This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critically evaluate the philosophical components of an issue. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

PHI 240 Introduction to Ethics (3 0 3)
Prerequisites: ENG 111
Corequisites: None
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on moral theories such as consequentialism, deontology, and virtue ethics. Upon completion, students should be able to apply various ethical theories to moral issues such as abortion, capital punishment, poverty, war, terrorism, the treatment of animals, and issues arising from new technologies. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

PHYSICS

PHY 110 Conceptual Physics (3 0 3)
Prerequisites: DMA 010, 020, 030, 040, 050 (L)
Corequisites: None
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences. This course is also available through the Virtual Learning Community (VLC).*

PHY 110A Conceptual Physics Lab (0 2 1)
Prerequisites: None
Corequisites: PHY 110
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

PHY 131 Physics-Mechanics (3 2 4)
Prerequisites: MAT 121 or MAT 171
Corequisites: None
This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

PHY 132 Physics-Electricity and Magnetism (3 2 4)
Prerequisites: PHY 131
Corequisites: None
This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, waves, electricity, magnetism, circuits, transformers, motors, and generators. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

PHY 151 College Physics I (3 2 4)
Prerequisites: MAT 171
Corequisites: None
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

PHY 152 College Physics II (3 2 4)
Prerequisites: PHY 151
Corequisites: None
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

PHY 251 General Physics I (3 3 4)
Prerequisites: MAT 271
Corequisites: MAT 272
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

PHY 252 General Physics II (3 3 4)
Prerequisites: MAT 272 and PHY 251
Corequisites: None
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in natural sciences.*

PLUMBING

PLU 111 Introduction to Basic Plumbing (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces basic plumbing tools, materials, and fixtures. Topics include standard tools, materials, and fixtures used in basic plumbing systems and other related topics. Upon completion, students should be able to demonstrate an understanding of a basic plumbing system.

PLU 211 Commercial/Industrial Plumbing (2 2 3)
Prerequisites: None
Corequisites: None
This course covers the installation of various commercial and industrial piping. Topics include piping in steam, gas, air, fire sprinklers, and other related topics. Upon completion, students should be able to select and install various piping systems for a variety of applications.

POLITICAL SCIENCE

POL 120 American Government (3 0 3)
Prerequisites: None
Corequisites: None
This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy process. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

PSYCHOLOGY

PSY 110 Life Span Development (3 0 3)
Prerequisites: None
Corequisites: None
This course provides an introduction to the study of human growth and development. Emphasis is placed on the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span and apply this knowledge to their specific field of study.

PSY 150 General Psychology (3 0 3)
Prerequisites: DRE 097, or satisfactory placement test scores (L)
Corequisites: None
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

PSY 237 Social Psychology (3 0 3)
Prerequisites: PSY 150 or SOC 210
Corequisites: None
This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

PSY 239 Psychology of Personality (3 0 3)
Prerequisites: PSY 150
Corequisites: None
This course covers major personality theories and personality research methods. Topics include psychoanalytic, behavioristic, social learning, cognitive, humanistic, and trait theories including supporting research. Upon completion, students should be able to compare and contrast traditional and contemporary approaches to the understanding of individual differences in human behavior. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

PSY 241 Developmental Psychology (3 0 3)
Prerequisites: PSY 150
Corequisites: None
This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

PSY 281 Abnormal Psychology (3 0 3)
Prerequisites: PSY 150
Corequisites: None
This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

RELIGION

REL 110 World Religions (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

REL 111 Eastern Religions (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course introduces the major Asian religious traditions. Topics include Hinduism, Buddhism, Taoism, Confucianism, and Shinto. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

REL 112 Western Religions (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course introduces the major western religious traditions. Topics include Zoroastrianism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

REL 211 Introduction to Old Testament (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

REL 212 Introduction to New Testament (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: None
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in humanities/fine arts.*

INFORMATION SYSTEMS SECURITY

SEC 110 Security Concepts (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

SEC 150 Secure Communications (2 2 3)
Prerequisites: SEC 110 and NET 110 or NET 125
Corequisites: None
This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPSec. Upon completion, students should be able to implement secure data transmission technologies.

SEC 160 Secure Administration I (2 2 3)
Prerequisites: SEC 110 and NET 110 or NET 125
Corequisites: None
This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses.

SEC 210 Intrusion Detection (2 2 3)
Prerequisites: SEC 160
Corequisites: None
This course introduces the student to intrusion detection methods in use today. Topics include the types of intrusion detection products, traffic analysis, and planning and placement of intrusion detection solutions. Upon completion, students should be able to plan and implement intrusion detection solution for networks and host based systems.

SEC 220 Defense-In-Depth (2 2 3)
Prerequisites: None
Corequisites: SEC 160
This course introduces students to the concepts of defense in-depth, a security industry best practice. Topics include firewalls, backup systems, redundant systems, disaster recovery, and incident handling. Upon completion, students should be able to plan effective information security defenses, backup systems, and disaster recovery procedures.

SOCIOLOGY

SOC 210 Introduction to Sociology
3 0 3
Prerequisites: DRE 097 or satisfactory placement test scores (L)
Corequisites: None
This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

SOC 213 Sociology of the Family
3 0 3
Prerequisites: DRE 097, or satisfactory placement test scores (L)
Corequisites: None
This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

SOC 220 Social Problems
3 0 3
Prerequisites: DRE 097, or satisfactory placement test scores (L)
Corequisites: None
This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a general education course in social/behavioral sciences.*

SPANISH

SPA 111 Elementary Spanish I (3 0 3)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: SPA 181
This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement general education core requirement in humanities/fine arts for AA and AS only, can not be used to satisfy the Humanities requirement for AAS degrees.*

SPA 112 Elementary Spanish II (3 0 3)
Prerequisites: SPA 111
Corequisites: SPA 182
This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement general education core requirement in humanities/fine arts for AA and AS only, can not be used to satisfy the Humanities requirement for AAS degrees.*

SPA 120 Spanish for the Workplace (3 0 3)
Prerequisites: None
Corequisites: None
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, the students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA 181 Spanish Lab I (0 2 1)
Prerequisites: DRE 098 or satisfactory placement test scores (L)
Corequisites: SPA 111
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

SPA 182 Spanish Lab II (0 2 1)
Prerequisites: SPA 181
Corequisites: SPA 112
This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

SPA 211 Intermediate Spanish I (3 0 3)
Prerequisites: SPA 112
Corequisites: SPA 281
This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. *This course has been approved to satisfy the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement general education core requirement in humanities/fine arts for AA and AS only, can not be used to satisfy the Humanities requirement for AAS degrees.*

SPA 212 Intermediate Spanish II (3 0 3)
Prerequisites: SPA 211
Corequisites: SPA 282
This course provides a continuation of SPA 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. *This course has been approved to satisfy the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement general education core requirement in humanities/fine arts for AA and AS only, can not be used to satisfy the Humanities requirement for AAS degrees.*

SPA 281 Spanish Lab III (0 2 1)
Prerequisites: SPA 182
Corequisites: SPA 211
This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

SPA 282 Spanish Lab IV (0 2 1)
Prerequisites: SPA 281
Corequisites: SPA 212
This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. *This course has been approved for transfer under the Comprehensive Articulation Agreement and the Independent Comprehensive Articulation Agreement as a premajor and/or elective course requirement.*

SUSTAINABILITY TECHNOLOGIES

SST 110 Introduction to Sustainability (3 0 3)
Prerequisites: None
Corequisites: None
This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/non-renewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

SST 120 Energy Use Analysis (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the principles of analyzing energy use, energy auditing tools and techniques, conservation techniques, and calculating energy savings. Topics include building system control theory, calibrating digital controls, energy loss calculations, and applicable conservation techniques. Upon completion, students should be able to demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

SST 130 Modeling Renewable Energy (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces software and other technologies used for modeling renewable energy systems. Topics include renewable energy modeling software applications, data analysis, renewable energy sources, and cost of renewable energy systems. Upon completion, students should be able to use appropriate technology to model the effectiveness of renewable energy systems.

SST 140 Green Bldg & Design Concepts (3 0 3)
Prerequisites: None
Corequisites: None
This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction.

SST 210 Issues in Sustainability (3 0 3)
Prerequisites: SST 110
Corequisites: None
This course introduces the long-term impacts and difficulties of applying sustainability concepts in an organization, business, or society. Topics include the application of sustainable technologies and the analysis of affordability, efficiencies, recycling, and small and large-scale design. Upon completion, students should be able to recognize the possible limitations of sustainable technologies and be prepared to reconcile such conflicts.

SST 250 Sustain Capstone Project (1 6 3)
Prerequisites: SST 110
Corequisites: None
This course introduces an integrated team approach to a sustainability topic of interest to students, faculty, or professional community. Topics include problem identification, proposal preparation, conceptual design, and an effective project work schedule. Upon completion, students should be able to integrate the many facets of a topic based on environmental sustainability into a completed project.

SURGICAL TECHNOLOGY

SUR 110 Introduction to Surgical Technology (3 0 0 3)
Prerequisites: None
Corequisites: SUR 111
This course provides a comprehensive study of the operative environment, professional roles, moral/legal/ethical responsibilities, and medical communications used in surgical technology. Topics include historical development, professional behaviors, medical terminology, interdepartmental/peer/relationships, operating room environment/safety, pharmacology, anesthesia, incision sites, and physiology of wound healing. Upon completion, students should be able to apply theoretical knowledge of the course topics to the operative environment.

SUR 111 Perioperative Patient Care (5 6 0 7)
Prerequisites: None
Corequisites: SUR 110
This course provides theoretical knowledge for the application of essential operative skills during the perioperative phase. Topics include surgical asepsis, sterilization/disinfection, and perioperative patient care. Upon completion, students should be able to demonstrate the principles and practices of aseptic technique, sterile attire, basic case preparation, and other relevant skills.

SUR 122 Surgical Procedures I (5 3 0 6)
Prerequisites: SUR 110 and SUR 111
Corequisites: SUR 123 or STP 101
This course proveides and introdution to selected basic and intermediate surgical specialities that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

SUR 123 Surgical Clinical Practice I (0 0 21 7)
Prerequisites: SUR 110 and SUR 111
Corequisites: SUR 122
This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.

SUR 134 Surgical Procedures II (5 0 0 5)
Prerequisites: SUR 123 or STP 101
Corequisites: None
This course provides a comprehensive study of intermediate and advanced surgical specialties that students are exposed to in the second clincal rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students shoudl be able to correlate, intergrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

SUR 135 Surgical Clinical Practice II (0 0 12 4)
Prerequisites: SUR 123
Corequisites: SUR 134 or SUR 137
This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.

SUR 137 Professional Success Preparation (1 0 0 1)
Prerequisites: SUR 123
Corequisites: SUR 134 and SUR 135
This course provides job-seeking skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, and interviewing techniques. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.

TRANSPORTATION TECHNOLOGY

TRN 170 PC Skills for Transp (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces students to personal computer literacy and Internet literacy with an emphasis on the transportation service industry. Topics include service information systems, management systems, computer-based systems, and PC-based diagnostic equipment. Upon completion, students should be able to access information pertaining to transportation technology and perform word processing.

TRN 180 Basic Welding for Transp (1 4 3)
Prerequisites: None
Corequisites: None
This course covers the terms and procedures for welding various metals used in the transportation industry with an emphasis on personal safety and environmental health. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, cutting processes and other related issues. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standard

TRN 180A Basic Welding for Transp Lab (0 3 1)
Prerequisites: None
Corequisites: TRN 180
This course provides a laboratory experience for enhancing student skills in welding and cutting procedures associated with the transportation industry. Emphasis is placed on safety and precautionary measures, setup/operation of MIG equipment, metal identification, welds/joints, techniques, inspection of welds/joints, cutting processes and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards.

WORK-BASED LEARNING

WBL 110 World of Work (1 0 1)
Prerequisites: None
Corequisites; None
This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work.

WBL 111 Work-Based Learning I (0 10 1)
Prerequisites: None
Corequisites: None
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WBL 115 Work-Based Learning Seminar I (1 0 1)
Prerequisites: None
Corequisites: WBL 111, WBL 112, WBL 113 or WBL 114
Theories, techniques, and methods observed in the work settings will be discussed. Students will integrate ideas related in course work and work-based learning seminar situations. This course is designed to coordinate the classroom and industry experience. WBL 111 and WBL 115 must be taken the same term.

WBL 121 Work-Based Learning II (0 10 1)
Prerequisites: None
Corequisites: None
This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

WEB TECHNOLOGIES

WEB 110 Internet/Web Fundamentals (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines.

WEB 115 Web Markup and Scripting (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards.

WEB 120 Introduction Internet Multimedia (2 2 3)
Prerequisites: None
Corequisites: None
This is the first of two courses covering the creation of internet multimedia. Topics include internet multimedia file types, file type conversion, acquisition of digital audio/video, streaming audio/video and graphics animation plug-in programs and other related topics. Upon completion, students should be able to create internet multimedia presentations utilizing a variety of methods and applications.

WEB 125 Mobile Web Design (2 2 3)
Prerequisites: WEB 110
Corequisites: None
This course introduces students to web design for mobile devices. Topics include planning an effective mobile Web site, industry standard Mobile Markup Language, CSS3, multimedia, m-commerce, social media, testing and publishing. Upon completion, students should be able to plan, develop, test, and publish Web content designed for mobile devices.

WEB 140 Web Development Tools (2 2 3)
Prerequisites: None
Corequisites: None
This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.

WEB 182 PHP Programming (2 2 3)
Prerequisites: CIS 115
Corequisites: None
This course introduces students to the server-side, HTML-embedded scripting language PHP. Emphasis is placed on programming techniques required to create dynamic web pages using PHP scripting language features. Upon completion, students should be able to design, code, test, debug, and create a dynamic web site using the PHP scripting language.

WEB 210 Web Design (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces intermediate to advanced web design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, usability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional web sites.

WEB 214 Social Media (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces students to social media for organizations. Topics include social media, marketing strategy, brand presence, blogging, social media analytics and technical writing. Upon completion, students should be able to utilize popular social media platforms as part of a marketing strategy, and work with social media analytic tools.

WEB 225 Content Management Sys (2 2 3)
Prerequisites: WEB 110
Corequisites: None
This course introduces students to Content Management Systems (CMS) designed for the publication of Web content to Web sites. Topics include individual user accounts, administration menus, RSS-feeds, customizable layout, flexible account privileges, logging, blogging systems, creating online forums, and modules. Upon completion, students should be able to register and maintain individual user accounts and create a business website and/or an interactive community website.

WEB 230 Implementing Web Server (2 2 3)
Prerequisites: NET 110 or NET 125
Corequisites: None
This course covers website and web server architecture. Topics include installation, configuration, administration, and security of web servers, services and sites. Upon completion, students should be able to effectively manage the web services deployment lifecycle according to industry standards.

WEB 250 Database Driven Websites (2 2 3)
Prerequisites: DBA 110
Corequisites: None
This course introduces dynamic (database-driven) website development. Topics include the use of basic database CRUD statements (create, read, update and delete) incorporated into web applications, as well as in software architecture principles. Upon completion, students should be able to design and develop database driven web applications according to industry standards.

WEB 285 Emerging Web Technologies (2 2 3)
Prerequisites: None
Corequisites: None
This course will explore, discuss, and research emerging technologies in the web arena. Emphasis is placed on exposure to up-and-coming technologies relating to the web, providing hands-on experience, and discussion of practical implications of these emerging fields. Upon completion, students should be able to articulate issues relating to these technologies.

WELDING

WLD 110 Cutting Processes (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.

WLD 112 Basic Welding Processes (1 3 2)
Prerequisites: None
Corequisites: None
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.

WLD 115 SMAW (Stick) Plate (2 9 5)
Prerequisites: None
Corequisites: None
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.

WLD 116 SMAW (Stick) Plate/Pipe (1 9 4)
Prerequisites: WLD 115
Corequisites: None
This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.

WLD 117 Industrial SMAW (1 4 3)
Prerequisites: None
Corequisites: None
This course introduces the SMAW (stick) process for joining carbon steel components for industrial applications. Topics include padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, student should be able to safely perform SMAW fillet and groove welds on carbon steel plate with prescribed electrodes.

WLD 121 GMAW (MIG) FCAW/Plate (2 6 4)
Prerequisites: None
Corequisites: None
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.

WLD 122 GMAW (MIG) Plate/Pipe (1 6 3)
Prerequisites: WLD 121
Corequisites: None
This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.

WLD 131 GTAW (TIG) Plate (2 6 4)
Prerequisites: None
Corequisites: None
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.

WLD 132 GTAW (TIG) Plate/Pipe (1 6 3)
Prerequisites: WLD 131
Corequisites: None
This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.

WLD 141 Symbols and Specifications (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.

WLD 143 Welding Metallurgy (1 2 2)
Prerequisites: None
Corequisites: None
This course introduces the concepts of welding metallurgy. Emphasis is placed on basic metallurgy, effects of welding on various metals, and metal classification and identification. Upon completion, students should be able to understand basic metallurgy, materials designation, and classification systems used in welding.

WLD 151 Fabrication I (2 6 4)
Prerequisites: WLD 110 (Local) and WLD 115 (Local)
Corequisites: None
This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, cutting, joining techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.

WLD 215 SMAW (Stick) Pipe (1 9 4)
Prerequisites: WLD 115 or WLD 116
Corequisites: None
This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and discontinuities. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.

WLD 231 GTAW (TIG) Pipe (1 6 3)
Prerequisites: WLD 132
Corequisites: None
This course covers gas tungsten arc welding on pipe. Topics include joint preparation and fit up with emphasis placed on safety, GTAW welding technique, bead application, and joint geometry. Upon completion, students should be able to perform GTAW welds to applicable codes on pipe with prescribed electrodes and filler materials in various pipe positions.

WLD 261 Certification Practices (1 3 2)
Prerequisites: WLD 115 and WLD 121 and WLD 131
Corequisites: None
This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.

WLD 262 Inspection and Testing (2 2 3)
Prerequisites: None
Corequisites: None
This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.

WHEELS OF LEARNING

WOL 110 Basic Construction Skills (2 3 3)
Prerequisites: None
Corequisites: None
This course introduces the student to basic safety, tools, and skills commonly found in the construction related trades. Topics include safety, basic math, blueprints, hand and power tools, and rigging. Upon completion, students should have successfully completed the core curricula as identified by the National Center for Construction Education and Research.

ACADEMIC POLICIES & PROCEDURES FOR CURRICULUM PROGRAMS

Isothermal Community College publishes academic policies and procedures that adhere to principles of good educational practice. These policies and procedures are disseminated to students, faculty, and other interested parties through the College Website and publications that are available in both digital and print format including the College Catalog and Student Handbook.

ACA CLASSES AND ORIENTATION

Orientation familiarizes students with campus procedures and resources and offers information and assistance to help students succeed in college. Orientation is delivered in a variety of formats. Degree seeking students take an ACA class (ACA 115 or ACA 122), the college's orientation class. ACA provides an extensive orientation, not only to the College, but also to the college experience. Moodle and Patriot Port information sessions are available at the beginning of each semester to help students become familiar with Isothermal's technical resources. Also, Successful Entry and Transition (SET) Sessions and standard orientation and information sessions are available in the high schools and on campus to help students transition to college and become familiar with campus resources.

ACADEMIC MISCONDUCT

All forms of academic misconduct may result in sanctions. For more information regarding academic misconduct and related sanctions and disciplinary procedures, please refer to Appendix A.

ACADEMIC STANDING AND APPEALS

Rules and regulations regarding academic standing, suspension, and length of suspension approved by the President. (Board approved policy: Academic standing 401-02-00BP)

Academic Alert

Students whose grade point average (GPA) falls below a 2.0 are placed on academic alert. Students on academic alert may benefit from familiarizing themselves with two important college procedures: Academic Fresh Start and Course Repeat. Students who repeat classes are encouraged to review their transcripts carefully to ensure that previously earned lower grade(s) have been removed from grade point average calculation. Students on academic alert should also consider academic load as well as assistance available through Student Services, Supplemental Instruction, and Academic Advisors.

In order to alert faculty and staff advisors that students are struggling academically, the Records Office will flag records in Colleague as notification when student GPAs fall below a 2.0.

Potential Consequences related to ongoing academic alert

There will be times when student academic performance is chronically poor, e.g., student is performing at or below 1.0 in consecutive semesters. Academic advisors may refer these students to the Dean of Students who will evaluate the progress of the student and may refer the student to the Committee on Admissions, Academic Continuation, and Records. This committee may (1) approve continued enrollment under specified circumstances or (2) suspend the enrollment of the student for a specified time frame. After observing the suspension period, the student must seek approval from the Dean of Students. The Dean of Students may refer the decision to the Committee on Admissions, Academic Continuation, and Records prior to re-entering.

Academic Standing

Guidelines may vary by program, e.g., Career and College Promise, Basic Law Enforcement Training (BLET), and health sciences. Information regarding academic standing guidelines by program is available in specific department areas.

Academic Standing Appeal

A student may appeal a decision on academic standing. An appeal should be submitted in writing to the Dean of Students. The Dean of Students may refer the appeal to the Committee on Admissions, Academic Continuation, and Records. The student may further appeal this decision to the Vice President of Academic and Student Services and Institutional Assessment. The decision of the Vice President will be final.

ATTENDANCE

Regular class attendance is a student obligation and essential to receive maximum benefit from the educational experience. The student is expected to attend and be on time for all classes and lab, shop, and/or clinic sessions. The student is also responsible for all work, including tests and written assignments, and for all class meetings.

Administrative Withdrawal

An instructor, in consultation with the appropriate instructional administrator, may administratively withdraw any student whose cumulative absences exceed 20% of the scheduled class hours for the semester. The withdrawal must be made by the drop deadline published in the Academic Calendar. The student will receive a grade of W#. In case of extenuating circumstances, a student who has been withdrawn from a course for excessive absences may be re-admitted to class with the permission of the instructor and the appropriate Dean/Director admission will be considered on a class-by-class basis. The instructor and/or department dean or director must notify the Records Office in writing requesting readmission.

Class Attendance Policies
Instructors establish their own class attendance policy. This attendance policy should be explained in detail at the beginning of the course and should include the relationship of absences to grades. Instructors maintain records for the full duration of each course to document student attendance. Students who stop going to class without officially withdrawing may receive a grade of "F" at the end of the semester. (Reference Drop/Withdrawal Policy 401-02-04AP) It should be noted that some programs have outside regulatory bodies that require a minimum of course attendance hours (i.e. BLET, Cosmetology). Students whose cumulative absences exceed 20% of scheduled class hours for the semester may also be subject to administrative withdrawal.

Class Entry Prior to the Census Date
Students enrolled in any course regardless of delivery method must be in attendance and recorded as present at least one time on or before the census date of the course. Students who fail to attend prior to the census date will be removed from the class roster and recorded as a No Show. Students removed from a course for failure to enter prior to the census date will not be issued a refund for the course. (1E SBCCC 900.1 Curriculum Tuition Refunds)
Students receiving financial aid should consult with a financial aid counselor to determine the impact of the No Show designation on their financial aid eligibility and obligations.

Students enrolled in online courses must complete the Mandatory Course Enrollment Assignment on the first day of the term. This requirement has been implemented by the institution in an effort to comply with Federal Financial Aid regulations.

"In a distance education context, documenting that a student has logged into an online class is not sufficient, by itself, to demonstrate academic attendance by the student. A school must demonstrate that a student participated in class or was otherwise engaged in an academically related activity, such as by contributing to an online discussion or initiating contact with a faculty member to ask a course□related question." Federal Student Aid Handbook 2013□2014, Volume 5, 5□60.

Failure to complete the mandatory course enrollment assignment could result in receiving a grade of No Show (NS) for the course. and will not receive a refund. Students enrolled in hybrid or web-assisted courses must enter the course prior to the census date either by attending the course during the scheduled face-to-face class time or by completing a Mandatory Course Enrollment Assignment.

Curriculum Late Course Entry, Late Registration, and Schedule Adjustments
In support of the College's focus on learning, the College ensures that students have an opportunity to be academically successful in each course. The faculty and academic administrators are in the best position to make decisions concerning students' ability to complete coursework within an allotted time. Therefore, students will not be allowed to add/change sections after the schedule adjustments deadline listed in the Academic Calendar. In addition, a student will not be allowed to enter a course past the census date regardless of registration status.

Students may officially drop a course(s) without academic penalty and receive a grade of 'W' if this drop is made before the drop deadline as published in the Academic Calendar. Courses that meet on a schedule other than a sixteen week semester may have a different drop deadline.

Following the Schedule Adjustment Period, a student may formally withdraw from a class or the College by completing a withdrawal form which can be obtained from the Records Office or any academic department. The student should notify the course instructor(s) of his/her withdrawal.

Any individual course dropped after the published deadline must be approved by the Vice President of Academic and Student Services and Institutional Assessment. The drop/add and drop deadlines are different for Academic Development and other classes that have non-standard beginning and ending dates and may not meet for the full duration of the semester.

School Absence for Religious Reasons
Isothermal Community College recognizes the right of students to be absent from class for religious reasons. Students may request a maximum of two excused class days per academic year for observations required by his/her faith. In accordance with this right, the President has established procedures for requesting, document and excusing religious absences.

AUDITING COURSES

If you wish to audit (take a class without credit), you must register through the regular procedure and must meet all course prerequistes and attendance requirements as other students. Audits will be charged the same fee as taking classes for credit. Notify your instructor when you begin the class. **AN AUDIT CANNOT BE CHANGED TO CREDIT OR CREDIT TO AUDIT.** Courses taken as an audit may be repeated for credit only. No curriculum course may be audited more than once.

AWARDING OF CREDIT

Transfer of credit for educational work taken at a regionally accredited institution may be accepted. Previous course work must be submitted on an official transcript. Credit will normally be allowed for applicable courses in which a grade of "C" or higher has been earned. Grades of previous enrollments will not be used in the grade point calculation of Isothermal Community College. Course work is evaluated according to the student's selected program. Time and program selection may be a factor in determining credit. Some technical credits older than 5 years or more may be subject to review by the Registrar's Office and appropriate faculty/dean. Courses under the 5 year limitation are determined and reviewed by Instructional Deans, and a list is maintained in the Registrar's Office. Students may be requested to provide prior course descriptions and/or documentation demonstrating required knowledge before credits are accepted. Note: Students requiring further math classes are STRONGLY advised to take a refresher course if it has been more than two years since completing their last math course. For students seeking transfer credit, college transcripts must be translated into English at the student's expense by World Evaluation Services (WES) or Global Credential Evaluators (GCE).

Results of the transfer of credit evaluation may be appealed to the Committee on Admissions, Academic Continuation, and Records.

Transfer students must earn 25% of the credits required for graduation in their particular program at Isothermal Community College (see Graduation Requirements). Any exceptions to this policy must be approved by the Committee on Admissions, Academic Continuation, and Records.

All transfer students will enter the college in good academic standing. Once enrolled, academic standing will be determined by grades on course work done solely at Isothermal.

Transfer of Credit Within the Institution

Students transferring from one curriculum to another within the College may be handled in the same manner as transfer credits from another institution. Courses designed for satisfaction of Associate of Arts and Associate of Science degree requirements may be accepted in Associate of Applied Science degree programs; however, courses designed for career preparation in Associate of Applied Science degrees, diploma, and certificates may not apply to Associate of Arts and Associate of Science programs. A list of courses approved for Arts and Sciences credit is maintained in the office of the Dean of Arts and Sciences. Cumulative grade point averages are normally continued when changing programs. The GPA for graduation is based only on the courses required in the program.

Other Credit

Credit may also be given in the occupational areas for noncollegiate and military educational experiences. These educational experiences will be evaluated on the basis of the current editions of College Credit Recommendations and The Guide To Evaluation of Educational Experiences in The Armed Services. Time and program selection may be a factor in determining credit. A maximum of 16 semester hours may be awarded. (Also, see requirements for the Occupational Education Associate Program.)

Credit by Examination

Any student at Isothermal Community College may receive course credit by examination through one of the following four methods: 1) Challenge Exam, 2) CLEP Exam, 3) Advanced Placement Exams, or 4) North Carolina High School to Community College Articulation Agreement, or 5) Diagnostic Exam in Academic Development courses.

Challenge Exam

A student may request permission through the appropriate instructional dean to challenge a course through a comprehensive exam for credit. Only those courses for which tests have been developed and have been filed in the dean's office may be challenged. The procedure for challenging is as follows:

1. The student must be registered for the course, have paid proper tuition, and have approval of the instructor.
2. If the exam is failed, the student must continue the course.
3. A course may be challenged only once and must be done during the first week of class.
4. If the exam is passed, the student's grade must be submitted to the Student Records Office during the first two weeks of the semester. This grade will be recorded as a "CE". (Note: "CE" grades are not acceptable for the Comprehensive Articulation Agreement between the North Carolina Community College System and the UNC system.)

Advanced Placement (AP) and
College Level Examination Program (CLEP)

College credit may be awarded if appropriate conditions are met by Advanced Placement (AP) or College Level Examination Program (CLEP) test scores. Isothermal academic credit will be granted to enrolled students who receive scores of 3 or higher on the AP tests offered by the College Board. CLEP is granted for scores of 50th percentile or higher. Credit may be considered only for those courses which are in the student's academic program. AP and CLEP credit accepted at other post-secondary institutions is not automatically transferred to Isothermal but is reviewed when official scores are received.

North Carolina High School to Community College Articulation Agreement

North Carolina high school graduates may be awarded college credits for certain high school courses when transferring to Isothermal Community College. Criteria is controlled by Department of Public Instruction and the NC Community College System and is subject to change without notice. The following criteria must be met to receive credit:

1. Grade of B or higher in the high school course
2. A scaled score of 93 or higher on the standardized VoCATS post-assessment
3. In order to receive articulated credit, students must enroll at Isothermal within two years of their high school graduation date.
4. Apply to Isothermal Community College in a related major

CHANGE OF MAJOR

Program changes should be iniated by the student in consultation with an advisor and Financial Aid Counselor (when applicable). Program changes must be submitted to the Admissions Office.

GRADING SYSTEM (Current)

Instructors are responsible for establishing their own grading policy in accordance with the college's letter grade system with qualitative descriptions.

Grade	Significance	Grade Value
A	Excellence	4.0
B	Above Average	3.0
C	Average	2.0
D	Below Average	1.0
F	Failed	0
W	Withdrawn	0
I	Incomplete	0
R*	Expected Progress DMA class	0
Y	No-credit-Audit	0
NS	No Show	
CE	Credit By Exam	
CR	Transfer Credit	
*	Developmental Credit	
%	Granted an Academic Fresh Start	
#	Administrative Withdrawal	

Academic Fresh Start

Any Isothermal Community College student who has experienced a lapse in enrollment at the college for a period of at least three consecutive academic years may petition in writing to have grades older than three years old and below "C" disregarded in calculating the GPA. Following re-enrollment, the student must complete at least twelve (12) semester hours with a minimum grade point average of 2.0 prior to requesting an academic fresh start.

In some instances students who change majors and complete two (2) academic semesters with at least twelve (12) semester hours and a 2.0 GPA in the new major may petition for an academic fresh start even if there has not been a lapse in enrollment.

The student requesting a fresh start should complete an application for Academic Fresh Start that is available in the Student Services office. Students may be granted an academic fresh start only once. An academic review committee will consider the request and determine the student's eligibility for grade forgiveness. If the request is approved, the record of earlier course work will remain on the student transcript. However, these grades will be removed from GPA calculation. Students transferring to another college should contact the institution to determine the impact of Academic Fresh Start on transfer. Fresh start GPA calculations are not used in determining eligibility for student financial aid.

Credit Hour Determination & Definition

Isothermal Community College makes determinations regarding credit hours and credit awarded consistent with the NC State Board of Community Colleges policy 1G SBCCC 100.1. Course descriptions and credit hours, lab hours, clinical hours and contact hours are scheduled for course delivery consistent with the NC Community College System Combined Course Library. Credit hours awarded for each class and hours required for program completion are described in the college catalog.

Course Repeat

Courses with earned grades of "D" or "F" may be repeated. Courses with earned grade of "C" or better may be repeated only by special permission from the Vice President for Academic and Student Services and Institutional Assessment. When a course has been repeated, the higher grade will be counted. Physical education credit classes may not be taken for a grade of "audit." Credit students may not receive more than five physical education credits. Exceptions for physical education majors may be granted by the Vice President for Academic and Student Services and Institutional Assessment. Non-credit recreation classes offered through Continuing Education may be repeated at will. Courses taken as audit may be repeated for credit only. No course may be audited more than once. Students receiving Veterans benefits can only receive benefits for repeated courses if the prior grade is an "F".

Grade Appeals
A student, after conferring with the instructor concerned, may present a grade appeal in writing. See Appendix A for information regarding the grade appeal process.

Grade Changes
Instructors have total responsibility and authority for the assigning of grades. The policy regarding incomplete grades is stated in the College catalog. No other grade may be changed by an instructor once the grade has been given without the consent of the Vice President of Academic and Student Services and Institutional Assessment.

Grade Point Average (GPA)
To compute your cumulative average, multiply credit hours times grade value to get total grade points for each course. Divide the total grade points for all courses by the total number of enrolled credit hours.

Grade Point Average Example:

Course	Credit hrs		Grade		Grade Points
English	3	x	C (2)	=	6
History	3	x	B (3)	=	9
Biology	4	x	A (4)	=	16
Math	5	x	D (1)	=	5
Spanish	3	x	F (0)	=	0
P.E.	2	x	A (4)	=	8
	20				44

Average for the semester 44 ÷ 20 = 2.20

Grade Reports
Your final grade report will be available online through Patriot Port at the completion of each semester.

Incomplete Policy
A grade of "I" is assigned when the course work is incomplete. Unless the instructor has established an earlier time line for completion, this grade must be removed by completing the course before the end of the following semester or the grade automatically becomes an "F" on the permanent record. If a student is registered for a course that requires a pre-requisite with an assigned "I" incomplete grade, the student must complete the course by the census date of the current term. Otherwise, the student will be administratively dropped resulting in a reduced enrollment status and ineligibility of a tuition refund. (Administrative approved policy: 401-02-03AP)

GRADUATION

Graduation exercises to award degrees, diplomas, and certificates to students in respective programs are held at the conclusion of spring semester. You **MUST** file a Graduation Application with the Records Office (Student Services). If you are eligible to receive a degree, diploma, or certificate you are encouraged to participate in graduation exercises. See Academic Planner for deadlines.

Requirements
In order to qualify for a degree, diploma, or certificate in a program of study, the student must:

1) Complete all of the courses as outlined in the official Curriculum Standards,
2) Earn the minimum required total semester hours,
3) Maintain a grade point average of 2.00 or better in the program of study, some programs also require a grade of C or better on required courses, and
4) Submit an application for graduation.

The students are responsible for monitoring their program toward graduation. The college catalog of record for graduation evaluation will be the current catalog. To check on your progress toward a degree, run a degree audit on Patriot Port.

In the case of students transferring into Isothermal Community College, at least 25% of the credits required for graduation must be earned at Isothermal Community College.

Course Substitutions
Course substitutions may be approved to fulfill graduation requirements provided the substitution is appropriate to the student's program and a comparable course is offered. In all cases course substitutions must be consistent with the program requirements as outlined in the Curriculum Standards published by the North Carolina Community College System. Each student is limited to nine (9) credit hours of substitutions; however, in cases where courses have been discontinued additional substitutions may be approved. All course substitutions must be approved by the appropriate instructional dean and the Vice President for Academic and Student Services and recorded in the Student Records Office.

Graduation Procedure
Students are expected to file graduation applications with the Student Records Office at least one semester preceding the completion of degree requirements. Commencement is held at the conclusion of the spring semester. A diploma fee is charged to each graduating student who wishes to purchase a diploma. The specific date of the commencement exercise is listed in the College Calendar in front of this catalog. All students who have completed degree requirements since the previous commencement are invited to participate in graduation exercises. See Academic Calendar for deadlines.

Graduation Orders
Graduation applicants will be notified by mail or email concerning orders for caps, gowns, diplomas, rings, and invitations. Orders are placed in the bookstore.

Graduation With Honors
Students who complete a degree, diploma or certificate program with a program of study grade point average of 4.0 will graduate with High Honors. The student who earns a program of study grade point average of 3.50 to 3.99 will graduate with Honors.

HONORS & AWARDS

Honors and awards are recognized in the following ways:

Awards Day
An annual assembly is held near the end of spring semester to recognize students whose scholarship, leadership, citizenship, and service have been noteworthy.

Dean's List
Dean's List is designed to recognize all students whose academic performance is outstanding. In order to qualify, a student must carry at least twelve (12) semester hours of credit during the term and maintain a 3.25 grade point average for the semester. Academic Development courses number less than 100 and do not count toward hours earned for the Dean's List.

High Honors
You will graduate with High Honors if you have completed your degree, diploma, or certificate program with a grade point average of 4.0 in your program of study.

Honors
You will graduate with Honors if you have completed your degree, diploma or certificate program with a grade point average of 3.50 to 3.99 in your program of study.

Outstanding Students
Each semester, students who display excellence in an aspect of college life are chosen from the Applied Sciences & Technology, Arts & Sciences, Business Sciences, and Academic Development program areas. These students are recognized as Learning College Student of the Semester. Additional awards or recognition may be provided for students with special achievement in regional, state, or national competition. Nomination forms are submitted in the eighth week of each semester to the Vice President of Academic and Student Services and Institutional Assessment, and awards are presented in the tenth week of the semester.

Dr. Barbara Peterson Award of Excellence for Student Portfolios
The Dr. Barbara Peterson Award of Excellence for Student Portfolios is a certificate that may be awarded to as many students as deserve it each semester. Among the criteria for this award are completeness, quality of artifacts (with an emphasis on reflection), and qualities that make the portfolio stand above the crowd.

Who's Who Among Students in American Junior Colleges
Students are selected for the Who's Who Award by vote of the faculty based on academic achievement, service to the community, leadership in extracurricular activities, and potential for continued success. The Who's Who organization assigns a quota of nominees based on Isothermal's enrollment in order to recognize outstanding campus leaders for the year.

Robert Wendell Eaves Distinguished Teaching Award
Each year, students, faculty, administration, staff, and people from the community have an opportunity to nominate an outstanding instructor for the Robert Wendell Eaves Distinguished Teaching Award. Recognition and a monetary award are given to the instructor selected each year. The winner is announced during the graduation ceremonies at the end of spring semester. To be eligible, the instructor must be a full-time employee of Isothermal Community College and must spend at least 25% of his/her employment in teaching. Nomination forms will be made available early spring semester. They can be obtained at the college switchboard, in Student Services, in the library, from departmental secretaries, at The Foundation, and on the college website.

This award is your opportunity to express appreciation to that one instructor who has gone above and beyond the call of duty to help you. Perhaps that instructor has helped you learn the subject matter, excel as a college student, obtain that first job, discover what career you want to pursue in life, or made a significant difference in your education in some way.

RECORDS & REGISTRATION

Academic Load

Arts and Sciences - 21 credit hours **(maximum hours)**
Applied Sciences and Technology - 21 credit hours **(maximum hours)**
Business Sciences - 21 credit hours **(maximum hours)**

Approval from the appropriate dean is required to register for more than the maximum hours.

Drop/Withdrawal

All official withdrawals must:

1. Be made through the instructor by the deadline published in the Academic Calendar. Courses that have non-standard beginning and ending dates may have different withdrawal deadlines. Students in these courses should consult their course syllabus or their instructor for deadline information.
2. Be made in person if possible.
3. Be recorded by the Student Records Office to be official.
4. Receive a grade of "W." Students who leave class without officially withdrawing may receive a grade of "F." Students whose cumulative absences exceed 20% of scheduled class hours for the semester may also be subject to administrative withdrawal. Students who are administratively withdrawn receive grades of W#.

Instructors are required to keep attendance records throughout the semester. Last dates of attendance are required for grades of W (Withdrawn), W# (Administratively Withdrawn), R (DMA repeat), and F (Failed) grades. The official withdrawal date will be the Last Date of Attendance. Students are urged to consult with financial aid and veteran's affairs staff regarding the impact of class withdrawal and last date of attendance on financial aid and veterans benefits eligibility.

Withdrawals after the deadline published in the Academic Calendar must be approved by the Vice President of Academic and Student Services and Institutional Assessment.

Mandatory Course Enrollment Assignment & Census Rosters

Census rosters are printed and distributed after students have been deregistered for non-payment. Instructors must verify enrollment, attendance dates, beginning and ending dates, and hours and times the class meets. A student who has not attended or completed the Mandatory Course Enrollment Assignment is listed as a No Show and must be indicated as such on the roster. Audits and credit by exam grades are also included on these reports. Faculty teaching online, hybrid and web-assisted courses must submit the graded Mandatory Course Enrollment Assignment results with the census roster. Completed reports are signed, dated, and submitted to the appropriate Dean/Director for review. The rosters are then returned to the Records Office for processing.

The enrollment data from these reports are used to report student hours of membership (North Carolina Administrative Code 2D.0323) which are used to calculate FTE (full time equivalents) for the college and affects subsequent funding. Accuracy of information is critical. These reports are subject to audit.

Registration/Advising Forms

Refer to Appendixes G and H for samples
Appendix G - Registration/Advising Form Student Worksheet
Appendix H - Student Registration Schedule

Registration Clearance

Students are responsible for obtaining registrations clearance unpaid fines or loans prior to registration. Students with other registrations flags must also have clearance.

Student Classification

Freshmen have earned less than 30 credit hours.
Sophomores have earned 30 credit hours or more.
Full-Time students are enrolled for 12 or more credit hours.
Part-Time students are enrolled for less than 12 credit hours.

Student Privacy

Isothermal Community College, in the execution of its responsibilities to students, must maintain accurate and confidential student records. The Student Services Office has the responsibility for maintaining these records in accordance with existing state laws, college policy and the Family Educational Rights and Privacy Act of 1974 as amended. See Appendix B: Student Records Policy.

EDUCATIONAL PROGRAMS

CAREER & COLLEGE PROMISE FOR HIGH SCHOOL STUDENTS

PURPOSE

The purpose of Career & College Promise is to provide flexible, seamless, student-centered educational opportunities for North Carolina high school students, which maximize the use of resources and educational opportunities not otherwise accessible.

DEFINITION

Career & College Promise occurs when qualified high school students are permitted to enroll in curriculum or continuing education courses. Students must be in 11th or 12th grade, meet admissions requirements for desired pathway, and have approval from their high school principal before being enrolled in college classes.

CONTACT

For more information about the admissions process for Career & College Promise, please contact the Rutherford Liaison at 828-395-1996, the Polk Liaison at 828-394-3092 or Admissions at 828-395-1442.

CONTINUING EDUCATION

www.isothermal.edu/academics/continuing-education/

Continuing Education's flexibility provides the opportunity to meet a wide variety of individual and group needs. Adults can study a high tech skills, learn to read, take a course for self-enrichment, or develop quality management techniques. Some courses are offered on a continuing basis while others are given in response to requests of individuals or groups. Groups meet in schools, churches, community clubs, fire stations, and industry throughout Rutherford and Polk counties and on campus. Class hours, the length of the course, and the number of meetings per week can be arranged for the convenience of the participants.

ADMISSION AND REGISTRATION

Adults 18 years of age or older are eligible to participate in Continuing Education classes. High school students from Rutherford and Polk counties, ages 16 and 17, may enroll in a course with permission from their high school.

REGISTRATION FEES

Student fees depend on the type of course. There are no registration fees for Adult Basic Education, HRD, and the High School Diploma programs. Law enforcement, fire, rescue, and EMT personnel pay no fees for their in-service training. Prisoners and mentally handicapped adults are fee exempt. North Carolina residents 65 and over, do not pay a fee for some classes.

CONTINUING EDUCATION REFUND POLICY

1. A student who withdraws from a class prior to the first day of class or if the class is canceled will be eligible for a 100 percent refund of the registration fee.
2. After the class has started, a 75% refund will be made if the student withdraws prior to or on the 10% point of the class.
3. An option to a refund: The student may request a transfer to another Continuing Education course before 10% of the course has expired. The course that is being transferred into must be within the same semester, have space available, and have the instructor's approval.
4. Exceptions to this policy can be made by the following:

Courses Originating In	Exceptions Made By
Continuing Education Division	Dean of Continuing Education
Polk Center	Polk Center Director

CONTINUING EDUCATION REPETITION POLICY

Continuing Education students may enroll in a course as many times as necessary to accomplish their personal or educational/training goals, provided they: 1) continue to show progress, 2) do not prohibit other students from participating, 3) pay the appropriate fees, and 4) do not violate North Carolina Department of Community College policy.

Students who take the same Occupational Extension course more than twice are required to pay for the actual cost of the course or the registration fee, whichever is more. This applies if the course is repeated within a five-year period since September 1, 1993. Courses taken for certification, licensure, or recertification are exempt from this policy.

CONTINUING EDUCATION UNITS

One Continuing Education Unit will be awarded for each 10 contact hours of instruction that will be determined prior to the beginning of the experience. A decision to award the CEU will be made after the program or activity has been offered. Calculations of contact hours will include the following elements:

1. Classroom time with direct participation between the students and instructors will be converted directly to contact hours.
2. Activities that use instruction such as supervised independent study, directed reading, or project based assignments will be awarded CEU's. Contact hours will be determined after finding the average amount of time and hours required to complete the learning activity.
3. Field trips and other experiential course activities will be awarded CEU's. This will usually be done on the basis of two hours required for each contact hour of instruction.

The CEU is used in three ways, as follows:

1. A unit of measure to recognize an individual's participation in non-credit activities that meet appropriate criteria.
2. The accounting unit of Isothermal Community College non-credit courses, programs, and activities.
3. The basis for quality assurance in Continuing Education programming.

The Dean of Continuing Education and the Director of Polk Center have responsibility for final determination of the CEU's awarded for a particular Continuing Education experience. The instructor will verify and report that each participant has or has not met the specified requirements for satisfactory completion and is or is not awarded a CEU. A permanent record of the student's participation will be maintained by Isothermal Community College.

OCCUPATIONAL EXTENSION

Occupational classes help adults build their job skills or knowledge. These classes are held on campus or in the workplace. Business, industry and public service organizations have benefited from their employee's development through occupational courses. Here are some examples of occupational oriented courses.

CPR	HRD	Team Building	Emergency Medical Services
Law Enforcement	First Aid	Teacher Renewal Credit	Fire Fighting
Leadership Rutherford	Nursing Assistant	Truck Driver Training	

SELF-ENRICHMENT

Self-enrichment courses help adults broaden their talents, stimulate their creativity, develop new skills, improve themselves, and just have fun. Examples of these courses include:

Cake Decorating	Crafts	Language & Culture	Pottery	Ceramics
Creative Writing	Music	Quilting	Dance	Computers Skills
Notary Public	Sign Language	Cooking & Nutrition	Painting	Health & Wellness
Vehicle Inspection/Emissions				

HRD PROGRAM

"Our mission is to educate and train individuals for success in the workplace." The HRD (Human Resources Development) programs help unemployed, under employed, and dislocated workers with motivation, attitudinal changes, and pre-job orientation. Instruction addresses six core competencies:

1. assessment of individual assets and limitations
2. development of a positive self-concept
3. development of employability skills
4. development of communication skills
5. development of problem-solving skills
6. development of awareness of information technology in workplace

The structured pre-employment training and counseling are designed to help participants achieve success. Students learn how to be better employees through a variety of instructional activities: individual participation, group interaction, discussion, creative expression, projects, team tasks. Students are encouraged to use their abilities, to develop attitudes and skills necessary to obtain and maintain satisfactory employment. Some classes include specific work-related training appropriate for employment such as basic office assistant, bank teller, child care worker.

PROFESSIONAL TRUCK DRIVER TRAINING

www.isothermal.edu/truck

The Professional Truck Driver Training is a certified program of the Professional Truck Driving Institute. This 168 hour program is offered in daytime or evening classes. Work with the truck in addition to classroom, will be scheduled at times from early morning to late evening, Monday-Sunday. Classes start about every five weeks.

PROGRAM FEATURES

44 hours of individual driving time and 124 hours of classroom
One-on-one instruction behind the wheel
Satisfaction guarantee
CDL State testing conducted in-house
Job placement assistance, if needed

ADMISSION REQUIREMENTS

21 years of age to drive interstate
High School or GED graduate. Non-graduates can take a placement test
Valid driver's license
Motor vehicle driving record free of any current serious offenses
Be able to pass a DOT physical and drug screen

ADULT BASIC EDUCATION

Adult Basic Education is designed for those who need basic reading, writing and math skills. The program offers instruction that will help adults become better consumers, employees and problem solvers. Classes provide group instruction, student driven individual study and technology to gain needed skills. All classes are free. To find the current schedule of class offerings, visit our website at www.isothermal.edu or contact the ABE Coordinator at 828-395-1489.

ADULT HIGH SCHOOL

The adult high school programs, Adult High School Diploma (AHSD) and the General Educational Development (GED), provide self-paced, individualized instruction to adults. Guidelines for the AHSD program are established through the Department of Community Colleges and through a cooperative agreement with the Polk County Board of Education, the Rutherford County Board of Education, and Isothermal Community College. Any 18 year old or older may enroll in either program.

ADULT HIGH SCHOOL DIPLOMA REQUIREMENTS

1) Satisfactory completion of units in English, mathematics, social studies, sciences, and health.
2) Satisfactory completion of elective units.
3) A placement/progress score for reading and math are required.

ENGLISH AS A SECOND LANGUAGE - ESL

English as a Second Language (ESL) is a program of instruction designed to help adults who have limited English proficiency to achieve competence in the English language. Classes stress everyday life skills that enable the student to be a functioning member of society by learning English. Instruction is provided in the beginner, intermediate and advanced levels. Isothermal Community College partners with Polk County Schools, Polk County Schools Foundation, and Rutherford County Schools to offer this instruction. All classes are free. To find the current schedule of class offerings, visit our website at www.isothermal.edu or contact the ESL Coordinator at 828-395-1489.

GENERAL EDUCATIONAL DEVELOPMENT (GED)

GED Testing

A North Carolina High School Equivalency Diploma is awarded upon satisfactory completion of a series of tests in the areas of writing, reading, social studies, science, and mathematics. Spanish versions of the tests are also available. Anyone interested in taking the GED tests should first contact the Adult High School Coordinator in the Oak Room of the Foundation at 828-395-1361. GED Testing accommodations may be available to examinees with documented disabilities. Contact the Chief Examiner at 828-395-1435 for more information.

GED practice tests and GED study material are available in all classes. Individual scores on the practice GED test determine whether or not the student needs to study and determines the subject(s) to review before attempting the official test. A student must be a resident of North Carolina to take the official GED test in North Carolina.

Classes are offered in communities throughout Rutherford and Polk counties, in industries, and on both the Rutherford Campus, Rutherfordton Learning Center, and Polk Center. Morning, afternoon, and evening classes are available.

CUSTOMIZED TRAINING & DEVELOPMENT

Isothermal Community College is committed to providing business and industry with a broad array of educational and training services. In addition to customized training and regular curricular offerings, the college can assist business and industry through the following program areas.

CUSTOMIZED TRAINING PROGRAM

The Customized Training Program supports the economic development efforts of the State by providing education and training opportunities for eligible businesses and industries. Amended in 2008, this program combines the New and Expanding Industry Training Program and the Customized Industry Training Program to more effectively respond to business and industry. The Customized Training Program also includes the former Focused Industry Training Program and shall offer programs and training services to assist new and existing business and industry to remain productive, profitable, and within the State.

The program was developed in recognition of the fact that one of the most important factors for a business or industry considering locating, expanding, or remaining in North Carolina is the ability of the State to ensure the presence of a well-trained workforce. The program is designed to react quickly to the needs of businesses and to respect the confidential nature of proprietary processes and information within those businesses.

PURPOSE

The purpose of the Customized Training Program is to provide customized training assistance in support of full-time production and direct customer service positions created in the State of North Carolina, thereby enhancing the growth potential of companies located in the State while simultaneously preparing North Carolina's workforce with the skills essential to successful employment in emerging industries.

ELIGIBILITY

Those businesses and industries eligible for support through the Customized Training Program include Manufacturing, Technology Intensive (i.e., Information Technology, Life Sciences), Regional or National Warehousing and Distribution Centers, Customer Support Centers, Air Courier Services, National Headquarters with operations outside North Carolina, and Civil Service employees providing technical support to US military installations located in North Carolina.

SMALL BUSINESS CENTER

The Small Business Center at Isothermal Community College is a community-based provider of education and training, confidential counseling, information, and referral for persons who are currently in business or those seeking to start a new business in Rutherford and/or Polk County.

The objective of the Small Business Center Network is to increase the success rate and the number of viable small businesses in the State of North Carolina. Throughout the year, the Small Business Center conducts seminars and training that are designed to provide you with up to date information on various small business topics.

At the Small Business Center, we also provide free, confidential counseling services for new and existing businesses. Available on an as-needed basis, our counselors serve as sounding boards for ideas and concerns you may have about your business. Our professional staff will help you find solutions to your challenging business questions. No question is too simple or too complicated.

CAREER READINESS CERTIFICATION

Career Readiness Certification is a credential that can be obtain at Isothermal Community College to take to a job interview. It can show an employer the skills a person has in reading for information, applied math and locating information. The program is self paced, the hours are flexible and in some cases the class is free.

POLK CENTER

The Polk Center offers a limited number of credit courses. Students may choose to complete specialized course work at the Rutherford campus or prepare for transfer to a four-year institution.

A wide variety of non-credit courses (continuing education) ranges from self-enrichment classes to those which offer training to volunteer firemen, rescue personnel, and allied health. Courses to improve occupational skills are offered as well. Adult Basic Education, Adult High School, and General Educational Development (GED) programs are available. English as a Second Language (ESL) classes are offered for persons whose native language is not English. Bulletins listing credit and non-credit courses are mailed out quarterly. News releases describing various courses and special events are placed in local newspapers. Polk Campus Preview appears weekly in the Tryon Daily Bulletin.

Library services for Polk Center students are provided through formal agreement with Polk County Public Library.

The Polk Center is fortunate to have dedicated volunteers actively participating in the Polk County Isothermal Community College Foundation, Inc. The Foundation has a significant role in fundraising, provides scholarship aid, and promotes Isothermal Community College in the community.

Regular hours at the Polk Center are Monday through Thursday, 8:00 a.m. to 9:00 p.m., Friday from 8:00 a.m. to 4:00 p.m., and other prearranged times including weekends. Additional information may be obtained by visiting the campus or calling 828-894-3092.

POLK COUNTY EARLY COLLEGE (PCEC)

PCEC is a hybrid (traditional and online) innovative high school in partnership with Isothermal Community College serving students of Polk County. Students enroll at the beginning of their ninth grade year and take a combination of high school and college courses; at the end of up to five years, students may graduate high school with their associate's degree.

RUTHERFORD EARLY COLLEGE HIGH SCHOOL (REACH)

REaCH is an innovative high school on the campus of Isothermal. Students enroll at REaCH at the beginning of their ninth grade year and continue through their twelfth grade year. While enrolled at REaCH, students take a combination of high school and college courses and may graduate with both their high school diploma and their associate's degree.

THE FOUNDATION - PERFORMING ARTS AND CONFERENCE CENTER

Located on the second and third floors of The Foundation Building, the Foundation Performing Arts and Conference Center plays host to an array of events, from concerts to wedding receptions. Cultural events include a variety of performance disciplines including dance, theatre, popular and classical music, family friendly variety shows, plays produced specifically for young audiences, as well as lectures and seminars. Programming is presented by the college and by community and regional based promoters. A listing of public events can be viewed on the facility web site www.FoundationShows.org The facility box office (828-286-9990) is located at the second floor entrance just off the North parking lot. The conference space is used for a variety of events including proms, weddings, sales, seminars, trade shows, and reunions, as well as smaller meetings and retreats. Some special student ticket pricing is available for select events. Ground Floor: Basic Skills/Adult High School/GED; Customized Training & Development; Continuing Education; Defensive Driving, Truck Driving; Small Business Center; Visitor Information. Second & Third Floor: Box Office; Performing Arts & Conference Center Seminar Rooms A & B; Stage.

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B.S., Lenior-Rhyne

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NCCER Craft Instructor

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B.A., Muskingum College

FACILITIES

ADMINISTRATION BUILDING
Academic Development office, faculty, and classrooms, Arts and Sciences office, faculty, labs and classrooms, Assessment, Planning and Research Office, Business Office, Computer Lab, Human Resources, Presidential Office Suite, Public Information Office, Webmaster, Writing Center, Math Lab

APPLIED SCIENCES & TECHNOLOGY BUILDING
BLET, Computer Engineering Technology, Criminal Justice, Early Childhood, Electronics Technology, Applied Sciences office, faculty, classrooms

BUSINESS SCIENCES/AUTOBODY BUILDING
Business Sciences office, faculty, and classrooms, Blue Room 112, Red Room 137, Banking and Finance, Marketing and Retailing, Computer Programming, Computer Information Technology, Entrepreneurship, Healthcare Business Informatics, Healthcare Management Technology, Information Systems Security, Medical Office Administration, Networking Technology, Office Administration, Web Technologies, Accounting Lab, Computer Lab

COMMUNICATIONS BUILDING
Advertising & Graphic Design, Campus Print Shop, Customized Training & Development Room, Electrical Technology, Broadcasting & Production Technology, WLOS, WNCW

THE FOUNDATION PERFORMING ARTS & CONFERENCE CENTER
Basic Skills/Adult High School/GED, Customized Training and Development, Continuing Education, Defensive Driving, Truck Driving, Small Business Center, Visitor Information, Box Office, Performing Arts & Conference Center Seminar Rooms

INFORMATION TECHNOLOGY BUILDING
IT Department, Coordinator of Technology Enhanced Learning, Isothermal Digital Education Academy (IDEA)

LIBRARY
Library staff offices and workspace, book, audiovisual, and periodical collections, student/public computer access, Old Tryon Room, Arts & Sciences Computer Lab, Library Auditorium

LIFELONG LEARNING CENTER
Arts & Sciences faculty and classrooms, REaCH office, faculty, and classrooms, Supplemental Instruction.

MACHINING TECHNOLOGY BUILDING
Manufacturing Technology, Mechanical Engineering Technology

MAINTENANCE BUILDING
College Vehicle Reserve, Shipping & Receiving

POLK COUNTY CENTER
The Polk County Center office, non-credit classes, Adult Basic Education, GED, CNA, English as a Second Language (ESL), curriculum classes

THE RUTHERFORDTON LEARNING CENTER
Associate Degree Nursing (ADN), Compensatory Education, EMT, ESL, Licensed Practical Nursing (LPN), Lifelong Learning classes, Nurse Aide, Truck Driver Training

STUDENT CENTER
Admissions Office, Advising Center, Placement Testing, Campus Bookstore, Campus Enforcement, Arts & Sciences faculty and classrooms; OBH - Café, Cosmetology, Employee Fitness Center, Financial Aid Office, Gym & Pool, Learning Support and Retention Services, Physical Education, Student Activities, Student Services, Visitor Information, Records Office, Dean of Students, Student Government Association, Career Readiness Certification (CRC) lab, Workforce Investment Act (WIA), Verteran's Affairs, Help Desk, Pearson Vue Test Center, REaCH classroom

WELDING TECHNOLOGY BUILDING
Classrooms, Computer lab, Metrology/Inspection Room, Offices, Indoor Shop, Outdoor Shop Tool Storage

WHITE HOUSE
Construction Trades

Appendix A-General Education Competencies

GENERAL COMPETENCIES EXPECTED OF ISOTHERMAL GRADUATES

Because we believe an education is more than an accumulation of credits earned through completion of a variety of courses, and because we want graduates of our programs to be successful at whatever their next step may be—either getting a job or transferring to another college—, it is essential that they exhibit the general education skills described on the following pages. All of these skills are basic to getting along in the world of work. They are skills employers tell us they want most in people they hire. They are skills necessary to success in daily life. Our expected general education outcomes are as follows:

- Communicate effectively through writing, reading, speaking, and listening, and through demonstration of information literacy
- Analyze problems and make logical conclusions
- Demonstrate positive interpersonal skills through cooperative learning and group interaction
- Demonstrate quantitative competencies
- Demonstrate basic computer skills
- Understand global awareness
- Perform technical skills in a chosen occupation

Criteria for achieving these outcomes were developed by campus-wide assessment teams and have been adopted for use in all curriculum programs throughout the college. On the following pages, we provide these criteria in the form of assessment rubrics. Your instructors will be using these to assess your work.

WHAT STUDENTS CAN EXPECT OF ISOTHERMAL

In their commitment to learning and to the achievement of a true learning-centered community,
Isothermal personnel will:

- Meet student needs by demonstrating professional, friendly, and courteous service in all aspects of student life
- Maintain high professional and academic standards
- Serve as role models in the development of leadership skills
- Respect diversity and treat all students fairly
- Be available to students and helpful with student problems
- Communicate clear learning objectives and expected outcomes
- Provide timely feedback in the assessment of learning outcomes
- Stay current in subject matter
- Practice effective teaching/learning strategies that promote critical thinking

WHAT ISOTHERMAL EXPECTS OF STUDENTS

In their commitment to learning, students will:

- Accept responsibility for learning
- Attend and participate in all classes
- Complete required exercises and assignments as directed
- Develop a time management plan that includes adequate time for study
- Maintain an open-minded attitude toward learning
- Strive to become independent critical thinkers
- Seek help as needed from appropriate sources
- Be respectful and considerate of others
- Assume responsibility for knowing and adhering to all college policies
- Acknowledge that learning how to learn is the ultimate objective of education
- Recognize that struggle and discomfort often precede the rewards that accompany goal completion and success

With this commitment on the part of all concerned, an exciting partnership will grow and thrive, thus creating a community of learners whose mission is to improve life through learning.

WRITTEN COMMUNICATION RUBRIC

	4 – EXEMPLARY	3 - PROFICIENT	2 - EMERGING	1 - NOVICE
Context and Purpose	**Demonstrates** a thorough understanding of context, audience and purpose and follows instructions of assigned task, including an effective introduction and conclusion.	**Demonstrates** adequate consideration of context, audience, and purpose and follows instructions of assigned task, including an introduction and conclusion.	**Demonstrates** awareness of context, audience and purpose and attempts to follow instructions of assigned task, including a minimal introduction and conclusion.	**Demonstrates** minimal attention to context, audience, purpose, and instructions of assigned task.
Focus	**Formulates** a clear, strong, and defendable thesis and **focuses** all parts of the work on that thesis by staying on point and not introducing new ideas.	**Formulates** a clear and defendable thesis and **focuses** nearly all parts of the work on that thesis, mostly staying on point and not introducing new ideas.	**Formulates** an adequate thesis and **attempts** to focus the work on the thesis, staying on point somewhat but perhaps introducing an unrelated idea or two.	**Formulates** a weak and/or indefensible thesis and **demonstrates** little understanding of focus.
Development	Effectively **develops** the thesis with many specific, relevant, and compelling details, facts, examples, illustrations, quotations, etc. that indicate mastery of the subject.	**Develops** the thesis with specific, convincing, and relevant details, facts, examples, illustrations, quotations, etc.	**Uses** relevant content to explore the subject through most of the work but points are overly general and/or rarely supported by specifics.	**Uses** simple or inadequate content to explore the subject through some of the work.
Organization	**Organizes** major and supporting ideas logically, consistently, and with clear transitions which smoothly link ideas.	**Organizes** major and supporting ideas logically with some transitions to smoothly link ideas.	**Arranges** ideas in a somewhat logical organization to prevent confusion.	**Arranges** ideas in a confusing order.
Mechanics	**Uses** graceful language that skillfully communicates meaning with clarity, concision, and fluency, in correct and varied sentence structure and is virtually free of errors.	**Uses** straightforward language that generally conveys meaning with few errors and shows understanding of correct and varied sentence structure.	**Uses** language that generally conveys meaning with clarity, although writing may contain some errors, including sentence structure. **Shows** an attempt to proofread for errors.	**Uses** language that sometimes impedes meaning because of errors, usage and/or sentence structure and **shows** lack of proofreading.
Supporting materials/ information literacy (if applicable)	**Selects** authoritative, accurate, reliable, and timely scholarly and/or trade sources that are relevant to the topic; adjusts topic accordingly. **Integrates** and **balances** paraphrasing, summarization, and quotation to support thesis and points, while respecting source material's original context. **Uses** proper references & citations for all sources.	**Selects** authoritative, accurate, reliable, and timely scholarly and/or trade sources that are relevant to the topic. **Integrates** paraphrasing, summarization, and quotation to support thesis and points. **Uses** proper references & citations for all sources.	**Selects** sources that are relevant to the topic, but some may lack authority, accuracy, reliability, or timeliness. **Relies** too heavily on paraphrasing or summarization or quotation of information supporting thesis and points. **Uses** references & citations for sources with a minimum of errors or problems. **May** commit incremental plagiarism	**Selects** sources that are irrelevant or only marginally relevant to the topic and lack authority, accuracy, reliability, and timeliness. **Omits** information supporting thesis and points, or sources were quoted only, or sources were improperly quoted. **Neglects** references or citations, or references or citations have significant errors. **May commit** egregious forms of plagiarism, whether deliberate or not.

Sept. 2013

PRESENTATION SKILLS RUBRIC

	4 - EXEMPLARY	3 - PROFICIENT	2 - EMERGING	1 - NOVICE
Purpose	**Conveys** a clear purpose and a compelling central idea	**Conveys** a clear purpose and central idea	**Conveys** a purpose and central idea but could be clearer	**Needs to establish** a sense of purpose and a central idea
Content	**Presents** material that fits and **supports** the purpose and central idea in a creative, engaging, and insightful way Thoroughly **develops** distinct main points Optional: **Creates** superior visual aids that clearly relate to and enhance the presentation	**Presents** material that sufficiently fits and supports the purpose and central idea Adequately **develop**s distinct main points Optional: **Creates** good visual aids that need minor improvement but relate to and enhance the presentation	**Presents** relevant material that fits the purpose and central idea but needs more supporting information **Presents** discernible main points, but they need to be clearer and more fully developed Optional: **Creates** visual aids that need substantial improvement but relate to and enhance the presentation	**Needs** solid, relevant material to support the presentation **Needs** discernible main points Optional: **Needs** relevant visual aids to enhance the presentation
Organization	**Uses** a logical, well-constructed pattern that fits the purpose of the presentation **Unifies** ideas with smooth transitions and clear signals **Creates** a presentation that flows seamlessly	**Uses** a recognizable pattern that fits the purpose of the presentation **Unifies** ideas with some transitions and signals **Creates** a presentation that flows well overall	**Uses** a pattern that generally fits the purpose of the presentation **Needs** clearer transitions and signals **Creates** a presentation that generally flows but sometimes seems disjointed	**Needs** an identifiable, logical pattern **Needs** transitions and/or signals to move the speech along **Creates** a presentation that seems disjointed
Language (includes word choice, grammar, and punctuation)	**Uses** language that is vivid and completely clear, accurate, and appropriate for the situation or occasion	**Uses** language that is completely clear, generally accurate, and generally appropriate for the situation or occasion	**Uses** language that is generally clear and appropriate for the situation or occasion but has glaring inaccuracies that detract from the presentation	**Needs** language that is much clearer, more accurate, and more appropriate for the situation or occasion
Delivery	**Maintains** exceptional eye contact, volume, vocal variety, and nonverbal communication (gestures, facial expressions, stance, and dress) **Speaks** at a rate that is completely easy to follow and understand **Conveys** meaning with well-placed, non-vocalized pauses (“um,” “uh”) **Incorporates** visual aids (if used) smoothly and effectively	**Maintains** good eye contact, volume, vocal variety, and nonverbal communication (gestures, facial expressions, stance, and dress) **Speaks** at a rate that is generally easy to follow and understand **Seldom fills** pauses with “um,” “uh,” etc. **Incorporates** visual aids (if used) effectively overall but could use more polish	**Maintains** some eye contact, volume, vocal variety, and nonverbal communication (gestures, facial expressions, stance, and dress) **Sometimes speaks** too quickly and/or indistinctly **Often fills** pauses with “um,” “uh,” etc. **Incorporates** visual aids (if used) with some difficulty	**Reads** notes or manuscript to the audience; needs substantial work on volume, variety, and nonverbal communication **Consistently speaks** too quickly and/or indistinctly **Consistently fills** pauses with “um,” “uh,” etc. **Incorporates** visual aids (if used) with much difficulty
Supporting materials/ information literacy (if applicable)	**Selects** authoritative, accurate, reliable, and timely scholarly and/or trade sources that are relevant to the topic; adjusts topic accordingly **Integrates** and **balances** paraphrasing, summarization, and quotation to support thesis and points, while **respecting** source material’s original context **Uses** proper references & citations for all sources	**Selects** authoritative, accurate, reliable, and timely scholarly and/or trade sources that are relevant to the topic **Integrates** paraphrasing, summarization, and quotation to support thesis and points **Uses** proper references & citations for all sources	**Selects** sources that are relevant to the topic, but some may lack authority, accuracy, reliability, or timeliness **Relies too heavily** on paraphrasing or summarization or quotation of information supporting thesis and points **Uses** references & citations for sources with a minimum of errors or problems **May plagiarize** incrementally	**Selects** sources that are irrelevant or only marginally relevant to the topic & lack authority, accuracy, reliability, & timeliness **Omits** information supporting thesis and points, or sources were quoted only, or sources were improperly quoted **Neglects** references or citations, or references or citations have significant errors **May plagiarize** egregiously, whether deliberate or not

INFORMATION LITERACY RUBRIC

	4 - EXEMPLARY	3 – PROFICIENT	2 - EMERGING	1 – NOVICE
Defines the Need for Information	**Defines** the topic, the scope of the topic, key concepts, and the information needed **Develops** a manageable focus appropriate to criteria of assignment **Identifies** a variety or exhaustive list of likely source types	**Defines** the topic, and the information needed **Develops** a focus appropriate to criteria of assignment **Identifies** several likely source types	**Defines** the topic, and the information needed incompletely **Develops** a focus that is too broad or too narrow **Identifies** general source types	**Has** difficulty defining the topic, and the information needed **Lacks** a focus or the focus is too broad or too narrow **Has** difficulty identifying source types
Locates and Accesses Information	**Selects** a variety of topic-appropriate databases and resources **Uses** effective search strategies, developing a vocabulary of topic-specific terms, employing advanced search features (Boolean, indexes, limiters, etc.) as appropriate **Checks** source bibliographies for additional literature **Seeks** sources beyond those immediately available, e.g., interviews, interlibrary loan, etc.	**Selects** topic-appropriate databases and resources **Uses** effective search strategies with topic-specific terms, employing advanced search features (Boolean, indexes, limiters, etc.) as appropriate **Checks** source bibliographies for additional literature	**Uses** library databases and resources, but not necessarily topic appropriate. Excessive reliance on the open web **Searches** using topic-specific terms, but relies on keyword searching and little to no use of advanced search features	**Uses** few or no library resources. Excessive reliance on the open web **Searches** using limited terminology, and relies on keyword searching with little to no use of limiters
Evaluates Information	**Selects** scholarly and/or trade sources relevant to the topic based on authority, accuracy, reliability, coverage, and timeliness**;** and adjusts topic accordingly**.** **Selects** only those popular sources that are authoritative **Identifies** and **critiques** assumptions or biases	**Selects** scholarly and/or trade sources relevant to the topic based on authority, accuracy, reliability, coverage, and timeliness **Uses** few, credible popular sources **Identifies** assumptions or biases	**Selects** sources relevant to the topic, but some may lack authority, accuracy, reliability, coverage, or timeliness **Relies** on popular sources over scholarly or trade publications **Ignores** or **misses** assumptions or biases	**Selects** sources that are irrelevant or only marginally relevant to the topic **Relies** on popular sources over scholarly or trade publications **Ignores** or **misses** assumptions or biases
Uses Information Correctly & Ethically	**Integrates** and **balances** paraphrasing, summarization, and quotation to support thesis and points, while **respecting** source material's original context **Distinguishes** between common knowledge and sources requiring attribution **Uses** proper references & citations for all information sources	**Integrates** paraphrasing, summarization, and quotation to support thesis and points **Distinguishes** between common knowledge and sources requiring attribution **Uses** proper references & citations for all information sources	**Relies** heavily on paraphrasing or summarization or quotation of information supporting thesis and points **Confuses** common knowledge with sources requiring attribution **Uses** references & citations for information sources with a minimum of errors or problems	**Omits** information supporting thesis and points, or sources were quoted only, or sources were improperly quoted **Neglects** references or citations, or references or citations have significant errors

March 2013

CRITICAL THINKING RUBRIC

	4-EXEMPLARY	3-PROFICIENT	2-EMERGING	1-NOVICE
Understands Problem	**Clearly defines** the issue or problem **Accurately identifies** the core issues/key concepts **Appreciates** depth and breadth of problem **Identifies** relevant, significant points of view **Demonstrates** fair-mindedness toward the problem and all relevant points of view	**Defines** the issue **Identifies** the core issues/key concepts, but may not fully explore the depth and breadth **Identifies** relevant points of view Demonstrates fair-mindedness	**Defines** the issue, but superficially or narrowly **May overlook** some core issues/key concepts **May focus** on irrelevant or insignificant points of view **May identify** other points of view but **struggles** with maintaining fair-mindedness	**Fails** to clearly define the issue or problem **Does not recognize** the core issues/key concepts **Ignores** alternate points of view **Fails to maintain** a fair-minded approach toward the issue or problem or other points of view
Acquires Information	**Identifies** sufficient, credible, relevant information **Considers** information that opposes as well as supports the argued position **Distinguishes** between information and inferences drawn from it	**Identifies** sufficient, credible, relevant information **Considers** some information from opposing points of view **Distinguishes** between information and inferences drawn from it	**Identifies** some credible information, but not enough; some information may be irrelevant **Ignores** strong counter-arguments Sometimes **confuses** information and the inferences drawn from it	**Relies** on insufficient, irrelevant, or unreliable information **Fails to identify** or dismisses relevant counter-arguments Confuses information and the inferences drawn from it
Utilizes Information	**Accurately explains/uses** the relevant key concepts **Accurately identifies** assumptions **Makes assumptions** that are consistent, reasonable, and valid	**Explains** and **uses** the key concepts, but may lack depth and precision **Identifies** assumptions **Makes** valid assumptions	**Identifies** some key concepts, but use of concepts is superficial and inaccurate at times **Fails** to identify or explain assumptions, or the assumptions are irrelevant, unclear, and/or invalid	**Misunderstands** key concepts **Fails to identify** assumptions **Makes** invalid assumptions
Makes Valid Conclusions	**Follows** where evidence and reasoning lead to obtain defensible, thoughtful, logical conclusions or solutions **Makes** deep rather than superficial inferences **Makes** inferences that are consistent with one another **Identifies** the most significant implications and consequences of the reasoning (positive or negative) **Distinguishes** probable from improbable implications/solutions	**Follows** where evidence and reasoning lead to obtain justifiable, logical conclusions or solutions **Makes** valid inferences, but may lack depth **Identifies** significant implications and consequences, but may lack insight and precision **Distinguishes** probable from improbable implications/solutions, but may lack insight and precision	**Follows** some evidence to conclusions or solutions **Makes** inferences that are often unclear, illogical, inconsistent, and/or superficial **Has trouble** identifying significant implications and consequences **Identifies** improbable implications	**Uses** superficial, simplistic, or irrelevant reasoning and unjustifiable claims **Makes** illogical, inconsistent inferences **Maintains or defends** views based on self-interest, regardless of the evidence **Ignores** significant implications, consequences, or solutions
Supporting Materials/ Information Literacy (if applicable)	**Selects** authoritative, accurate, reliable, and timely scholarly and/or trade sources that are relevant to the topic; adjusts topic accordingly **Integrates** and **balances** paraphrasing, summarization, and quotation to support thesis and points, while respecting source material's original context **Uses** proper references & citations for all sources	**Selects** authoritative, accurate, reliable, and timely scholarly and/or trade sources that are relevant to the topic **Integrates** paraphrasing, summarization, and quotation to support thesis and points **Uses** proper references & citations for all sources	**Selects** sources that are relevant to the topic, but some may lack authority, accuracy, reliability, or timeliness **Relies** too heavily on paraphrasing or summarization or quotation of information supporting thesis and points **Uses** references & citations for sources with a minimum of errors or problems **May plagiarize** incrementally	**Selects s**ources that are irrelevant or only marginally relevant to the topic and lack authority, accuracy, reliability, and timeliness **Omits** information supporting thesis and points, or sources were quoted only, or sources were improperly quoted **Neglects** references or citations, or references or citations have significant errors **May plagiarize** egregiously, whether deliberate or not

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March 2013

QUANTITATIVE SKILLS RUBRIC

	4 - EXEMPLARY	3 - PROFICIENT	2 - EMERGING	1 - NOVICE
Demonstrates basic arithmetic skills	**Performs** basic arithmetic operations with 100% accuracy	**Performs** most arithmetic operations correctly with minor mistakes	**Performs** some arithmetic operations correctly but **cannot complete** the problem	**Cannot perform** basic arithmetic skills
Uses correct processes and models to solve problems	**Understands** the problem, **analyzes** information, **translates** into a solvable format, **correctly solves** the problem and **accurately translates** the results	**Understands** the problem, **translates** information into a solvable format, and **solves** the problem. May have minor arithmetic or translation errors	**Understands** the basics of the problem, but **cannot translate** information into a format that leads to a solution	**Unable to begin** the problem
Uses quantitative language in oral and written communication	**Appropriately uses** advanced quantitative language in all oral and written work	**Appropriately uses** basic and some advanced quantitative language in oral and written communication	**Appropriately uses** quantitative language at a basic level in oral and written communication	**Cannot use** appropriate quantitative language
Applies quantitative concepts to real-world situations	**Understands** the problem, **identifies** relevant data, and **selects** an appropriate model **Can obtain** and **accurately describe** results and **draw** inferences	**Understands** the problem, **identifies** relevant data, **selects** an appropriate model, but **cannot consistently obtain** and **describe** results	**Understands** basic concepts and **can identify** relevant data, but **cannot select** an appropriate model	**Unable to begin** the problem
Creates and/or interprets graphs, tables, and diagrams	**Can accurately read, interpret**, and **create** graphs, tables or diagrams and **can use** them to **solve** problems or **predict** change	**Can accurately read, interpret**, and **create** graphs, tables, or diagrams	**Can accurately read** and **interpret** graphs, tables, or diagrams	**Cannot provide** any information about the graph

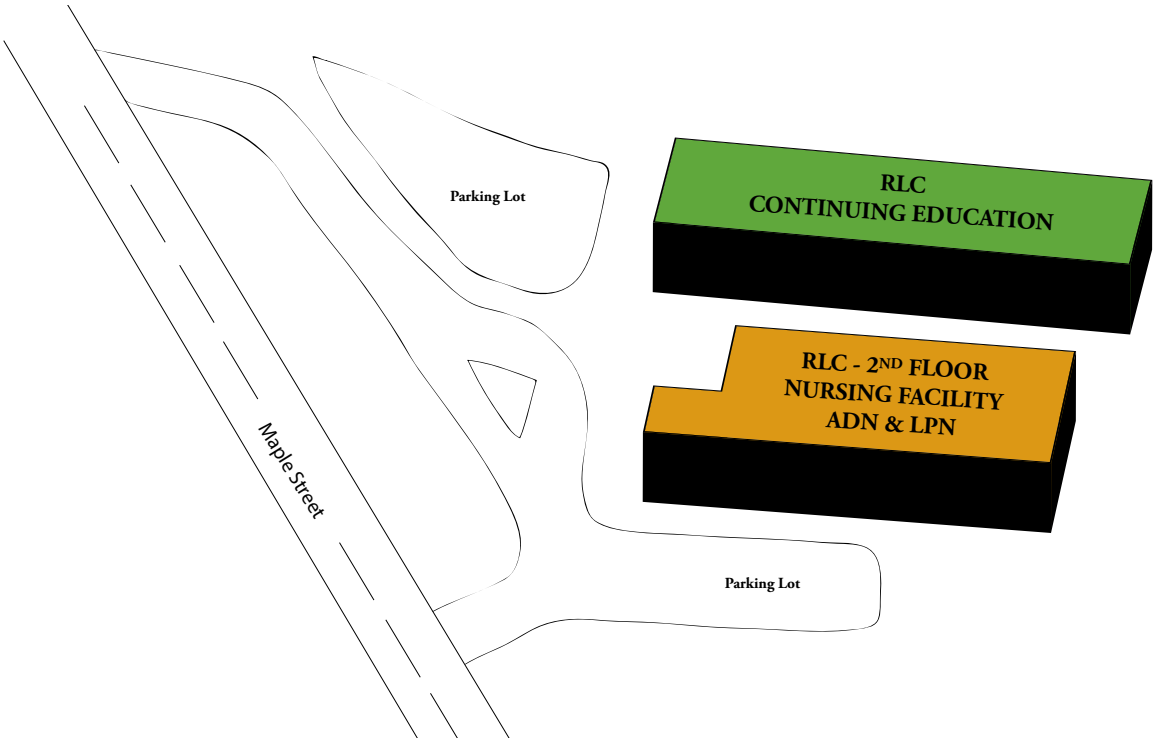
TECHNOLOGY SKILLS CHECKLIST

	Met	Not Met	N/A	Comments
Word Processing				
Adheres to assignment instructions by using correct formatting (font, margins, orientation, page numbers, spacing, tabs, etc.)				
Utilizes spelling and grammar functions in the word processing software				
Utilizes special functions to comply with assignment instructions (merge, labels, tables, design, layout)				
Accurately submitted assignment electronically and in required document format				
Multimedia (integration of text, graphics, sound, animation, and/or video)				
Utilizes multimedia according to assignment instruction				
Checks for technical issues before presentation if using multimedia equipment (computer, projector, wireless mouse)				
Operates the multimedia properly (navigates well through the use of the multimedia)				
Fulfills technical requirements of the assignment (color/theme, graphs, sound, video, animation)				
Fulfills formatting requirement of the assignment (font, margins, orientation, page numbers, spacing, tabs)				
Utilizes spelling and grammar checks before submission/ presentation				
Learning Management System Usage (Moodle, Aplia)				
Accessed course components per instruction				
Successfully performed a required task (uploaded an assignment)				
Successfully completes quizzes and other required assignments as instructed				
Successfully utilized other learning system functions (wikis, blogs, forum, chats, etc)				
Participates in social media activities as instructed (Facebook, Twitter, LinkedIn, Ning, etc.)				
Electronic Mail				
Accurately utilizes college email account to communicate with instructor and fellow students				
Includes a proper subject in the subject line				
Includes a salutation and a closing				
Utilizes standard English and proper punctuation, grammar, and spelling				
Uses a professional tone				
Includes attachments correctly				
Technology and Research				
Uses technology to access valid resources when conducting research (NC LIVE, online periodicals, websites with .edu and .gov addresses, etc.)				
Other Educational Technology Tools				
Demonstrates efficiency with the use of other required classroom technology tools (calculators, web cameras, tablets, and other mobile devices)				

Index

Rutherfordton Learning Center

134 Maple Street, Rutherfordton, NC 28139



Polk Center

1255 West Mills St., Columbus, NC 28722

ISOTHERMAL COMMUNITY COLLEGE

RUTHERFORD CAMPUS MAP

286 ICC LOOP RD., SPINDALE, NC 28160
(828) 286-3636

Communications - COMM
Advertising & Graphic Design
Broadcasting & Production Tech.
Campus Print Shop
Customized Training & Dev. Room
Electrical Systems Technology
WLOS
WNCW

Applied Sciences & Engineering Technology - AS
Computer Engineering Technology
Electronics Engineering Technology
Mechanical Drafting Technology

Health & Public Services - AS
BLET
Criminal Justice
Early Childhood/Schoolage

Business Sciences - BSCI
Autobody
Blue Room 112
Business Administration
Building Construction Technology
Chocolate Room 136
Computer Information Technology
Computer Programming
Entrepreneurship
Healthcare Management Technology
Information Systems Security
Medical Office Administration
Networking Technology
Office Administration
Red Room 137
Web Technologies

Information Technology - IT
IT Department

Maintenance - MNTN
College Vehicle Reserve
Shipping & Receiving

Library - LIBR
Arts & Sciences Computer Lab
Library Auditorium
Old Tryon Room

Welding Technology - WLD
Computer Lab
Welding Classrooms and Offices
Welding Shop

Lifelong Learning Center - LLC
Arts & Sciences Faculty
REaCH
Supplemental Instruction Coordinator

Machining Technology - MACH
Manufacturing Technology
Mechanical Engineering Technology
Metrology Lab

Student Center - SCTR
Admissions Office
Advising Center
Arts & Science Faculty
Campus Bookstore
Campus Enforcement
Career Readiness Certification
College Cafe
Cosmetology
Dean of Students
Employee Fitness Center
Financial Aid Office
Gym & Pool
Help Desk
Intramural Sports
Learning Support & Retention
Physical Education
Placement/GED Testing
Pre-Health Sciences Advising
Student Activities
Student Records
Student Services
Veterans Affairs
Visitor Information

Continuing Education Annex - ANEX (White House)

Administration - ADM
Academic Development
Arts & Sciences
Assessment, Planning & Development
Business Office
Human Resources
Math Lab
Marketing & Community Relations
Presidential Office Suite
Writing Center

The Foundation - FNDN
Ground Floor
Adult High School/GED
College & Career Readiness
Continuing Education
Customized Training & Development
Defensive Driving
Small Business Center
Visitor Information
Second & Third Floor
Performing Arts & Conference Center
Box Office
Seminar A & B
Stage