Richmond
COMMUNITY COLLEGE

2013-2014

Program and Course Catalog

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Associate in Applied Science Degrees, Diplomas, and Certificates (continued)

Richmond Community College offers curricular programs leading to an associate degree, a diploma, or a certificate. Certificates may be awarded through certain curricula upon the satisfactory completion of prescribed courses selected and identified by the College. For more information, see your academic advisor.

The Academic Success Center, tutorial services, and developmental education courses are available for students who need to enhance or review basic skills prior to entering a curriculum. New programs and courses are added in response to student and community needs. All course syllabi are available on the college website. This general catalog represents the most accurate information available concerning Richmond Community College at the time of its publication. However, the College reserves the right to delete or change programs and courses as may be required.

The curricular programs are designed so all students who complete requirements for a degree or diploma will meet required competencies in reading, writing, oral communication, computing and general math skills.

Curricular programs are arranged in alphabetical order and described in detail on the following pages.

DEGREES, DIPLOMAS, AND CERTIFICATES

The Board of Trustees of Richmond Community College, under the authority of the State Board of Community Colleges, is authorized to award the following degrees, diplomas, and certificates:

1. An Associate in Arts or Associate in Science degree is awarded for successful completion of the college transfer curriculum.
2. An Associate in General Education degree is awarded for successful completion of a 65 semester hour individualized program of study with emphasis on personal interest, growth and development.
3. An Associate in Applied Science degree is awarded for successful completion of a 64 – 76 semester hour curriculum.
4. A diploma is awarded for successful completion of a 36 – 48 semester hour curriculum.
5. A certificate is awarded for successful completion of programs that are 12–18 semester hours credit in length. The courses will be determined by Richmond Community College.

COURSES OF STUDY

COLLEGE TRANSFER PROGRAMS

These programs are offered through the Associate in Arts (AA) and Associate in Science (AS) degrees. The Associate in Arts and the Associate in Science programs are part of the Comprehensive Articulation Agreement (CAA). This agreement addresses the transfer of students between institutions in the North Carolina Community College System and the constituent institutions of the University of North Carolina.

Associate in Arts (A10100)
RCC – N.C. State University Agricultural Sciences (A10100)
Associate in Science (A10400)
RCC - N.C. State University Poultry Science (A10400)

GENERAL EDUCATION PROGRAM

The General Education program is designed for individuals wishing to broaden their education, with emphasis on personal interest, growth and development. The two-year General Education program provides students opportunities to study English, literature, fine arts, philosophy, social science, science and mathematics at the college level. All courses in the program are college-level courses. Many of the courses are equivalent to college transfer courses; however, the program is not principally designed for college transfer. Courses must be at the 110-199 or 210-299 level. Successful completion of 65 semester hour credits leads to an Associate in General Education degree (AGE).

Associate in General Education (A10300)

ASSOCIATE IN APPLIED SCIENCE PROGRAMS

These programs range from 64 to 76 semester hour credits. A full-time student can typically complete one of these programs within two years. In addition to major course work, associate in applied science degree programs require a minimum of 15 semester hour credits of general education. General education requirements include course work in communications, humanities/fine arts, social/behavioral sciences and natural sciences/mathematics. Certain courses in associate degree programs may be accepted by a four-year college or university for transfer credit in an associated field.

Accounting (A25100)
Air Conditioning, Heating, and Refrigeration Technology (A35100)
Associate Degree Nursing (A45110)
Business Administration (A25120)
Computer Engineering Technology (A40160)
Computer Information Technology (A25260)
Criminal Justice Technology (A55180)
Early Childhood Education (A55220)
Electric Utility Substation and Relay Technology (A50510)
Electronics Engineering Technology (A40200)
General Occupational Technology (A55280)
Health Information Technology (45360)
Healthcare Business Informatics (A25510)
Healthcare Management Technology (A25200)
Human Services Technology (A45380)
Industrial Systems Technology (A50240)
Mechanical Engineering Technology (A40320)
Medical Assisting (A45400)
Office Administration (A25370)
School-Age Education (A55440)

Note: Associate in Applied Science Degree students considering transfer to a senior institution should substitute a higher-level mathematics course for the required mathematics course listed in their curriculum.

DIPLOMA PROGRAMS

These programs range from 36 to 48 semester hour credits and can usually be completed by a full-time student within two semesters and one summer term. Associate degree level courses within a diploma program may also be applied toward an Associate in Applied Science degree.

Air Conditioning, Heating, and Refrigeration Technology (D35100)
Associate in Arts Transfer Core (D10100)
Associate in Science Transfer Core (D10400)
Computer Information Technology (D25260)
Computer-Integrated Machining (D50210)
Criminal Justice Technology (D55180)
Early Childhood Education - Special Education (D55220)
Electrical/Electronics Technology (D35220)
Industrial Systems Technology (D50240)
Mechanical Engineering Technology (D40320)
Practical Nursing (D45660)
Welding Technology (D50420)

CERTIFICATE PROGRAMS

These programs range from 12 to 18 semester hour credits and can usually be completed within one semester by a full-time student. Associate degree level courses within a certificate program may also be applied toward a diploma or an associate in applied science degree.

Accounting (C25100A)
Accounting / Bookkeeper (C25100B)
Air Conditioning (C35100C)
At-Risk Youth Technician (C45380Y)
Business Administration (C25120)
Computer Information Technology (C25260)
Computer-Integrated Machining (C50210)
Corrections (C55180C)
Early Childhood Education (C55220)
Electrical/Electronics Technology (C35220)
Entrepreneurship (C25490)
Healthcare Management Technology (C25200)
Heating (C35100H)
Industrial Systems Technology (C50240)
Infant/Toddler Care (C55290)
Lateral Entry (C55430)
Law Enforcement (C55180L)
Machining (C50210M)
Mechanical Engineering Technology/Computer-Aided Drafting (C40320)
Medical Assisting (C45400)
Nursing Assistant (C45480)
Office Administration (C25370)
Social Gerontology (C45380G)

Welding Technology (C50420)

TYPES OF INSTRUCTION

Web-assisted courses: web-assisted courses are delivered 100% face-to-face on campus. There may be up to 24% online course work using the college learning management system. The instructor will provide online resources that will be available to students throughout the entire duration of the course.

Asynchronous online courses: asynchronous online courses are independent of time and location. Rather than gathering in a classroom, students meet online and communicate with the instructor and classmates using the college learning management system (LMS), e-mail and/or other web tools. Students are required to complete 100% of the course online. While there are no required on-campus class meetings, instructors may require a proctored exam.

Synchronous online courses: synchronous online courses are delivered completely online but have set virtual meeting times. Students will have regularly scheduled online meeting times in addition to online assignments. While students are not required to physically come to campus, synchronous courses do require students to meet virtually with their classmates and instructor using web-conferencing tools, web-cam, and a microphone. The required virtual course meeting times will be designated on the course schedule.

Hybrid courses: hybrid courses combine traditional face-to-face learning with online learning. Hybrid courses will require at least 25% but not more than 75% of the course work to be completed online using the college learning management system (LMS), e-mail and/or other web tools. The required traditional course meeting times will be designated on the course schedule.

Interactive television courses: interactive television (ITV) courses are taught by an RCC instructor who teaches traditionally from one campus location and synchronously delivers the class to other campus location(s) using advanced web-conference tools and a large TV monitor. The instructor and students can interact with each other just as they would in a traditional classroom, and students are able to interact with their peers who are enrolled at other campus locations. ITV courses provide opportunities for students to take courses that mirror a traditional classroom setting but from a different more convenient campus location.

Section indicators on RCC Course Schedule

"W" = Online courses
  ● Asynchronous courses will have "TBA" listed for days and times
  ● Synchronous courses will have scheduled days and times listed for online virtual meetings
"H" = Hybrid courses
"V" = ITV courses

DEVELOPMENTAL EDUCATION

Students scoring below the official cutoff scores on the Computerized Placement Tests will be assigned to the appropriate developmental course(s). These courses are designed to provide the student with the reading, writing, mathematics, and keyboarding skills needed to enter a one or two-year program.

Because most curriculum courses have developmental prerequisites, the following restrictions apply: (1) Students will not be allowed to register for those curriculum courses until the prerequisite courses are passed. (2) Students required to take RED 070 and RED 080 should postpone taking any curriculum courses until they progress to RED 090. (3) Students required to take more than one developmental course should limit their enrollment in curriculum courses to those requiring the least reading, writing and computational competencies. (4) Students taking RED 070 may take ENG 080 at the same time.

DEVELOPMENTAL COURSES
(DAY / EVENING)

			Class	Lab	Work Exp/ Clinical	Credit
BIO	094	Concepts of Human Biology	3	2	0	4
DMA	010	Operations with Integers	.75	.50	0	1
DMA	020	Fractions and Decimals	.75	.50	0	1
DMA	030	Proportions/Ratio/Rate/Percent	.75	.50	0	1
DMA	040	Expressions/Linear Equations and Inequalities	.75	.50	0	1
DMA	050	Graphs/Equations of Lines	.75	.50	0	1
DMA	060	Polynomials/Quadratic Equations	.75	.50	0	1
DMA	070	Rational Expressions/Equations	.75	.50	0	1
DMA	080	Radical Expressions/Equations	.75	.50	0	1
ENG	080	Writing Foundations	3	2	0	4
ENG	090	Composition Strategies	3	0	0	3
ENG	090A	Composition Strategies Lab	0	2	0	1
OST	080	Keyboarding Literacy	1	2	0	2
RED	070	Essential Reading Skills	3	2	0	4
RED	080	Introduction to College Reading	3	2	0	4
RED	090	Improved College Reading	3	2	0	4
SCI	090	Skills for the Sciences	2	2	0	3

Exit Requirements

Students must earn a final grade of "C" (78) or better to exit any developmental English, mathematics, or reading course. A student whose final grade is below "C" may not progress to the next level of that course sequence and, therefore, will receive a grade of "F." Grades of "D" are not given in developmental courses.

Associate Degree Curricula

ASSOCIATE IN ARTS (A10100)
(College Transfer Curricula)

Richmond Community College offers two associate degree programs designed to allow seamless transition to four-year institutions: Associate in Arts (A.A.) and Associate in Science (A.S.). These programs are designed to offer students the freshman and sophomore years of a baccalaureate-track program. In order to receive an Associate in Arts (A.A.) or Associate in Science (A.S.) degree students must have a grade of "C" or better in all courses.

The Associate in Arts program is designed for students desiring a bachelor's degree and/or pre-professional training in areas other than fine arts and natural/biological/mathematical sciences. Students who plan to major in such disciplines as art, business, economics, history, humanities, liberal arts, liberal arts education, music, political science, psychology, and sociology should consult a counselor about enrolling in the A.A. program.

TRANSFER CORE DIPLOMA (D10100)

Students who successfully complete the 44-hour General Education Core with a grade of "C" or better in each course may be awarded the Associate in Arts Transfer Core diploma. As defined by the Comprehensive Articulation Agreement between the UNC System and the North Carolina Community College System and approved by the North Carolina Legislature, the 44-hour General Education Core includes study in the areas of English composition, humanities and fine arts, mathematics, natural sciences, and social and behavioral sciences.

ACADEMIC PRE-MAJORS

Counselors and advisors can help students design a program of study. See http://www.northcarolina.edu/content.php/assessment/reports/student_info/caa.htm for additional information.

ASSOCIATE IN ARTS GENERAL EDUCATION CORE
(44 Semester Hours Credit)

English Composition (6 SHC)

			Class	Lab	Work Exp/ Clinical	Credit
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
or						
ENG	113	Literature-Based Research	3	0	0	3
or						
ENG	114	Professional Research & Reporting	3	0	0	3

Humanities/Fine Arts (12 SHC)
Four (4) courses from at least **three (3)** discipline areas are required. **At least one (1) course must be a literature course.**

			Class	Lab	Work Exp/ Clinical	Credit
ART	111	Art Appreciation	3	0	0	3
CHI	111	Elementary Chinese I	3	0	0	3
CHI	112	Elementary Chinese II	3	0	0	3

COM	110	*Introduction to Communication	3	0	0	3
COM	120	*Interpersonal Communication	3	0	0	3
COM	231	*Public Speaking	3	0	0	3
DRA	111	Theatre Appreciation	3	0	0	3
ENG	131	Introduction to Literature	3	0	0	3
ENG	231	American Literature I	3	0	0	3
ENG	232	American Literature II	3	0	0	3
ENG	233	Major American Writers	3	0	0	3
ENG	241	British Literature I	3	0	0	3
ENG	242	British Literature II	3	0	0	3
ENG	243	Major British Writers	3	0	0	3
ENG	261	World Literature I	3	0	0	3
ENG	262	World Literature II	3	0	0	3
FRE	111	Elementary French I	3	0	0	3
FRE	112	Elementary French II	3	0	0	3
GER	111	Elementary German I	3	0	0	3
GER	112	Elementary German II	3	0	0	3
HUM	110	Technology and Society	3	0	0	3
HUM	115	Critical Thinking	3	0	0	3
HUM	120	Cultural Studies	3	0	0	3
HUM	122	Southern Culture	3	0	0	3
HUM	130	Myth in Human Culture	3	0	0	3
HUM	150	American Women's Studies	3	0	0	3
HUM	160	Introduction to Film	2	2	0	3
HUM	211	Humanities I	3	0	0	3
HUM	212	Humanities II	3	0	0	3
MUS	110	Music Appreciation	3	0	0	3
PHI	210	History of Philosophy	3	0	0	3
PHI	240	Introduction to Ethics	3	0	0	3
REL	110	World Religions	3	0	0	3
REL	111	Eastern Religions	3	0	0	3
REL	112	Western Religions	3	0	0	3
REL	211	Introduction to Old Testament	3	0	0	3
REL	212	Introduction to New Testament	3	0	0	3
REL	221	Religion in America	3	0	0	3
SPA	111	Elementary Spanish I	3	0	0	3
SPA	112	Elementary Spanish II	3	0	0	3
SPA	211	Intermediate Spanish I	3	0	0	3
SPA	212	Intermediate Spanish II	3	0	0	3

* 3 SHC in Speech/Communication may be substituted for 3 SHC in Humanities/Fine Arts. Speech/Communication may not substitute for the literature requirement.

Social Sciences (12 SHC)
Four (4) courses from at least **three (3)** discipline areas are required. **At least one (1) course must be a history course.**

Work Exp/

			Class	Lab	Clinical	Credit
ANT	220	Cultural Anthropology	3	0	0	3
ECO	151	*Survey of Economics	3	0	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
GEO	111	World Regional Geography	3	0	0	3
GEO	112	Cultural Geography	3	0	0	3
HIS	111	World Civilizations I	3	0	0	3
HIS	112	World Civilizations II	3	0	0	3
HIS	121	Western Civilization I	3	0	0	3
HIS	122	Western Civilization II	3	0	0	3
HIS	131	American History I	3	0	0	3
HIS	132	American History II	3	0	0	3
POL	110	Introduction to Political Science	3	0	0	3
POL	120	American Government	3	0	0	3
POL	220	International Relations	3	0	0	3
PSY	150	General Psychology	3	0	0	3
PSY	237	Social Psychology	3	0	0	3
PSY	241	Developmental Psychology	3	0	0	3
PSY	281	Abnormal Psychology	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3
SOC	220	Social Problems	3	0	0	3
SOC	225	Social Diversity	3	0	0	3
SOC	240	Social Psychology	3	0	0	3

*ECO 151 is for those students who have not received credit for ECO 251 or ECO 252.

Natural Sciences/Mathematics (14 SHC)
Natural Sciences (8 SHC)
Select at least one (1) course from the biological sciences and at least one (1) course from the physical sciences, including accompanying labs.

			Class	Lab	Work Exp/ Clinical	Credit
Biological Sciences						
BIO	110	Principles of Biology	3	3	0	4
BIO	111	General Biology I	3	3	0	4
BIO	112	General Biology II	3	3	0	4
BIO	120	Introductory Botany	3	3	0	4
BIO	130	Introductory Zoology	3	3	0	4
BIO	140	Environmental Biology	3	0	0	3
BIO	140A	Environmental Biology Lab	0	3	0	1

Physical Sciences

			Class	Lab	Work Exp/ Clinical	Credit
AST	111	Descriptive Astronomy	3	0	0	3

			Class	Lab	Work Exp/ Clinical	Credit
AST	111A	Descriptive Astronomy Lab	0	2	0	1
CHM	131	Introduction to Chemistry	3	0	0	3
CHM	131A	Introduction to Chemistry Lab	0	3	0	1
CHM	132	Organic and Biochemistry	3	3	0	4
CHM	151	General Chemistry I	3	3	0	4
CHM	152	General Chemistry II	3	3	0	4
GEL	111	Introductory Geology	3	2	0	4
GEL	120	Physical Geology	3	2	0	4
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1
PHY	151	College Physics I	3	2	0	4
PHY	152	College Physics II	3	2	0	4
PHY	251	General Physics I	3	3	0	4
PHY	252	General Physics II	3	3	0	4

Mathematics (6 SHC)

At least one (1) course in introductory mathematics is required; the other course may be selected from among other quantitative subjects, such as computer science or statistics.

			Class	Lab	Work Exp/ Clinical	Credit
Mathematics						
MAT	140	Survey of Mathematics	3	0	0	3
MAT	165	Finite Mathematics	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	271	Calculus I	3	2	0	4
MAT	272	Calculus II	3	2	0	4
MAT	273	Calculus III	3	2	0	4
Quantitative Subjects						
CIS	110	Introduction to Computers	2	2	0	3
CIS	115	Introduction to Programming & Logic	2	3	0	3
MAT	155	Statistical Analysis	3	0	0	3

OTHER REQUIRED HOURS

(20-21) SEMESTER HOURS CREDIT)

College Orientation (1 SHC)

			Class	Lab	Work Exp/ Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
ACA	118	College Study Skills	1	2	0	2
ACA	122	College Transfer Success	1	0	0	1

Electives and other required courses (20 SHC)

Select a minimum of twenty (20) semester hours. Students may take additional courses in the preceding Social//Behavioral Sciences, Humanities/Fine Arts, and Natural Sciences/Mathematics or any of the courses listed below. The following courses may transfer to some senior institutions. Students should check with their advisors and senior institutions before taking these courses.

			Class	Lab	Work Exp/ Clinical	Credit
ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	121	Principles of Managerial Accounting	3	2	0	4
ART	131	Drawing I	0	6	0	3
BIO	163	Basic Anatomy and Physiology	4	2	0	5
BIO	165	Anatomy and Physiology I	3	3	0	4
BIO	166	Anatomy and Physiology II	3	3	0	4
BIO	275	Microbiology	3	3	0	4
BUS	110	Introduction to Business	3	0	0	3
BUS	115	Business Law I	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
BUS	228	Business Statistics	2	2	0	3
CHM	251	Organic Chemistry I	3	3	0	4
CHM	252	Organic Chemistry II	3	3	0	4
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	141	Corrections	3	0	0	3
CSC	139	Visual BASIC Programming	2	3	0	3
CSC	151	JAVA Programming	2	3	0	3
EDU	144	Child Development I	3	0	0	3
EDU	145	Child Development II	3	0	0	3
EDU	146	Child Guidance	3	0	0	3
EDU	216	Foundations of Education	3	2	0	4
EDU	221	Children with Exceptionalities	3	0	0	3
ENG	125	Creative Writing I	3	0	0	3
ENG	272	Southern Literature	3	0	0	3
ENG	273	African-American Literature	3	0	0	3
HEA	110	Personal Health/Wellness	3	0	0	3
HEA	112	First Aid & CPR	1	2	0	2
HEA	120	Community Health	3	0	0	3
HIS	162	Women and History	3	0	0	3
HIS	221	African-American History	3	0	0	3
HIS	226	The Civil War	3	0	0	3
HIS	227	Native American History	3	0	0	3
HIS	236	North Carolina History	3	0	0	3
MAT	145	Analytical Mathematics	3	0	0	3
MAT	167	Discrete Mathematics	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
MAT	172A	Precalculus Trig Lab	0	2	0	1
MAT	280	Linear Algebra	3	0	0	3

MAT	285	Differential Equations	3	0	0	3
PED	110	Fit and Well for Life	1	2	0	2
PED	120	Walking for Fitness	0	3	0	1
PED	142	Lifetime Sports	0	2	0	1
PED	210	Team Sports	0	3	0	1
SPA	161	Cultural Immersion	2	3	0	3
SPA	181	Spanish Lab 1	0	2	0	1
SPA	182	Spanish Lab 2	0	2	0	1

ASSOCIATE IN ARTS (A10100)

RCC – N.C. State University Agricultural Sciences

An articulation agreement between N.C. State University and Richmond Community College guarantees students who have successfully completed selected courses in RCC's Associate in Arts program admission into N.C. State University's Bachelor of Science in Agricultural Sciences curriculum as juniors. RCC advisors will assist students in selecting courses which will transfer. Graduates must have a minimum cumulative grade point average of 3.0 at RCC to be eligible to transfer.

Contact the Student Services Department to speak with an advisor. Below is a suggested schedule.

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
ACA	122	College Transfer Success	1	0	0	1
BIO	111	General Biology 1	3	3	0	4
ENG	111	Expository Writing	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
COM		Communication Elective*	3	0	0	3
			13	9	0	15
First Year – Spring Semester						
BIO	112	General Biology II	3	3	0	4
ECO	251	Principles of Microeconomics	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
HIS		History Elective+	3	0	0	3
			15	5	0	17
Second Year – Fall Semester						
CHM	151	General Chemistry I	3	3	0	4
MAT	271	Calculus I	3	2	0	4
ENG		Literature Elective++	3	0	0	3
		Humanities/Fine Arts**	3	0	0	3
		Social/Behavioral Sciences***	3	0	0	3
			12	5	0	17
Second Year – Spring Semester						
CHM	132	Organic and Biochemistry	3	3	0	4
		Humanities/Fine Arts**	3	0	0	3
		Social/Behavioral Sciences***	3	0	0	3
		Free Elective	3	0	0	3

Free Elective	3	0	0	3
	12	3	0	16

*Communication Electives
COM 120 Interpersonal Communication
COM 231 Public Speaking

+History Electives
HIS 111 or 112 World Civilizations I or II
HIS 121 or 122 Western Civilization I or II
HIS 131 or 132 American History I or II

++Literature Electives
ENG 131 Introduction to Literature
ENG 231 or 232 American Literature I or II
ENG 233 Major American Writers
ENG 241 or 242 British Literature I or II
ENG 243 Major British Writers
ENG 261 or 262 World Literature I or II

**Humanities/Fine Arts
Four (4) courses from at least three (3) different discipline areas are required. At least one (1) course must be a communications course and one (1) must be a literature course. Select other courses from the Associate in Arts Humanities/Fine Arts electives listed in the previous section for the Humanities/Fine Arts electives.

***Social/Behavior Sciences
Four (4) courses from at least three (3) different discipline areas are required. At least one (1) course must be ECO 251 and one (1) must be a history course. Select other courses from the Associate in Arts Social Sciences electives listed in the previous section for the Social/Behavioral Sciences electives.

ASSOCIATE IN GENERAL EDUCATION (A10300)

The Associate in General Education curriculum is designed for the academic enrichment of students who wish to broaden their education, with emphasis on personal interest, growth and development.

Course work includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition. Opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and the basic use of computers will be provided.

Through these skills, students will have a sound base for lifelong learning. Graduates are prepared for advancements within their field of interest and become better qualified for a wide range of employment opportunities.

Note: Enrollment in this degree requires the approval of the Vice President for Instruction/Chief Academic Officer. Due to the flexibility of this degree, interested students must submit a plan of study that specifies the course work that will be completed and have a faculty advisor selected that will support the student as they complete their program of study. Requests to enroll in this degree must be received at least four weeks before the start of the semester in which the student wished to begin the degree program.

COURSE REQUIREMENTS

	Credit
GENERAL EDUCATION CORE	
English Composition	6

Humanities/Fine Arts   3

    Select courses from the following discipline areas: music, art, drama, dance, foreign languages, interdisciplinary humanities, literature, philosophy and religion.

Natural Sciences/Mathematics   3

Mathematics

    Select courses from the following discipline areas: college algebra, trigonometry, calculus, computer science, and statistics.
    or

Natural Sciences

    Select courses from the following discipline areas: astronomy, biology, chemistry, earth sciences, physics, and/or general science.

Social/Behavioral Sciences   3

    Select courses from the following discipline areas: anthropology, economics, geography, history, political science, psychology, and sociology.

MAJOR COURSES

Other Major Courses   49

Other required hours include courses that are identified in the Course Description section stating: "This course has been approved to satisfy the Comprehensive

Articulation Agreement general education core requirement." or "This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement."

OTHER REQUIRED COURSES

ACA   115   Success & Study Skills   1

      Total Credit Hours   **65**

ASSOCIATE IN SCIENCE (A10400)

(College Transfer Curricula)

Richmond Community College offers two associate degree programs designed to allow seamless transition to four-year institutions: Associate in Arts (A.A.) and Associate in Science (A.S.). These programs are designed to offer students the freshman and sophomore years of a baccalaureate-track program. In order to receive an Associate in Arts (A.A.) or Associate in Science (A.S.) degree students must have a grade of "C" or better in all courses.

The Associate in Science program is designed for students desiring a bachelor's degree and/or pre-professional training in biological, mathematical, or natural science disciplines.

TRANSFER CORE DIPLOMA

Students who successfully complete the 44-hour General Education Core with a grade of "C" or better in each course may be awarded the Associates in Science Transfer Core diploma. As defined by the Comprehensive Articulation Agreement between the UNC System and the North Carolina Community College System and approved by the North Carolina Legislature, the 44-hour General Education Core includes study in the areas of English composition, humanities and fine arts, mathematics, natural sciences, and social and behavioral sciences.

ACADEMIC PRE-MAJORS

Counselors and advisors can help students design a program of study. See http://www.northcarolina.edu/content.php/assessment/reports/student_info/caa.htm for additional information.

ASSOCIATE IN SCIENCE

GENERAL EDUCATION CORE

(44 Semester Hours Credit)

English Composition (6 SHC)

			Class	Lab	Work Exp/ Clinical	Credit
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
or						
ENG	113	Literature-Based Research	3	0	0	3
or						
ENG	114	Professional Research & Reporting	3	0	0	3

Humanities/Fine Arts (9 SHC)
Three (3) courses from **three (3)** discipline areas are required. **One (1) course must be a literature course.**

			Class	Lab	Work Exp/ Clinical	Credit
ART	111	Art Appreciation	3	0	0	3
CHI	111	Elementary Chinese I	3	0	0	3
CHI	112	Elementary Chinese II	3	0	0	3

COM	110	*Introduction to Communication	3	0	0	3
COM	120	*Interpersonal Communication	3	0	0	3
COM	231	*Public Speaking	3	0	0	3
DRA	111	Theatre Appreciation	3	0	0	3
ENG	131	Introduction to Literature	3	0	0	3
ENG	231	American Literature I	3	0	0	3
ENG	232	American Literature II	3	0	0	3
ENG	233	Major American Writers	3	0	0	3
ENG	241	British Literature I	3	0	0	3
ENG	242	British Literature II	3	0	0	3
ENG	243	Major British Writers	3	0	0	3
ENG	261	World Literature I	3	0	0	3
ENG	262	World Literature II	3	0	0	3
FRE	111	Elementary French I	3	0	0	3
FRE	112	Elementary French II	3	0	0	3
GER	111	Elementary German I	3	0	0	3
GER	112	Elementary German II	3	0	0	3
HUM	110	Technology and Society	3	0	0	3
HUM	115	Critical Thinking	3	0	0	3
HUM	120	Cultural Studies	3	0	0	3
HUM	122	Southern Culture	3	0	0	3
HUM	130	Myth in Human Culture	3	0	0	3
HUM	150	American Women's Studies	3	0	0	3
HUM	160	Introduction to Film	2	2	0	3
HUM	211	Humanities I	3	0	0	3
HUM	212	Humanities II	3	0	0	3
MUS	110	Music Appreciation	3	0	0	3
PHI	210	History of Philosophy	3	0	0	3
PHI	240	Introduction to Ethics	3	0	0	3
REL	110	World Religions	3	0	0	3
REL	111	Eastern Religions	3	0	0	3
REL	112	Western Religions	3	0	0	3
REL	211	Introduction to Old Testament	3	0	0	3
REL	212	Introduction to New Testament	3	0	0	3
REL	221	Religion in America	3	0	0	3
SPA	111	Elementary Spanish I	3	0	0	3
SPA	112	Elementary Spanish II	3	0	0	3
SPA	211	Intermediate Spanish I	3	0	0	3
SPA	212	Intermediate Spanish II	3	0	0	3

* 3 SHC in Speech/Communication may be substituted for 3 SHC in Humanities/Fine Arts. Speech/Communication may not substitute for the literature requirement.

Social Sciences (9 SHC)
Three **(3)** courses from **three (3)** discipline areas are required. **One (1) course must be a history course.**

Work Exp/

			Class	Lab	Clinical	Credit
ANT	220	Cultural Anthropology	3	0	0	3
ECO	151	*Survey of Economics	3	0	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
GEO	111	World Regional Geography	3	0	0	3
GEO	112	Cultural Geography	3	0	0	3
HIS	111	World Civilizations I	3	0	0	3
HIS	112	World Civilizations II	3	0	0	3
HIS	121	Western Civilization I	3	0	0	3
HIS	122	Western Civilization II	3	0	0	3
HIS	131	American History I	3	0	0	3
HIS	132	American History II	3	0	0	3
POL	110	Introduction to Political Science	3	0	0	3
POL	120	American Government	3	0	0	3
POL	220	International Relations	3	0	0	3
PSY	150	General Psychology	3	0	0	3
PSY	237	Social Psychology	3	0	0	3
PSY	241	Developmental Psychology	3	0	0	3
PSY	281	Abnormal Psychology	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3
SOC	220	Social Problems	3	0	0	3
SOC	225	Social Diversity	3	0	0	3
SOC	240	Social Psychology	3	0	0	3

*ECO 151 is for those students who have not received credit for ECO 251 or ECO 252.

Natural Sciences/Mathematics (20 SHC)
Natural Science (8 SHC)
Select a two-course sequence in general biology, general chemistry, college physics, or general physics, including accompanying labs.

			Class	Lab	Work Exp/ Clinical	Credit
BIO	111	General Biology I	3	3	0	4
BIO	112	General Biology II	3	3	0	4
CHM	151	General Chemistry I	3	3	0	4
CHM	152	General Chemistry II	3	3	0	4
PHY	151	College Physics I	3	2	0	4
PHY	152	College Physics II	3	2	0	4
PHY	251	General Physics I	3	3	0	4
PHY	252	General Physics II	3	3	0	4

Mathematics (6 SHC)
One course in mathematics at the precalculus algebra (MAT 171) level or above is required; the other course(s) may be higher level mathematics or may be selected from among other quantitative subjects, such as computer science or statistics.

Mathematics

			Class	Lab	Work Exp/ Clinical	Credit
MAT	171	Precalculus Algebra	3	0	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	271	Calculus I	3	2	0	4
MAT	272	Calculus II	3	2	0	4
MAT	273	Calculus III	3	2	0	4

Quantitative Subjects

			Class	Lab	Work Exp/ Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
CIS	115	Introduction to Programming & Logic	2	3	0	3
MAT	155	Statistical Analysis	3	0	0	3

ASSOCIATE IN SCIENCE: Six (6) additional semester hour credits must be selected from courses designated as Natural Sciences/Mathematics general education transfer courses.

			Class	Lab	Work Exp/ Clinical	Credit
AST	111	Descriptive Astronomy	3	0	0	3
AST	111A	Descriptive Astronomy Lab	0	2	0	1
BIO	110	Principles of Biology	3	3	0	4
BIO	120	Introductory Botany	3	3	0	4
BIO	130	Introductory Zoology	3	3	0	4
BIO	140	Environmental Biology	3	0	0	3
BIO	140A	Environmental Biology Lab	0	3	0	1
CHM	131	Introduction to Chemistry	3	0	0	3
CHM	131A	Introduction to Chemistry Lab	0	3	0	1
CHM	132	Organic and Biochemistry	3	3	0	4
GEL	111	Introductory Geology	3	2	0	4
GEL	120	Physical Geology	3	2	0	4
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1

OTHER REQUIRED HOURS
(20-21 SEMESTER HOURS CREDIT)

College Orientation (1 SHC)

			Class	Lab	Work Exp/ Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
ACA	118	College Study Skills	1	2	0	2
ACA	122	College Transfer Success	1	0	0	1

Electives and other required courses (20 SHC)
ASSOCIATE IN SCIENCE: Select a minimum of fourteen (14) semester hours in Computer Science, Mathematics, or Natural Sciences. The remaining courses may be selected from the preceding Social/Behavioral Sciences, Humanities/Fine Arts, and Natural Sciences/Mathematics sections or any of the courses listed below.

Natural Sciences/Mathematics/Computer Science Electives

			Class	Lab	Work Exp/ Clinical	Credit
BIO	163	Basic Anatomy and Physiology	4	2	0	5
BIO	165	Anatomy and Physiology I	3	3	0	4
BIO	166	Anatomy and Physiology II	3	3	0	4
BIO	175	General Microbiology	2	2	0	3
BIO	275	Microbiology	3	3	0	4
CHM	251	Organic Chemistry I	3	3	0	4
CHM	252	Organic Chemistry II	3	3	0	4
CSC	139	Visual BASIC Programming	2	3	0	3
CSC	151	JAVA Programming	2	3	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
MAT	172A	Precalculus Trig Lab	0	2	0	1
MAT	280	Linear Algebra	3	0	0	3
MAT	285	Differential Equations	3	0	0	3

General Electives
The following courses <u>may</u> transfer to some senior institutions. Students should check with their advisors and senior institutions before taking these courses.

			Class	Lab	Work Exp/ Clinical	Credit
ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	121	Principles of Managerial Accounting	3	2	0	4
ART	131	Drawing I	0	6	0	3
BUS	110	Introduction to Business	3	0	0	3
BUS	115	Business Law I	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	141	Corrections	3	0	0	3
EDU	144	Child Development I	3	0	0	3
EDU	145	Child Development II	3	0	0	3
EDU	146	Child Guidance	3	0	0	3
EDU	216	Foundations of Education	3	2	0	4
EDU	221	Children with Exceptionalities	3	0	0	3
ENG	125	Creative Writing I	3	0	0	3
ENG	272	Southern Literature	3	0	0	3
ENG	273	African-American Literature	3	0	0	3
FRE	112	Elementary French II	3	0	0	3

GER	112	Elementary German II	3	0	0	3
HEA	110	Personal Health/Wellness	3	0	0	3
HEA	112	First Aid & CPR	1	2	0	2
HEA	120	Community Health	3	0	0	3
HIS	162	Women and History	3	0	0	3
HIS	221	African-American History	3	0	0	3
HIS	226	The Civil War	3	0	0	3
HIS	227	Native American History	3	0	0	3
HIS	236	North Carolina History	3	0	0	3
PED	110	Fit and Well for Life	1	2	0	2
PED	120	Walking for Fitness	0	3	0	1
PED	142	Lifetime Sports	0	2	0	1
PED	210	Team Sports	0	3	0	1
SPA	161	Cultural Immersion	2	3	0	3
SPA	181	Spanish Lab 1	0	2	0	1
SPA	182	Spanish Lab 2	0	2	0	1

ASSOCIATE IN SCIENCE (A10400)
RCC - N.C. State University Poultry Science

An articulation agreement between N.C. State University and Richmond Community College guarantees students who have successfully completed selected courses in RCC's Associate in Science program admission into N.C. State University's Bachelor of Science in Poultry Science Technology curriculum as juniors. RCC advisors will assist students in selecting courses which will transfer. Graduates must have a minimum cumulative grade point average of 3.0 at RCC to be eligible to transfer.

Contact the Student Services Department to speak with an advisor. Below is a suggested schedule.

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
or						
ACA	122	College Transfer Success				
ACC	120	Principles of Financial Acct	3	2	0	4
BIO	111	General Biology I	3	3	0	4
ENG	111	Expository Writing	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
			13	9	0	16
First Year – Spring Semester						
BIO	112	General Biology II	3	3	0	4
ECO	252	Prin of Macroeconomics	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
HIS		History Elective*	3	0	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
			15	5	0	17
Second Year – Fall Semester						
AST/BIO/CHM/PHY Science Elective**			3	2/3	0	4
CHM	151	General Chemistry I	3	3	0	4
ENG		Literature Elective+	3	0	0	3
MAT	271	Calculus I	3	2	0	4
			12	7/8	0	15
Second Year – Spring Semester						
BIO	275	Microbiology	3	3	0	4
CHM	132	Organic and Biochemistry	3	3	0	4
COM		Communication Elective++	3	0	0	3

Humanities/Fine Arts***	3	0	0	3
Social/Behavioral Science***	3	0	0	3
	15	6	0	17

* History Electives
HIS-111 or 112 World Civilizations I or II
HIS-121 or 122 Western Civilization I or II
HIS-131 or 132 American History I or II

\+ Literature Electives
ENG-131 Introduction to Literature
ENG-231 or 232 American Literature I or II
ENG-233 Major American Writers
ENG-241 or 242 British Literature I or II
ENG-243 Major British Writers
ENG-261 or 262 World Literature I or II

** Science Electives
AST-111/A Descriptive Astronomy and Lab
BIO-140/A Environmental Biology and Lab
BIO-165 Anatomy and Physiology I
CHM-152 General Chemistry II
PHY-110/A Conceptual Physics and Lab
PHY-151 College Physics I
PHY-251 General Physics I

\+\+ Communication Electives
COM-120 Interpersonal Communication
COM-231 Public Speaking

***Humanities/Fine Arts and Social/Behavioral Science
Select any course without a COM or ENG prefix from the Associate in Science Humanities/Fine Arts electives listed in the previous section for the Humanities/Fine Arts elective. Select any course without a ECO or HIS prefix from the Associate in Science Social Sciences electives listed in the previous section for the Social/Behavioral Science elective.

Associate in Applied Science Degrees, Diplomas and Certificates

ACCOUNTING (A25100)

The Accounting curriculum is designed to provide students with the knowledge and skills necessary for employment and growth in the accounting profession. Using the "language of business," accountants assemble and analyze, process and communicate essential information about financial operations.

In addition to course work in accounting principles, theories, and practice, students will study business law, finance, management, and economics. Related skills are developed through the study of communications, computer applications, financial analysis, critical thinking skills, and ethics.

Graduates should qualify for entry-level accounting positions in many types of organizations including accounting firms, small businesses, manufacturing firms, banks, hospitals, school systems, and governmental agencies. With work experience and additional education, an individual may advance in the accounting profession.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A.	**General Education Courses**						
	1.	Required Courses					
		ECO 252	Principles of Macroeconomics	3	0	0	3
		ENG 111	Expository Writing	3	0	0	3
		MAT 140	Survey of Mathematics	3	0	0	3
		COM 231	Public Speaking	3	0	0	3
		or					
		ENG 112	Argument-Based Research	3	0	0	3
			Humanities/Fine Arts Elective*	3	0	0	3
B.	**Major Courses**						
	1.	Core Courses					
		To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.					
		ACC 120	Principles of Financial Accounting	3	2	0	4
		ACC 121	Principles of Managerial Accounting	3	2	0	4
		ACC 129	Individual Income Taxes	2	2	0	3
		ACC 220	Intermediate Accounting I	3	2	0	4
		BUS 115	Business Law I	3	0	0	3
		CIS 110	Introduction to Computers	2	2	0	3

ECO	251	Principles of Microeconomics	3	0	0	3

2. Other Major Courses

ACC	122	Principles of Financial Accounting II	3	0	0	3
ACC	130	Business Income Taxes	2	2	0	3
ACC	149	Intro to Accounting Spreadsheets	1	2	0	2
ACC	150	Accounting Software Applications	1	2	0	2
ACC	221	Intermediate Accounting II	3	2	0	4
ACC	225	Cost Accounting	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
		Business Elective**	2/3	0-3	0	3/4
ACC	151	Accounting Spreadsheet Applications	1	2	0	2
	or					
COE	112	Co-op Work Experience I	0	0	20	2

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours **65/66**

* Approved Electives are listed on the page before the Course Descriptions.

** Business elective may be selected from the following courses:

ACC 111	Financial Accounting	3	0	0	3
ACC 115	College Accounting	3	2	0	4
BUS 110	Introduction to Business	3	0	0	3
BUS 116	Business Law II	3	0	0	3
BUS 121	Business Mathematics	2	2	0	3
BUS 125	Personal Finance	3	0	0	3
BUS 153	Human Resource Management	3	0	0	3
BUS 228	Business Statistics	2	2	0	3
BUS 230	Small Business Management	3	0	0	3
BUS 260	Business Communication	3	0	0	3
BUS 261	Diversity in Management	3	0	0	3
DBA 110	Database Concepts	2	3	0	3
INT 110	International Business	3	0	0	3
MKT 120	Principles of Marketing	3	0	0	3
MKT 221	Consumer Behavior	3	0	0	3
MKT 223	Customer Service	3	0	0	3
MKT 224	International Marketing	3	0	0	3
MKT 228	Service Marketing	3	0	0	3
OST 122	Office Computations	1	2	0	2
OST 286	Professional Development	3	0	0	3
SPA 111	Elementary Spanish I	3	0	0	3
SPA 120	Spanish for the Workplace	3	0	0	3

Note: Only 3 SHC of SPA are allowed towards the Accounting degree.

SEMESTER SCHEDULE
ACCOUNTING (DAY)

			Class	Lab	Work Exp/ Clinical	Credit
First Year — Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
ACC	120	Principles of Financial Accounting	3	2	0	4
CIS	110	Introduction to Computers	2	2	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
			14	6	0	17
First Year — Spring Semester						
ACC	122	Principles of Financial Accounting II	3	0	0	3
ACC	129	Individual Income Taxes	2	2	0	3
ACC	150	Accounting Software Applications	1	2	0	2
ECO	251	Principles of Microeconomics	3	0	0	3
COM	231	Public Speaking	3	0	0	3
or						
ENG	112	Argument-Based Research	3	0	0	3
			15	4	0	17
Second Year — Fall Semester						
ACC	121	Principles of Managerial Accounting	3	2	0	4
ACC	130	Business Income Taxes	2	2	0	3
ACC	149	Intro to Accounting Spreadsheets	1	2	0	2
ACC	220	Intermediate Accounting I	3	2	0	4
BUS	115	Business Law I	3	0	0	3
			12	8	0	16
Second Year — Spring Semester						
ACC	151	Accounting Spreadsheet Applications***	1	2	0	2
ACC	221	Intermediate Accounting II	3	2	0	4
ACC	225	Cost Accounting	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
		Business Elective**	2/3	0-3	0	3/4
		Humanities/Fine Arts Elective*	3	0	0	3
			15/16	4-7	0	18/19

Total Credit Hours   **65/66**

* Approved Electives are listed on the page before the Course Descriptions.

*** COE 112, Co-op Work Experience I, may be substituted for ACC 151, Accounting Spreadsheet Applications. See the course requirements for Accounting (A25100) for details.

SEMESTER SCHEDULE
ACCOUNTING (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
ACC	120	Principles of Financial Accounting	3	2	0	4
CIS	110	Introduction to Computers	2	2	0	3
MAT	140	Survey of Mathematics	3	0	0	3
			8	6	0	11
First Year— Spring Semester						
ACC	121	Principles of Managerial Accounting	3	2	0	4
ACC	122	Principles of Financial Accounting II	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			9	2	0	10
Second and Third Years (Alternating Sequences) Even Years — Fall Semester						
ACC	129	Individual Income Taxes	2	2	0	3
ACC	225	Cost Accounting	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
			11	2	0	12
Even Years — Spring Semester						
ACC	151	Accounting Spreadsheet Applications***	1	2	0	2
ACC	221	Intermediate Accounting II	3	2	0	4
COM	231	Public Speaking	3	0	0	3
or						
ENG	112	Argument-Based Research	3	0	0	3
		Business Elective**	2/3	0-3	0	3/4
			9/10	4-7	0	12/13
Odd Years — Spring Semester						
ACC	130	Business Income Taxes	2	2	0	3
ACC	150	Accounting Software Applications	1	2	0	2
ECO	251	Principles of Microeconomics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3

			9	4	0	11

Odd Years — Fall Semester

			Class	Lab	Clinical	Credit
ACC	220	Intermediate Accounting I	3	2	0	4
ACC	149	Intro to Accounting Spreadsheets	1	2	0	2
BUS	115	Business Law I	3	0	0	3
			7	4	0	9

Total Credit Hours   **65/66**

* Approved Electives are listed on the page before the Course Descriptions.

ACCOUNTING (CERTIFICATE) (C25100A)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	121	Principles of Managerial Accounting	3	2	0	4
CIS	110	Introduction to Computers	2	2	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3

Total Credit Hours   **18**

ACCOUNTING/BOOKKEEPER (CERTIFICATE) (C25100B)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	122	Principles of Financial Accounting II	3	0	0	3
ACC	150	Accounting Software Applications	1	2	0	2
CIS	110	Introduction to Computers	2	2	0	3
MAT	140	Survey of Mathematics	3	0	0	3
OST	122	Office Computations	1	2	0	2

Total Credit Hours   **18**

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY (A35100)

The Air Conditioning, Heating, and Refrigeration Technology curriculum provides the basic knowledge to develop skills necessary to work with residential and light commercial systems.

Topics include mechanical refrigeration, heating and cooling theory, electricity, controls, and safety. The diploma program covers air conditioning, furnaces, heat pumps, tools and instruments. In addition, the AAS degree covers residential building codes, residential system sizing, and advanced comfort systems.

Diploma graduates should be able to assist in the start-up, preventive maintenance, service, repair, and/or installation of residential and light commercial systems. AAS degree graduates should be able to demonstrate an understanding of system selection and balance and advanced systems.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
COM	231	Public Speaking	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/Clinical	Credit
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	112	Heating Technology	2	4	0	4
AHR	113	Comfort Cooling	2	4	0	4
AHR	114	Heat Pump Technology	2	4	0	4
AHR	130	HVAC Controls	2	2	0	3
AHR	211	Residential Systems Design	2	2	0	3
AHR	212	Advanced Comfort Systems	2	6	0	4
AHR	213	HVACR Building Code	1	2	0	2

2. Other Major Courses

				Class	Lab	Work Exp/Clinical	Credit
AHR	115	Refrigeration Systems		1	3	0	2
AHR	151	HVAC Duct Systems I		1	3	0	2
AHR	160	Refrigerant Certification		1	0	0	1
AHR	235	Refrigeration Design		2	2	0	3
BUS	110	Introduction to Business		3	0	0	3
	or						
BUS	230	Small Business Management		3	0	0	3
CIS	110	Introduction to Computers		2	2	0	3
PHY	110	Conceptual Physics		3	0	0	3
PHY	110A	Conceptual Physics Lab		0	2	0	1

C.Other Required Courses

				Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills		0	2	0	1

Total Credit Hours 66

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY

			Class	Lab	Work Exp/Clinical	Credit
First Year – Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	113	Comfort Cooling	2	4	0	4
AHR	160	Refrigerant Certification	1	0	0	1
CIS	110	Introduction to Computers	2	2	0	3
			9	14	0	17
First Year – Spring Semester						
AHR	112	Heating Technology	2	4	0	4
AHR	114	Heat Pump Technology	2	4	0	4
AHR	151	HVAC Duct Systems I	1	3	0	2
BUS	110	Introduction to Business	3	0	0	3
	or					
BUS	230	Small Business Management	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			11	11	0	16
Second Year – Fall Semester						
AHR	115	Refrigeration Systems	1	3	0	2
AHR	211	Residential System Design	2	2	0	3

AHR	213	HVACR Building Code	1	2	0	2
COM	231	Public Speaking	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
		Humanities Fine Arts Elective*	3	0	0	3
			13	7	0	16

Second Year – Spring Semester

AHR	130	HVAC Controls	2	2	0	3
AHR	212	Advanced Comfort Systems	2	6	0	4
AHR	235	Refrigeration Design	2	2	0	3
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1
		Social /Behavioral Sciences Elective *	3	0	0	3
			12	12	0	17

Total Credit Hours   **66**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY (DIPLOMA)

			Class	Lab	Work Exp/ Clinical	Credit

First Year – Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	113	Comfort Cooling	2	4	0	4
AHR	160	Refrigerant Certification	1	0	0	1
CIS	110	Introduction to Computers	2	2	0	3
			10	14	0	17

First Year – Spring Semester

AHR	112	Heating Technology	2	4	0	4
AHR	114	Heat Pump Technology	2	4	0	4
AHR	151	HVAC Duct Systems I	1	3	0	2
BUS	110	Introduction to Business	3	0	0	3
	or					
BUS	230	Small Business Management	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3

	14	11	0	19

Total Credit Hours   **36**

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY
AIR CONDITIONING CERTIFICATE (C35100C)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	113	Comfort Cooling	2	4	0	4
AHR	160	Refrigerant Certification	1	0	0	1

Total Credit Hours   **13**

AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY
HEATING CERTIFICATE (C35100H)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
AHR	110	Intro to Refrigeration	2	6	0	5
AHR	111	HVACR Electricity	2	2	0	3
AHR	112	Heating Technology	2	4	0	4
AHR	114	Heat Pump Technology	2	4	0	4
AHR	160	Refrigerant Certification	1	0	0	1

Total Credit Hours   **17**

ASSOCIATE DEGREE NURSING (A45110)

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, individualize 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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

The Associate Degree Nursing program is approved by the North Carolina Board of Nursing.

			Class	Lab	WorkExp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
BIO	165	Anatomy and Physiology I	3	3	0	4
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
		Humanities/Fine Arts Elective *	3	0	0	3
B. Major Courses						
1. Core Courses						
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.						
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 Systems Concepts	3	0	6	5
NUR	213	Complex Health Concepts	4	3	15	10
2. Other Major Courses						
BIO	166	Anatomy and Physiology II	3	3	0	4

			Class	Lab	Clinical	Credit
BIO	275	Microbiology	3	3	0	4
CIS	110	Introduction to Computers	2	2	0	3
PSY	150	General Psychology	3	0	0	3
PSY	241	Developmental Psychology	3	0	0	3

Total Credit Hours   **76**

* Approved electives are listed on the page before Course Descriptions.

SEMESTER SCHEDULE
ASSOCIATE DEGREE NURSING

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
BIO	165	Anatomy and Physiology I	3	3	0	4
CIS	110	Introduction to Computers	2	2	0	3
NUR	111	Intro to Health Concepts	4	6	6	8
PSY	150	General Psychology	3	0	0	3
			12	11	6	18
First Year — Spring Semester						
BIO	166	Anatomy and Physiology II	3	3	0	4
ENG	111	Expository Writing	3	0	0	3
NUR	112	Health-Illness Concepts	3	0	6	5
NUR	114	Holistic Health Concepts	3	0	6	5
PSY	241	Developmental Psychology	3	0	0	3
			15	3	12	20
First Year — Summer Semester						
NUR	113	Family Health Concepts	3	0	6	5
			3	0	6	5
Second Year — Fall Semester						
BIO	275	Microbiology	3	3	0	4
ENG	112	Argument-Based Research	3	0	0	3
NUR	211	Health Care Concepts	3	0	6	5
NUR	212	Health System Concepts	3	0	6	5
		Humanities/Fine Arts Elective*	3	0	0	3
			15	3	12	20

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Second Year — Spring Semester

NUR	213	Complex Health Concepts	4	3	15	10
SOC	210	Introduction to Sociology	3	0	0	3
			7	3	15	13

Total Credit Hours **76**

* Approved Electives are listed on the page before the Course Descriptions.

BUSINESS ADMINISTRATION (A25120)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
2. Required Subject Area						
MAT	140	Survey of Mathematics	3	0	0	3
	or					
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
B. Major Courses						
1. Core Courses						

To receive a degree, diploma, or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
ACC	120	Principles of Financial Accounting	3	2	0	4
BUS	115	Business Law I	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
MKT	120	Principles of Marketing	3	0	0	3

2. Other Major Courses

ACC	121	Principles of Managerial Accounting	3	2	0	4
BUS	110	Introduction to Business	3	0	0	3
BUS	121	Business Mathematics	2	2	0	3
BUS	153	Human Resource Management	3	0	0	3
BUS	230	Small Business Management	3	0	0	3
BUS	239	Business Applications Seminar	1	2	0	2
CTS	130	Spreadsheet	2	2	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
INT	110	International Business	3	0	0	3

3. Required Subject Area

Business Elective (Select 6 hours from the following courses)

ACC	122	Principles of Financial Accounting	3	0	0	3
ACC	129	Individual Income Taxes	2	2	0	3
ACC	130	Business Income Taxes	2	2	0	3
ACC	225	Cost Accounting	3	0	0	3
BUS	116	Business Law II	3	0	0	3
BUS	125	Personal Finance	3	0	0	3
BUS	139	Entrepreneurship I	3	0	0	3
BUS	228	Business Statistics	2	2	0	3
BUS	260	Business Communication	3	0	0	3
BUS	261	Diversity in Management	3	0	0	3
MKT	221	Consumer Behavior	3	0	0	3
MKT	223	Customer Service	3	0	0	3
MKT	224	International Marketing	3	0	0	3
MKT	228	Service Marketing	3	0	0	3
SPA	111	Elementary Spanish I	3	0	0	3
SPA	120	Spanish for the Workplace	3	0	0	3

Note: Only 3 SHC of SPA are allowed towards the Business Administration degree.

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours **68/69**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
BUSINESS ADMINISTRATION (DAY)

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
BUS	110	Introduction to Business	3	0	0	3
BUS	115	Business Law I	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
or						
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
			—	—	—	—
			14	4/6	0	16/17
First Year — Spring Semester						
BUS	137	Principles of Management	3	0	0	3
CTS	130	Spreadsheet	2	2	0	3
ENG	112	Argument-Based Research	3	0	0	3
MKT	120	Principles of Marketing	3	0	0	3
		Business Elective I	3	0	0	3
		Humanities/Fine Arts Elective *	3	0	0	3
			—	—	—	—
			17	2	0	18
Second Year — Fall Semester						
ACC	120	Principles of Financial Accounting	3	2	0	4
BUS	153	Human Resource Management	3	0	0	3
BUS	121	Business Mathematics	2	2	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
		Business Elective II	3	0	0	3
			—	—	—	—
			14	4	0	16
Second Year — Spring Semester						
ACC	121	Principles of Managerial Accounting	3	2	0	4
BUS	230	Small Business Management	3	0	0	3
BUS	239	Business Applications Seminar	1	2	0	2
ECO	251	Principles of Microeconomics	3	0	0	3
INT	110	International Business	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			—	—	—	—
			16	4	0	18

Total Credit Hours   **68/69**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
BUSINESS ADMINISTRATION (ONLINE)

			Class	Lab	Work Exp/ Clinical	Credit
First Year — Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
BUS	110	Introduction to Business	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
MKT	120	Principles of Marketing	3	0	0	3
		Business Elective I	3	0	0	3
			15	2	0	16
First Year — Spring Semester						
BUS	115	Business Law I	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			17	2	0	18
Second Year – Fall Semester						
ACC	120	Principles of Financial Accounting	3	2	0	4
BUS	230	Small Business Management	3	0	0	3
CTS	130	Spreadsheet	2	2	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
INT	110	International Business	3	0	0	3
			14	4	0	16
Second Year – Spring Semester						
ACC	121	Principles of Managerial Accounting	3	2	0	4
BUS	153	Human Resource Management	3	0	0	3
BUS	121	Business Mathematics	2	2	0	3
BUS	239	Business Applications Seminar	1	2	0	2
		Business Elective II	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			15	6	0	18
		Total Credit Hours				**68**

* Approved Electives are listed on the page before the Course Descriptions.

BUSINESS ADMINISTRATION (CERTIFICATE) (C25120)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
BUS	110	Introduction to Business	3	0	0	3
BUS	115	Business Law I	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
CTS	130	Spreadsheet	2	2	0	3
MKT	120	Principles of Marketing	3	0	0	3

Total Credit Hours **18**

COMPUTER ENGINEERING TECHNOLOGY (A40160)

The Computer Engineering Technology curriculum provides the skills required to install, service, and maintain computers, peripherals, networks, and microprocessor and computer controlled equipment. It includes training in both hardware and software, emphasizing operating systems concepts to provide a unified view of computer systems.

Course work includes mathematics, physics, electronics, digital circuits, and programming, with emphasis on the operation, use, and interfacing of memory and devices to the CPU. Additional topics may include communications, networks, operating systems, programming languages, Internet configuration and design, and industrial applications.

Graduates should qualify for employment opportunities in electronics technology, computer service, computer networks, server maintenance, programming, and other areas requiring a knowledge of electronic and computer systems. Graduates may also qualify for certification in electronics, computers, or networks.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						
CET	111	Computer Upgrade/Repair I	2	3	0	3
CSC	139	Visual BASIC Programming	2	3	0	3
ELC	131	DC/AC Circuit Analysis	4	3	0	5
ELN	133	Digital Electronics	3	3	0	4
ELN	137	Electronic Devices and Circuits	4	3	0	5
C. Other Major Courses						
ATR	218	Computer Integrated Manufacturing	2	3	0	3
CET	222	Computer Architecture	2	0	0	2

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
CIS	115	Introduction to Programming & Logic	2	3	0	3
DFT	151	CAD I	2	3	0	3
EGR	285	Design Project	0	4	0	2
ELN	232	Introduction to Microprocessors	3	3	0	4
ELN	237	Local Area Networks	2	3	0	3
ELN	260	Prog Logic Controllers	3	3	0	4
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
NOS	110	Operating System Concepts	2	3	0	3
NOS	120	Linux/Unix Single User	2	2	0	3
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1

D.Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **75**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

COMPUTER ENGINEERING TECHNOLOGY (DAY)

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
CIS	115	Introduction to Programming & Logic	2	3	0	3
ELC	131	DC/AC Circuit Analysis	4	3	0	5
ENG	111	Expository Writing	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
NOS	110	Operating System Concepts	2	3	0	3
			14	13	0	19
First Year – Spring Semester						
CET	111	Computer Upgrade/Repair I	2	3	0	3
ENG	112	Argument-Based Research	3	0	0	3
ELN	137	Electronic Devices and Circuits	4	3	0	5
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1
			15	10	0	19

First Year – Summer Semester

ELN	260	Prog Logic Controllers	3	3	0	4
ELN	133	Digital Electronics	3	3	0	4
			6	6	0	8

Second Year – Fall Semester

CET	222	Computer Architecture	2	0	0	2
DFT	151	CAD I	2	3	0	3
ELN	232	Introduction to Microprocessors	3	3	0	4
NOS	120	Linux/Unix Single User	2	2	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			12	8	0	15

Second Year – Spring Semester

ATR	218	Computer Integrated Manufacturing	2	3	0	3
CSC	139	Visual BASIC Programming	2	3	0	3
EGR	285	Design Project	0	4	0	2
ELN	237	Local Area Networks	2	3	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			9	13	0	14

Total Credit Hours   75

* Approved Electives are listed on the page before the Course Descriptions.

COMPUTER INFORMATION TECHNOLOGY (A25260)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed.   Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A.	**General Education Courses**						
	1.	Required Courses					
		ENG	111	Expository Writing	3	0	0	3
		ENG	112	Argument-Based Research	3	0	0	3
		MAT	145	Analytical Mathematics	3	0	0	3
				Humanities/Fine Arts Elective*	3	0	0	3
				Social/Behavioral Sciences Elective*	3	0	0	3
B.	**Major Courses**						
	1.	Core Courses					

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

		Class	Lab	Work Exp/ Clinical	Credit
BUS	110	Introduction to Business	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
CIS	115	Introduction to Programming & Logic	2	3	0	3
CTS	120	Hardware/Software Support	2	3	0	3
CTS	285	Systems Analysis & Design	3	0	0	3
CTS	289	System Support Project	1	4	0	3
DBA	110	Database Concepts	2	3	0	3
NET	125	Networking Basics	1	4	0	3
NOS	110	Operating System Concepts	2	3	0	3
NOS	130	Windows Single User	2	2	0	3

NOS	230	Windows Administration I	2	2	0	3
SEC	110	Security Concepts	2	2	0	3

2. Other Major Courses

CSC	139	Visual BASIC Programming	2	3	0	3
NOS	120	Linux/UNIX Single User	2	2	0	3
WEB	140	Web Development Tools	2	2	0	3
WEB	230	Implementing Web Serv	2	2	0	3
WEB	250	Database Driven Websites	2	2	0	3

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **67**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
COMPUTER INFORMATION TECHNOLOGY (DAY)

			Class	Lab	Work Exp/ Clinical	Credit

First Year — Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
CIS	115	Introduction to Programming & Logic	2	3	0	3
ENG	111	Expository Writing	3	0	0	3
NET	125	Networking Basics	1	4	0	3
NOS	110	Operating System Concepts	2	3	0	3
			10	14	0	16

First Year — Spring Semester

CSC	139	Visual BASIC Programming	2	3	0	3
DBA	110	Database Concepts	2	3	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	145	Analytical Mathematics	3	0	0	3
NOS	130	Windows Single User	2	2	0	3
			12	8	0	15

Second Year — Fall Semester

BUS	110	Introduction to Business	3	0	0	3
CTS	285	Systems Analysis & Design	3	0	0	3
NOS	120	Linux/UNIX Single User	2	2	0	3
NOS	230	Windows Administration I	2	2	0	3
SEC	110	Security Concepts	2	2	0	3

			Class	Lab	Work Exp/Clinical	Credit
WEB	140	Web Development Tools	2	2	0	3
			14	8	0	18

Second Year — Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
CTS	120	Hardware/Software Support	2	3	0	3
CTS	289	System Support Project	1	4	0	3
WEB	230	Implementing Web Serv	2	2	0	3
WEB	250	Database Driven Websites	2	2	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			13	11	0	18

Total Credit Hours **67**

* Approved Electives are listed on the page before the Course Descriptions.

COMPUTER INFORMATION TECHNOLOGY (DIPLOMA) (D25260)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
CIS	115	Introduction to Programming & Logic	2	3	0	3
CSC	139	Visual BASIC Programming	2	3	0	3
CTS	120	Hardware/Software Support	2	3	0	3
DBA	110	Database Concepts	2	3	0	3
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
NET	125	Networking Basics	1	4	0	3
NOS	110	Operating System Concepts	2	3	0	3
NOS	120	Linux/UNIX Single User	2	2	0	3
NOS	130	Windows Single User	2	2	0	3
SEC	110	Security Concepts	2	2	0	3
WEB	140	Web Development Tools	2	2	0	3

Total Credit Hours **40**

SEMESTER SCHEDULE
COMPUTER INFORMATION TECHNOLOGY (CERTIFICATE) (C25260)

			Class	Lab	Work Exp/ Clinical	Credit
First Year — Fall Semester						
CIS	110	Introduction to Computers	2	2	0	3
NET	125	Networking Basics	1	4	0	3
NOS	110	Operating System Concepts	2	3	0	3
			5	9	0	9
First Year — Spring Semester						
CTS	120	Hardware/Software Support	2	3	0	3
DBA	110	Database Concepts	2	3	0	3
NOS	130	Windows Single User	2	2	0	3
			6	8	0	9

Total Credit Hours   **18**

COMPUTER-INTEGRATED MACHINING
(DIPLOMA) (D50210)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A.	**General Education Courses**						
	1. Required Courses						
	ENG	102	Applied Communications II	3	0	0	3
	PSY	101	Applied Psychology	3	0	0	3
B.	**Major Courses**						
	1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

				Class	Lab	Work Exp/ Clinical	Credit
	BPR	111	Blueprint Reading	1	2	0	2
	MAC	111	Machining Technology I	2	12	0	6
	MAC	112	Machining Technology II	2	12	0	6
	MAC	122	CNC Turning	1	3	0	2
2. Other Major Courses							
	BPR	121	Blueprint Reading: Mechanical	1	2	0	2
	MAC	113	Machining Technology III	2	12	0	6
	MAC	124	CNC Milling	1	3	0	2
	MAC	151	Machining Calculations	1	2	0	2
	MEC	141	Intro Manufacturing Processes	2	2	0	3
	or						
	COE	112	Co-op Work Experience I	0	0	20	2

Total Credit Hours   **36/37**

SEMESTER SCHEDULE
COMPUTER-INTEGRATED MACHINING (DIPLOMA) (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
BPR	111	Blueprint Reading	1	2	0	2
MAC	111	Machining Technology I	2	12	0	6
			3	14	0	8
First Year – Spring Semester						
ENG	102	Applied Communications II	3	0	0	3
MAC	122	CNC Turning	1	3	0	2
MAC	124	CNC Milling	1	3	0	2
PSY	101	Applied Psychology	3	0	0	3
			8	6	0	10
First Year – Summer Semester						
MAC	151	Machining Calculations	1	2	0	2
MEC	141	Intro Manufacturing Processes	2	2	0	3
or						
COE	112	Co-op Work Experience I	0	0	20	2
			3	4	20	5/7
Second Year – Fall Semester						
BPR	121	Blueprint Reading: Mechanical	1	2	0	2
MAC	112	Machining Technology II	2	12	0	6
			3	14	0	8
Second Year – Spring Semester						
MAC	113	Machining Technology III	2	12	0	6
			2	12	0	6

Total Credit Hours   **36/37**

COMPUTER-INTEGRATED MACHINING TECHNOLOGY (CERTIFICATE) (C50210) (EVENING)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
BPR	111	Blueprint Reading	1	2	0	2
ENG	102	Applied Communications I	3	0	0	3
MAC	111	Machining Technology I	2	12	0	6
MAC	122	CNC Turning	1	3	0	2
MAC	124	CNC Milling	1	3	0	2
PSY	101	Applied Psychology	3	0	0	3

Total Credit Hours   **18**

MACHINE TECHNOLOGY CERTIFICATE (C50210M)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
MAC	111	Machining Technology I	2	12	0	6
MAC	112	Machining Technology II	2	12	0	6
MAC	113	Machining Technology III	2	12	0	6

Total Credit Hours   **18**

CRIMINAL JUSTICE TECHNOLOGY (A55180)

The Criminal Justice 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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

The Criminal Justice A.A.S. Degree Program at Richmond Community College is certified as meeting the educational and program requirements of the North Carolina Criminal Justice Education and Training Standards Commission.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
ENG	111	Expository Writing		3	0	0	3
ENG	112	Argument-Based Research		3	0	0	3
MAT	140	Survey of Mathematics		3	0	0	3
PSY	150	General Psychology		3	0	0	3
		Humanities/Fine Arts Elective*		3	0	0	3
B. Major Courses							
1. Core Courses							

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

				Class	Lab	Work Exp/ Clinical	Credit
CJC	111	Introduction to Criminal Justice		3	0	0	3
CJC	112	Criminology		3	0	0	3
CJC	113	Juvenile Justice		3	0	0	3
CJC	131	Criminal Law		3	0	0	3
CJC	212	Ethics & Community Relations		3	0	0	3
CJC	221	Investigative Principles		3	2	0	4
CJC	231	Constitutional Law		3	0	0	3

2. Other Major Courses

				Class	Lab	Work Exp/Clinical	Credit
CIS	110	Introduction to Computers		2	2	0	3
CJC	132	Court Procedure & Evidence		3	0	0	3
CJC	141	Corrections		3	0	0	3
CJC	160	Terrorism: Underlying Issues		3	0	0	3
CJC	211	Counseling		3	0	0	3
CJC	215	Organization & Administration		3	0	0	3
CJC	222	Criminalistics		3	0	0	3
CJC	233	Correctional Law		3	0	0	3
SOC	210	Introduction to Sociology		3	0	0	3

3. Elective Course (Select one of the following courses)**

			Class	Lab	Work Exp/Clinical	Credit
HIS	131	American History I	3	0	0	3
HIS	132	American History II	3	0	0	3
POL	120	American Government	3	0	0	3
SPA	111	Elementary Spanish I	3	0	0	3
SPA	120	Spanish for the Workplace	3	0	0	3

C. Other Required Courses

			Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   68

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

CRIMINAL JUSTICE TECHNOLOGY (DAY)

			Class	Lab	Work Exp/Clinical	Credit
First Year— Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
CJC	111	Introduction to Criminal Justice	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
PSY	150	General Psychology	3	0	0	3
			14	4	0	16
First Year – Spring Semester						
ENG	112	Argument-Based Research	3	0	0	3
CJC	112	Criminology	3	0	0	3
CJC	131	Criminal Law	3	0	0	3
CJC	132	Court Procedure & Evidence	3	0	0	3
CJC	141	Corrections	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
			18	0	0	18

Second Year — Fall Semester

			Class	Lab	Clinical	Credit
CJC	113	Juvenile Justice	3	0	0	3
CJC	211	Counseling	3	0	0	3
CJC	221	Investigative Principles	3	2	0	4
CJC	231	Constitutional Law	3	0	0	3
		Elective Course **	3	0	0	3
			15	2	0	16

Second Year – Spring Semester

			Class	Lab	Clinical	Credit
CJC	160	Terrorism: Underlying Issues	3	0	0	3
CJC	212	Ethics & Community Relations	3	0	0	3
CJC	215	Organization & Administration	3	0	0	3
CJC	222	Criminalistics	3	0	0	3
CJC	233	Correctional Law	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			18	0	0	18

Total Credit Hours   **68**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

CRIMINAL JUSTICE TECHNOLOGY (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit

First Year — Fall Semester

			Class	Lab	Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	131	Criminal Law	3	0	0	3
CJC	141	Corrections	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			12	2	0	13

First Year — Spring Semester

			Class	Lab	Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
CJC	112	Criminology	3	0	0	3
CJC	113	Juvenile Justice	3	0	0	3
CJC	211	Counseling	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
			14	2	0	15

Second and Third Years (Alternating Sequences) Even Years — Fall Semester

			Class	Lab	Clinical	Credit
CJC	221	Investigative Principles	3	2	0	4

			Class	Lab	Clinical	Credit
CJC	233	Correctional Law	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			9	2	0	10

Odd Years — Spring Semester

CJC	160	Terrorism: Underlying Issues	3	0	0	3
CJC	222	Criminalistics	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
PSY	150	General Psychology	3	0	0	3
			12	0	0	12

Odd Years — Fall Semester

CJC	132	Court Procedure & Evidence	3	0	0	3
CJC	231	Constitutional Law	3	0	0	3
		Elective Course**	3	0	0	3
			9	0	0	9

Even Years — Spring Semester

CJC	212	Ethics & Community Relations	3	0	0	3
CJC	215	Organization & Administration	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
			9	0	0	9

Total Credit Hours   **68**

* Approved Electives are listed on the page before the Course Descriptions.

CRIMINAL JUSTICE TECHNOLOGY (DIPLOMA) (D55180)
COURSE REQUIREMENTS

REQUIRED:			Class	Lab	Work Exp/ Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	112	Criminology	3	0	0	3
CJC	221	Investigative Principles	3	2	0	4
CJC	231	Constitutional Law	3	0	0	3
CJC	141	Corrections	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3

ANY FIVE (5) OF THE FOLLOWING CRIMINAL JUSTICE COURSES:

CJC	113	Juvenile Justice	3	0	0	3
CJC	131	Criminal Law	3	0	0	3
CJC	132	Court Procedure & Evidence	3	0	0	3
CJC	160	Terrorism: Underlying Issues	3	0	0	3
CJC	211	Counseling	3	0	0	3
CJC	212	Ethics & Community Relations	3	0	0	3
CJC	215	Organization & Administration	3	0	0	3
CJC	233	Correctional Law	3	0	0	3

Total Credit Hours **43**

CRIMINAL JUSTICE TECHNOLOGY (CERTIFICATE)
LAW ENFORCEMENT (C55180L)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	112	Criminology	3	0	0	3
CJC	221	Investigative Principles	3	2	0	4
CJC	222	Criminalistics	3	0	0	3
CJC	231	Constitutional Law	3	0	0	3

Total Credit Hours **16**

CRIMINAL JUSTICE TECHNOLOGY (CERTIFICATE)
CORRECTIONS (C55180C)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
CJC	111	Introduction to Criminal Justice	3	0	0	3
CJC	112	Criminology	3	0	0	3
CJC	113	Juvenile Justice	3	0	0	3
CJC	141	Corrections	3	0	0	3
CJC	212	Ethics and Community Relations	3	0	0	3
CJC	233	Correctional Law	3	0	0	3

Total Credit Hours **18**

EARLY CHILDHOOD EDUCATION (A55220)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
EDU	145	Child Development II	3	0	0	3
EDU	146	Child Guidance	3	0	0	3
EDU	151	Creative Activities	3	0	0	3
EDU	153	Health, Safety, & Nutrition	3	0	0	3
EDU	221	Children with Exceptionalities	3	0	0	3
EDU	271	Educational Technology	2	2	0	3
EDU	280	Language & Literacy Experiences	3	0	0	3

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Clinical	Credit
EDU	284	Early Child Capstone Practicum	1	9	0	4

2. Other Major Courses

			Class	Lab	Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	151A	Creative Activities Lab	0	2	0	1
EDU	251	Exploration Activities	3	0	0	3
EDU	259	Curriculum Planning	3	0	0	3
EDU	261	Early Childhood Administration I	3	0	0	3
EDU	282	Early Childhood Literature	3	0	0	3

3. Required Subject Area

EDU Elective (Select one of the following)**

			Class	Lab	Clinical	Credit
EDU	154	Social/Emotion/Behav Dev	3	0	0	3
EDU	162	Observ & Assess in Ece	3	0	0	3
EDU	163	Classroom Mgt & Instruct	3	0	0	3
EDU	223	Specific Learning Disab	3	0	0	3
EDU	234	Infants, Toddlers, & Twos	3	0	0	3
EDU	235	School-Age Dev & Programs	3	0	0	3
EDU	247	Sensory & Physical Disab	3	0	0	3
EDU	248	Developmental Delays	3	0	0	3
EDU	250	PRAXIS I Preparation	1	0	0	1
EDU	262	Early Childhood Administration II	3	0	0	3

C. Other Required Courses

			Class	Lab	Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours 70/72

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

EARLY CHILDHOOD EDUCATION (DAY)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			15	4	0	17
First Year – Spring Semester						
EDU	145	Child Development II	3	0	0	3

			Class	Lab	Work Exp/ Clinical	Credit
EDU	146	Child Guidance	3	0	0	3
EDU	151	Creative Activities	3	0	0	3
EDU	151A	Creative Activities Lab	0	2	0	1
EDU	153	Health. Safety. & Nutrition	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
PSY	150	General Psychology	3	0	0	3
			18	2	0	19

Second Year – Fall Semester

COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	221	Children with Exceptionalities	3	0	0	3
EDU	251	Exploration Activities	3	0	0	3
EDU	261	Early Childhood Administration I	3	0	0	3
EDU	280	Language & Literacy Experiences	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			16	0	10	17

Second Year – Spring Semester

EDU	259	Curriculum Planning	3	0	0	3
EDU	271	Educational Technology	2	2	0	3
EDU	282	Early Childhood Literature	3	0	0	3
EDU	284	Early Child Capstone Practicum	1	9	0	4
MAT	140	Survey of Mathematics	3	0	0	3
		EDU Elective**	1/3	0	0	1/3
			13/15	11	0	17/19

Total Credit Hours   **70/72**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

EARLY CHILDHOOD EDUCATION (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit

First Year - Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	144	Child Development I	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			10	2	0	11

First Year - Spring Semester

CIS	110	Introduction to Computers	2	2	0	3
EDU	145	Child Development II	3	0	0	3
EDU	146	Child Guidance	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
			11	2	0	12

Second and Third Years (Alternating Sequences) Even Years — Fall Semester

EDU	131	Child, Family, & Community	3	0	0	3
EDU	221	Children with Exceptionalities	3	0	0	3
EDU	261	Early Childhood Administration I	3	0	0	3
PSY	150	General Psychology	3	0	0	3
			12	0	0	12

Odd Years - Spring Semester

EDU	151	Creative Activities	3	0	0	3
EDU	151A	Creative Activities Lab	0	2	0	1
EDU	153	Health, Safety, & Nutrition	3	0	0	3
EDU	271	Educational Technology	2	2	0	3
		EDU Elective**	1/3	0	0	1/3
			9/11	4	0	11/13

** EDU Elective: EDU 154, EDU 162, EDU 163, EDU 223, EDU 234, EDU 235, EDU 247, EDU 248, EDU 250 or EDU 262

Odd Years — Fall Semester

COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	280	Language & Literacy Experiences	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			10	0	10	11

Even Years — Spring Semester

EDU	251	Exploration Activities	3	0	0	3
EDU	259	Curriculum Planning	3	0	0	3
EDU	282	Early Childhood Literature	3	0	0	3
EDU	284	Early Child Capstone Practicum	1	9	0	4
			10	9	0	13

Total Credit Hours   **70/72**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
EARLY CHILDHOOD EDUCATION (CERTIFICATE) (C55220)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
			10	0	0	10
First Year – Spring Semester						
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	145	Child Development II	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			7	0	10	8

Total Credit Hours   **18**

SEMESTER SCHEDULE
EARLY CHILDHOOD EDUCATION
(SPECIAL EDUCATION) DIPLOMA (D55220)

		Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester					
ACA 115	Success & Study Skills	0	2	0	1
CIS 110	Introduction to Computers	2	2	0	3
EDU 119	Intro to Early Childhood Education	4	0	0	4
EDU 131	Child, Family, & Community	3	0	0	3
EDU 144	Child Development I	3	0	0	3
ENG 111	Expository Writing	3	0	0	3
		15	4	0	17
First Year – Spring Semester					
EDU 145	Child Development II	3	0	0	3
EDU 146	Child Guidance	3	0	0	3
EDU 151	Creative Activities	3	0	0	3

Course	Title				
EDU 151A	Creative Activities Lab	0	2	0	1
EDU 153	Health, Safety, & Nutrition	3	0	0	3
		12	2	0	13

Second Year – Fall Semester

Course	Title				
COE 111	Co-op Work Experience I	0	0	10	1
COE 115	Work Experience Seminar I	1	0	0	
EDU 154	Social/Emotional/Behav Dev	3	0	0	3
EDU 221	Children with Exceptionalities	3	0	0	3
EDU 223	Specific Learning Disabilities	3	0	0	3
EDU 247	Sensory/Physical Disabilities	3	0	0	3
EDU 248	Developmental Delays	3	0	0	3
		16	0	10	17

Total Credit Hours   **47**

ELECTRIC UTILITY SUBSTATION AND RELAY TECHNOLOGY
(A50510)

The Electric Utility Substation and Relay Technology curriculum provides the skills to maintain high voltage equipment and protective systems for the electric utility transmission system. Training in operation and maintenance of critical infrastructure associated with the transmission grid is included.

Courses will develop an understanding of maintenance/troubleshooting on transmission equipment. Courses include theory in three phase power, protective relaying, power transformers, voltage regulators, capacitors, and power circuit breakers. The skills apply to the electric utility industry and numerous other industries.

Graduates should qualify for entry-level employment in the electric utility industry and industrial power facilities. Employment opportunities include: control systems, instrumentation and control in general industry, electric utility industry, green energy markets, or positions with equipment related to power transmission.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ECO	252	Principles of Macroeconomics	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
		Humanities/Fine Arts Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
EUS	110	Intro to Electric Utility Industry	3	3	0	4
EUS	130	Electric Utility Print Reading	1	2	0	2
EUS	210	Large High Voltage Power Transfmr I	2	3	0	3
EUS	215	Large High Voltage Power Transfmr II	2	3	0	3
EUS	220	High Voltage Power Circuit Breakers	2	3	0	3

			Class	Lab	Work Exp/ Clinical	Credit
EUS	230	Electric Utility Protective Relaying I	2	3	0	3
EUS	235	Electric Utility Protective Relaying II	2	3	0	3
EUS	240	Substation Ancillary Systems	2	3	0	3
EUS	260	Capstone & Case Studies in EUSRT	2	0	0	2

2. Other Major Courses

ELC	117	Motors and Controls	2	6	0	4
ELC	128	Introduction to PLC	2	3	0	3
ELC	131	DC/AC Circuit Analysis	3	6	0	5
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trigonometry Lab	0	2	0	1
MAT	271	Calculus I	3	2	0	4
PHY	151	College Physics I	3	2	0	4
PHY	152	College Physics II	3	2	0	4

C.Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **74**

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
ELECTRIC UTILITY SUBSTATION AND RELAY TECHNOLOGY

		Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester					
ACA 115	Success & Study Skills	0	2	0	1
CIS 110	Introduction to Computers	2	2	0	3
ELC 131	DC/AC Circuit Analysis	3	6	0	5
ENG 111	Expository Writing	3	0	0	3
EUS 110	Intro to Electric Utility Industry	3	3	0	4
MAT 171	Precalculus Algebra	3	0	0	3
MAT 171A	Precalculus Algebra Lab	0	2	0	1
		14	15	0	20
First Year—Spring Semester					
ELC 117	Motors and Controls	2	6	0	4
ENG 112	Argument-Based Research	3	0	0	3
EUS 130	Electric Util Print Reading	1	2	0	2
EUS 210	Large High Voltage Power Transformers I	2	3	0	3
MAT 172	Precalculus Trigonometry	3	0	0	3
MAT 172A	Precalculus Trig Lab	0	2	0	1
PHY 151	College Physics I	3	2	0	4
		14	15	0	20

Second Year—Fall Semester

ECO	252	Principles of Macroeconomics	3	0	0	3
EUS	215	Large High Voltage Power Transformers II	2	3	0	3
EUS	230	Electric Utility Protective Relaying I	2	3	0	3
EUS	240	Substation Ancillary Sys	2	3	0	3
MAT	271	Calculus I	3	2	0	4
PHY	152	College Physics II	3	2	0	4
			15	13	0	20

Second Year—Spring Semester

ELC	128	Intro to PLC	2	3	0	3
EUS	220	High Voltage Power Circuit Breakers	2	3	0	3
EUS	235	Electric Utility Protective Relaying II	2	3	0	3
EUS	260	Caps & Case Stud in EUSRT	2	0	0	2
		Humanities/Fine Arts Elective*	3	0	0	3
			11	9	0	14

Total Credit Hours   **74**

* Approved Electives are listed on the page before the Course Descriptions.

ELECTRICAL/ELECTRONICS TECHNOLOGY
(DIPLOMA) (D35220)

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

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

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

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
	ENG	102	Applied Communications II	3	0	0	3
	PSY	101	Applied Psychology	3	0	0	3
B. Major Courses							
1. Core Courses							
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.							
	ELC	112	DC/AC Electricity	3	6	0	5
	ELC	113	Basic Wiring I	2	6	0	4
	ELC	117	Motors and Controls	2	6	0	4
	ELC	128	Introduction to PLC	2	3	0	3
	ELN	229	Industrial Electronics	3	3	0	4
2. Other Major Courses							
	ELC	114	Basic Wiring II	2	6	0	4
	ELC	118	National Electric Code	1	2	0	2
	ELC	119	NEC Calculations	1	2	0	2
	ELC	125	Diagrams and Schematics	1	2	0	2
	ELC	134	Transformer Applications	1	2	0	2

Total Credit Hours   **38**

SEMESTER SCHEDULE
ELECTRICAL/ELECTRONICS TECHNOLOGY (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
ELC	112	DC/AC Electricity	3	6	0	5
ELC	118	National Electric Code	1	2	0	2
ELC	119	NEC Calculations	1	2	0	2
			5	10	0	9
First Year – Spring Semester						
ELC	113	Basic Wiring I	2	6	0	4
ENG	102	Applied Communications II	3	0	0	3
PSY	101	Applied Psychology	3	0	0	3
			8	6	0	10
First Year – Summer Semester						
ELC	125	Diagrams and Schematics	1	2	0	2
ELC	134	Transformer Applications	1	2	0	2
			2	4	0	4
Second Year— Fall Semester						
ELC	114	Basic Wiring II	2	6	0	4
ELN	229	Industrial Electronics	3	3	0	4
			5	9	0	8
Second Year – Spring Semester						
ELC	117	Motors and Controls	2	6	0	4
ELC	128	Introduction to PLC	2	3	0	3
			4	9	0	7

Total Credit Hours   **38**

SEMESTER SCHEDULE

ELECTRICAL/ELECTRONICS TECHNOLOGY (CERTIFICATE)
(C35220)

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
ELC	112	DC/AC Electricity	3	6	0	5
ELC	118	National Electric Code	1	2	0	2
			4	8	0	7
First Year – Spring Semester						
ELC	113	Basic Wiring I	2	6	0	4
ELC	117	Motors and Controls	2	6	0	4
			4	12	0	8
First Year – Summer Semester						
ELC	125	Diagrams and Schematics	1	2	0	2
			1	2	0	2

Total Credit Hours   **17**

ELECTRONICS ENGINEERING TECHNOLOGY (A40200)

The Electronics Engineering Technology curriculum prepares individuals 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.

A broad-based core of courses, including basic electricity, solid-state fundamentals, digital concepts and microprocessors ensures the student will develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the student's ability to analyze and troubleshoot electronic systems.

Graduates should qualify for employment as engineering assistants or electronic technicians with job titles such as, electronics engineering technician, field service technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, and production control technician.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
ENG	111	Expository Writing		3	0	0	3
ENG	112	Argument-Based Research		3	0	0	3
MAT	171	Precalculus Algebra		3	0	0	3
MAT	171A	Precalculus Algebra Lab		0	2	0	1
		Humanities/Fine Arts Elective*		3	0	0	3
		Social/Behavioral Sciences Elective*		3	0	0	3
B. Major Courses							
1. Core Courses							

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

				Class	Lab	Work Exp/ Clinical	Credit
ELC	131	DC/AC Circuit Analysis		4	3	0	5
ELN	133	Digital Electronics		3	3	0	4
ELN	137	Electronic Devices and Circuits		4	3	0	5
ELN	232	Introduction to Microprocessors		3	3	0	4
2. Other Major Courses							
ATR	218	Computer Integrated Manufacturing		2	3	0	3
CET	111	Computer Upgrade/Repair I		2	3	0	3
CIS	110	Introduction to Computers		2	2	0	3

			Class	Lab	Clinical	Credit
DFT	151	CAD I	2	3	0	3
EGR	285	Design Project	0	4	0	2
ELN	132	Linear IC Applications	3	3	0	4
ELN	237	Local Area Networks	2	3	0	3
ELN	260	Prog Logic Controllers	3	3	0	4
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1

C. Other Required Courses

			Class	Lab	Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **71**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

ELECTRONICS ENGINEERING TECHNOLOGY (DAY)

			Class	Lab	Work Exp/ Clinical	Credit
First Year— Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
ELC	131	DC/AC Circuit Analysis	4	3	0	5
ENG	111	Expository Writing	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
			12	9	0	16
First Year – Spring Semester						
CET	111	Computer Upgrade/Repair I	2	3	0	3
ELN	137	Electronic Devices and Circuits	4	3	0	5
ENG	112	Argument-Based Research	3	0	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
PHY	110	Conceptual Physics	3	0	0	3
PHY	110A	Conceptual Physics Lab	0	2	0	1
			15	10	0	19
First Year – Summer Term						
ELN	260	Prog Logic Controllers	3	3	0	4
ELN	133	Digital Electronics	3	3	0	4

			6	6	0	8

Second Year— Fall Semester

DFT	151	CAD I	2	3	0	3
ELN	132	Linear IC Applications	3	3	0	4
ELN	232	Introduction to Microprocessors	3	3	0	4
		Humanities/Fine Arts Elective*	3	0	0	3
			11	9	0	14

Second Year – Spring Semester

ATR	218	Computer Integrated Manufacturing	2	3	0	3
EGR	285	Design Project	0	4	0	2
ELN	237	Local Area Networks	2	3	0	3
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			9	13	0	14

Total Credit Hours   **71**

* Approved Electives are listed on the page before the Course Descriptions.

ENTREPRENEURSHIP (CERTIFICATE) (C25490)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit

A. General Education Courses
  1. Required Courses
    None

B. Major Courses
  1. Core Courses
    To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
BUS	110	Introduction to Business	3	0	0	3
BUS	139	Entrepreneurship I	3	0	0	3
BUS	280	REAL Small Business	4	0	0	4
ECO	251	Principles of Microeconomics	3	0	0	3

C. Other Required Courses
  None

Total Credit Hours   **13**

GENERAL OCCUPATIONAL TECHNOLOGY (A55280)

The General Occupational Technology curriculum provides individuals with an opportunity to upgrade skills and to earn an associate degree, diploma, and/or certificate by taking courses suited for individual occupational interests and/or needs.

The curriculum content will be customized for students according to occupational interests and needs. A program of study for each student will be selected from any non-developmental 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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

	Credit
A. General Education Courses	
1. Required Courses	
English/Communications	6
Humanities/Fine Arts	3
Natural Sciences/Mathematics	3
Social/Behavioral Sciences	3
B. Major Courses	
1. Core Courses	
Select core courses from approved curriculums at RCC.	18
2. Other Major Courses	
Select major courses from approved curriculums at RCC.	31-42
C. Other Required Courses	
ACA 115 Success & Study Skills	1
Total Credit Hours	**65-76**

An "Individual Student Program of Study" form must be completed by the Registrar and on file in the Registrar's office when the student begins the program of study and must be updated every semester.

HEALTH INFORMATION TECHNOLOGY (A45360)

The Health Information Technology curriculum provides individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage, and report health information.

Students will supervise departmental functions; classify, code, and index diagnoses and procedures; coordinate information for cost control, quality management, statistics, marketing, and planning; monitor governmental and non-governmental standards; facilitate research; and design system controls to monitor patient information security.

Graduates of this program may be eligible to write the national certification examination to become a Registered Health Information Technician (RHIT). Employment opportunities include hospitals, rehabilitation facilities, nursing homes, health insurance organizations, outpatient clinics, physicians' offices, hospice, and mental health facilities.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
BIO	165	Anatomy and Physiology I	3	3	0	4
BIO	166	Anatomy and Physiology II	3	3	0	4
BUS	137	Principles of Management	3	0	0	3
HIT	110	Fundamentals of HIM	3	0	0	3
HIT	112	Health Law and Ethics	3	0	0	3
HIT	114	Health Data Sys/Standards	2	3	0	3
HIT	210	Healthcare Statistics	2	2	0	3
HIT	211	ICD Coding	2	6	0	4
HIT	214	CPT/Other Coding Systems	1	3	0	2
HIT	216	Quality Management	1	3	0	3

			Class	Lab	Clinical	Credit
HIT	222	Prof. Practice Exp III	0	0	6	2
HIT	226	Principles of Disease	3	0	0	3
HIT	280	Professional Issues	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3

2.**Other Major Courses**

			Class	Lab	Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
DBA	110	Database Concepts	2	3	0	3
HIT	215	Reimbursement Methodology	1	2	0	2
HIT	220	Health Informatics & EHRs	1	2	0	2

C. Other Required Courses

			Class	Lab	Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   70

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

HEALTH INFORMATION TECHNOLOGY

			Class	Lab	Work Exp/ Clinical	Credit

First Year – Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
BIO	165	Anatomy and Physiology I	3	3	0	4
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
HIT	110	Fundamentals of HIM	3	0	0	3
HIT	112	Health Law and Ethics	3	0	0	3
MED	121	Medical Terminology I	3	0	0	3
			17	7	0	20

First Year – Spring Semester

BIO	166	Anatomy and Physiology II	3	3	0	4
DBA	110	Database Concepts	2	3	0	3
ENG	112	Argument-Based Research	3	0	0	3
HIT	114	Health Data Sys/Standards	2	3	0	3
MAT	140	Survey of Mathematics	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3
			16	9	0	19

Second Year – Fall Semester

HIT	210	Healthcare Statistics	2	2	0	3
HIT	211	ICD Coding	2	6	0	4
HIT	216	Quality Management	1	3	0	2

HIT	220	Health Informatics & EHRs	1	2	0	2
HIT	226	Principles of Disease	3	0	0	3
PSY	150	General Psychology	3	0	0	3
			12	13	0	17

Second Year – Spring Semester

BUS	137	Principles of Management	3	0	0	3
HIT	214	CPT/Other Coding Systems	1	3	0	2
HIT	215	Reimbursement Methodology	1	2	0	2
HIT	222	Prof. Practice Exp III	0	0	6	2
HIT	280	Professional Issues	2	0	0	2
		Humanities/Fine Arts Elective*	3	0	0	3
			10	8	6	14

Total Credit Hours   **70**

*Approved Electives are listed on the page before the Course Descriptions.

HEALTHCARE BUSINESS INFORMATICS (A25510)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	145	Analytical Mathematics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						
		To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.				
BUS	110	Introduction to Business	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
CTS	120	Hardware/Software Support	2	3	0	3
DBA	110	Database Concepts	2	3	0	3
HBI	110	Issues and Trends in HBI	3	0	0	3
HBI	113	Survey of Med Insurance	3	0	0	3
HBI	250	Data Mgmt and Utilization	2	2	0	3
MED	118	Medical Law and Ethics	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3

			Class	Lab	Work Exp/ Clinical	Credit
NET	125	Networking Basics	1	4	0	3
NOS	110	Operating System Concepts	2	3	0	3
SEC	110	Security Concepts	2	2	0	3

2. Other Major Courses

CIS	115	Intro to Prog & Logic	2	3	0	3
NOS	120	Linux/UNIX Single User	2	2	0	3
NOS	130	Windows Single User	2	2	0	3
NOS	230	Windows Administration I	2	2	0	3

C.Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **66**

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
HEALTHCARE BUSINESS INFORMATICS

			Class	Lab	Work Exp/ Clinical	Credit
		First Year – Fall Semester				
ACA	115	Success & Study Skills	0	2	0	1
BUS	110	Introduction to Business	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
MED	118	Medical Law and Ethics	2	0	0	2
NET	125	Networking Basics	1	4	0	3
NOS	110	Operating Systems Concepts	2	3	0	3
			13	11	0	18
		First Year – Spring Semester				
DBA	110	Database Concepts	2	3	0	3
ENG	112	Argument-Based Research	3	0	0	3
HBI	110	Issues and Trends in HBI	3	0	0	3
HBI	113	Survey of Med Insurance	3	0	0	3
MAT	145	Analytical Mathematics	3	0	0	3
NOS	130	Windows Single User	2	2	0	3
			16	5	0	18
		Second Year – Fall Semester				
CIS	115	Introduction to Prog & Logic	2	3	0	3
HBI	250	Data Mgmt and Utilization	2	2	0	3
MED	121	Medical Terminology I	3	0	0	3
NOS	120	Linux/UNIX Single User	2	2	0	3
NOS	230	Windows Administration I	2	2	0	3

SEC	110	Security Concepts	2	2	0	3
			13	11	0	18

Second Year – Spring Semester

CTS	120	Hardware/Software Support	2	3	0	3
MED	122	Medical Terminology II	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			11	3	0	12

Total Credit Hours   **66**

*Approved Electives are listed on the page before the Course Descriptions.

HEALTHCARE MANAGEMENT TECHNOLOGY (A25200)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
ENG	111	Expository Writing		3	0	0	3
ENG	112	Argument-Based Research		3	0	0	3
MAT	140	Survey of Mathematics		3	0	0	3
		Humanities/Fine Arts Elective*		3	0	0	3
		Social/Behavioral Sciences Elective*		3	0	0	3
B. Major Courses							
1. Core Courses							

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
ACC	120	Principles of Financial Accounting	3	2	0	4
ACC	121	Principles of Managerial Accounting	3	2	0	4
HMT	110	Intro to Healthcare Management	3	0	0	3
HMT	210	Medical Insurance	3	0	0	3
HMT	211	Long-Term Care Administration	3	0	0	3
HMT	220	Healthcare Financial Management	4	0	0	4

			Class	Lab	Clinical	Credit
MED	118	Medical Law and Ethics	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3

2. Other Major Courses

ACC	225	Cost Accounting	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
BUS	153	Human Resource Management	3	0	0	3
CIS	110	Introduction to Computers	2	2	0	3
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
CTS	130	Spreadsheet	2	2	0	3
HMT	225	Practice Mgmt Simulation	2	2	0	3
OST	131	Keyboarding	1	2	0	2

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   67

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE
HEALTHCARE MANAGEMENT TECHNOLOGY (DAY)

			Class	Lab	Work Exp/Clinical	Credit

First Year—Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
ACC	120	Principles of Financial Accounting	3	2	0	4
BUS	137	Principles of Management	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
MED	121	Medical Terminology I	3	0	0	3
			15	4	0	17

First Year - Spring Semester

ACC	121	Principles of Managerial Accounting	3	2	0	4
CIS	110	Introduction to Computers	2	2	0	3
ENG	112	Argument-Based Research	3	0	0	3
HMT	110	Intro to Healthcare Management	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3
OST	131	Keyboarding	1	2	0	2
			15	6	0	18

Second Year - Fall Semester

			Class	Lab	Clinical	Credit
BUS	153	Human Resource Management	3	0	0	3
HMT	210	Medical Insurance	3	0	0	3
HMT	211	Long-Term Care Administration	3	0	0	3
MED	118	Medical Law and Ethics	2	0	0	2
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			17	0	0	17

Second Year - Spring Semester

			Class	Lab	Clinical	Credit
ACC	225	Cost Accounting	3	0	0	3
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
CTS	130	Spreadsheet	2	2	0	3
HMT	220	Healthcare Financial Management	4	0	0	4
HMT	225	Practice Mgmt Simulation	2	2	0	3
			12	4	10	15

Total Credit Hours   **67**

*Approved Electives are listed on the page before the Course Descriptions.

HEALTHCARE MANAGEMENT TECHNOLOGY
(CERTIFICATE) (C25200)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
HMT	110	Introduction to Healthcare Management	3	0	0	3
HMT	210	Medical Insurance	3	0	0	3
MED	118	Medical Law and Ethics	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3
			16	2	0	17

Total Credit Hours   **17**

HUMAN SERVICES TECHNOLOGY (A45380)

The Human Services Technology curriculum prepares students for entry-level positions in institutions and agencies which provide social, community, and educational services. Along with core courses, students take courses which prepare them for specialization in specific human service areas.

Students will take courses from a variety of disciplines. Emphasis in core courses is placed on development of relevant knowledge, skills, and attitudes in human services. Fieldwork experience will provide opportunities for application of knowledge and skills learned in the classroom.

Graduates should qualify for positions in mental health, child care, family services, social services, rehabilitation, correction, and educational agencies. Graduates choosing to continue their education may select from a variety of transfer programs at senior public and private institutions.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
ENG	111	Expository Writing		3	0	0	3
ENG	112	Argument-Based Research		3	0	0	3
MAT	140	Survey of Mathematics		3	0	0	3
SOC	210	Introduction to Sociology		3	0	0	3
		Humanities/Fine Arts Elective*		3	0	0	3
B. Major Courses							
1. Core Courses							

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
HSE	110	Introduction to Human Services	2	2	0	3
HSE	112	Group Process I	1	2	0	2
HSE	123	Interviewing Techniques	2	2	0	3
HSE	125	Counseling	2	2	0	3
HSE	210	Human Services Issues	2	0	0	2
HSE	225	Crisis Intervention	3	0	0	3
PSY	150	General Psychology	3	0	0	3
PSY	241	Developmental Psychology	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3

2. Other Major Courses

				Class	Lab	Work Exp/Clinical	Credit
CIS	110	Introduction to Computers		2	2	0	3
COE	111	Co-op Work Experience I		0	0	10	1
COE	115	Work Experience Seminar I		1	0	0	1
COE	121	Co-op Work Experience II		0	0	10	1
COE	125	Work Experience Seminar II		1	0	0	1
GRO	120	Gerontology		3	0	0	3
HSE	155	Community Resources Management		2	0	0	2
HSE	220	Case Management		2	2	0	3
HSE	227	Children & Adolescents in Crisis		3	0	0	3
HSE	250	Financial Services		2	0	0	2
HSE	251	Activities Therapy		2	2	0	3
SOC	225	Social Diversity		3	0	0	3
		or					
SWK	113	Working with Diversity		3	0	0	3

C. Other Required Courses

ACA	115	Success & Study Skills		0	2	0	1

Total Credit Hours   **67**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

HUMAN SERVICES TECHNOLOGY (DAY)

			Class	**Lab**	**Work Exp/Clinical**	**Credit**
First Year— Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
ENG	111	Expository Writing	3	0	0	3
HSE	110	Introduction to Human Services	2	2	0	3
HSE	123	Interviewing Techniques	2	2	0	3
HSE	155	Community Resources Management	2	0	0	2
PSY	150	General Psychology	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
			15	6	0	18
First Year – Spring Semester						
CIS	110	Introduction to Computers	2	2	0	3
ENG	112	Argument-Based Research	3	0	0	3
HSE	112	Group Process I	1	2	0	2
HSE	125	Counseling	2	2	0	3
HSE	250	Financial Services	2	0	0	2
MAT	140	Survey of Mathematics	3	0	0	3
			13	6	0	16

Second Year— Fall Semester

			Class	Lab	Work Exp/Clinical	Credit
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
HSE	251	Activities Therapy	2	2	0	3
HSE	227	Children & Adolescents in Crisis	3	0	0	3
PSY	241	Developmental Psychology	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3
SOC	225	Social Diversity	3	0	0	3
		or				
SWK	113	Working with Diversity	3	0	0	3
			15	2	10	17

Second Year – Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
COE	121	Co-op Work Experience II	0	0	10	1
COE	125	Work Experience Seminar II	1	0	0	1
GRO	120	Gerontology	3	0	0	3
HSE	210	Human Services Issues	2	0	0	2
HSE	220	Case Management	2	2	0	3
HSE	225	Crisis Intervention	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			14	2	10	16

Total Credit Hours   **67**

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

HUMAN SERVICES TECHNOLOGY (EVENING)

			Class	Lab	Work Exp/Clinical	Credit

First Year — Fall Semester

			Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
HSE	110	Introduction to Human Services	2	2	0	3
			7	6	0	10

First Year — Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
ENG	112	Argument-Based Research	3	0	0	3
HSE	123	Interviewing Techniques	2	2	0	3
PSY	150	General Psychology	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3

			11	2	0	12

Even Years — Fall Semester

COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
HSE	227	Children & Adolescents in Crisis	3	0	0	3
HSE	251	Activities Therapy	2	2	0	3
SOC	225	Social Diversity	3	0	0	3
or						
SWK	113	Working with Diversity	3	0	0	3
			9	2	10	11

Odd Years — Spring Semester

COE	121	Co-op Work Experience II	0	0	10	1
COE	125	Work Experience Seminar II	1	0	0	1
HSE	210	Human Services Issues	2	0	0	2
HSE	220	Case Management	2	2	0	3
MAT	140	Survey of Mathematics	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3
			11	2	10	13

Odd Years — Fall Semester

HSE	112	Group Process I	1	2	0	2
HSE	125	Counseling	2	2	0	3
HSE	225	Crisis Intervention	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			9	4	0	11

Even Years — Spring Semester

GRO	120	Gerontology	3	0	0	3
HSE	155	Community Resources Management	2	0	0	2
HSE	250	Financial Services	2	0	0	2
PSY	241	Developmental Psychology	3	0	0	3
			10	0	0	10

Total Credit Hours   **67**

*Approved Electives are listed on the page before the Course Descriptions.

HUMAN SERVICES TECHNOLOGY (CERTIFICATE)

SOCIAL GERONTOLOGY (C45380G)

COURSE REQUIREMENTS

GRO	120	Gerontology	3	0	0	3

HSE	110	Introduction to Human Services	2	2	0	3
HSE	125	Counseling	2	2	0	3
HSE	251	Activities Therapy	2	2	0	3
PSY	150	General Psychology	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3
			14	6	0	18

Total Credit Hours **18**

HUMAN SERVICES TECHNOLOGY (CERTIFICATE)
AT-RISK YOUTH TECHNICIAN (C45380Y)
COURSE REQUIREMENTS

HSE	110	Introduction to Human Services	2	2	0	3
HSE	125	Counseling	2	2	0	3
HSE	225	Crisis Intervention	3	0	0	3
HSE	227	Children & Adolescents in Crisis	3	0	0	3
PSY	150	General Psychology	3	0	0	3
PSY	241	Developmental Psychology	3	0	0	3
			16	4	0	18

Total Credit Hours **18**

INDUSTRIAL SYSTEMS TECHNOLOGY (A50240)

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 blueprint 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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
	ENG	111	Expository Writing	3	0	0	3
	ENG	112	Argument-Based Research	3	0	0	3
	MAT	140	Survey of Mathematics	3	0	0	3
			Humanities/Fine Arts Elective*	3	0	0	3
			Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses							
1. Core Courses							

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
BPR	111	Blueprint Reading	1	2	0	2
ELC	112	DC/AC Electricity	3	6	0	5
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
		or				
HYD	115	Industrial Hydraulics	2	2	0	3
ISC	112	Industrial Safety	2	0	0	2
MEC	111	Machine Processes I	1	4	0	3
MNT	110	Intro to Maintenance Procedures	1	3	0	2
WLD	112	Basic Welding Processes	1	3	0	2

2. Other Major Courses

CIS	110	Introduction to Computers	2	2	0	3
ELC	117	Motors and Controls	2	6	0	4
ELC	120	Introduction to Wiring	2	2	0	3
ELC	125	Diagrams and Schematics	1	2	0	2
ELC	128	Introduction to PLC	2	3	0	3
HYD	180	Pneumatics in Automation	2	3	0	3
MAC	114	Introduction to Metrology	2	0	0	2
MEC	130	Mechanisms	2	2	0	3
MNT	230	Pumps & Piping Systems	1	3	0	2
MNT	240	Industrial Equipment Troubleshooting	1	3	0	2
PKG	130	Basic Electronics	1	3	0	2
WLD	117	Industrial SMAW	1	4	0	3

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **67**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

INDUSTRIAL SYSTEMS TECHNOLOGY (DAY)

			Class	Lab	Work Exp/ Clinical	Credit

First Year— Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
ELC	112	DC/AC Electricity	3	6	0	5
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
			11	10	0	15

First Year— Spring Semester

BPR	111	Blueprint Reading	1	2	0	2
ELC	125	Diagrams and Schematics	1	2	0	2
ENG	112	Argument-Based Research	3	0	0	3
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
	or					
HYD	115	Industrial Hydraulics	2	2	0	3
ISC	112	Industrial Safety	2	0	0	2
		Humanities/Fine Arts Elective*	3	0	0	3
			12	6/7	0	15

First Year — Summer Semester

			Class	Lab	Clinical	Credit
PKG	130	Basic Electronics	1	3	0	2
		Social/Behavioral Sciences Elective*	3	0	0	3
			4	3	0	5

Second Year — Fall Semester

			Class	Lab	Clinical	Credit
ELC	120	Introduction to Wiring	2	2	0	3
HYD	180	Pneumatics in Automation	2	3	0	3
MEC	111	Machine Processes I	1	4	0	3
MEC	130	Mechanisms	2	2	0	3
MNT	230	Pumps & Piping Systems	1	3	0	2
WLD	112	Basic Welding Processes	1	3	0	2
			9	17	0	16

Second Year — Spring Semester

			Class	Lab	Clinical	Credit
ELC	117	Motors and Controls	2	6	0	4
ELC	128	Introduction to PLC	2	3	0	3
MAC	114	Introduction to Metrology	2	0	0	2
MNT	110	Intro to Maintenance Procedures	1	3	0	2
MNT	240	Industrial Equipment Troubleshooting	1	3	0	2
WLD	117	Industrial SMAW	1	4	0	3
			9	19	0	16

Total Credit Hours   **67**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

INDUSTRIAL SYSTEMS TECHNOLOGY (DIPLOMA) (D50240) (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit

First Year — Fall Semester

			Class	Lab	Clinical	Credit
BPR	111	Blueprint Reading	1	2	0	2
MEC	111	Machine Processes I	1	4	0	3
WLD	112	Basic Welding Processes	1	3	0	2
			3	9	0	7

First Year — Spring Semester

			Class	Lab	Clinical	Credit
ENG	102	Applied Communications II	3	0	0	3
ISC	112	Industrial Safety	2	0	0	2
MNT	110	Intro to Maintenance Procedures	1	3	0	2
PSY	101	Applied Psychology	3	0	0	3

			9	3	0	10
First Year — Summer Semester						
ELC	125	Diagrams and Schematics	1	2	0	2
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
	or					
HYD	115	Industrial Hydraulics	2	2	0	3
			3	4/5	0	5
Second Year — Fall Semester						
ELC	112	DC/AC Electricity	3	6	0	5
MEC	130	Mechanisms	2	2	0	3
			5	8	0	8
Second Year — Spring Semester						
ELC	117	Motors and Controls	2	6	0	4
ELC	128	Introduction to PLC	2	3	0	3
			4	9	0	7

Total Credit Hours   **37**

SEMESTER SCHEDULE
INDUSTRIAL SYSTEMS TECHNOLOGY (CERTIFICATE) (C50240)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
BPR	111	Blueprint Reading	1	2	0	2
ELC	112	DC/AC Electricity	3	6	0	5
	or					
MEC	111	Machine Processes I	1	4	0	3
			2/4	6/8	0	5/7
First Year – Spring Semester						
ISC	112	Industrial Safety	2	0	0	2
MNT	110	Intro to Maintenance Procedures	1	3	0	2
			3	3	0	4
First Year – Summer Semester						
HYD	110	Hydraulics/Pneumatics I	2	3	0	3

	or					
HYD	115	Industrial Hydraulics	2	2	0	3
			2	2/3	0	3

Second Year – Fall Semester

WLD	112	Basic Welding Processes	1	3	0	2
			1	3	0	2

Total Credit Hours   **14/16**

INFANT/TODDLER CARE (CERTIFICATE) (C55290)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
EDU	153	Health, Safety, & Nutrition	3	0	0	3
EDU	234	Infants, Toddlers, & Twos	3	0	0	3
2. Other Major Courses						
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1

Total Credit Hours   **18**

SEMESTER SCHEDULE
INFANT/TODDLER CARE (CERTIFICATE)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
			10	0	0	10
1st Year – Spring Semester						
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	153	Health, Safety, & Nutrition	3	0	0	3
EDU	234	Infants, Toddlers, & Twos	3	0	0	3
			7	0	10	8

Total Credit Hours   **18**

LATERAL ENTRY (CERTIFICATE) (C55430)

The Lateral Entry curriculum provides a course of study leading to the development of the general pedagogy competencies needed to become certified to teach by the North Carolina Department of Public Instruction.

Course work includes human growth and development, learning theory, instructional technology, school policies and procedures, home, school, and community collaborations, and classroom organization and management to enhance learning. Courses offered by partnering senior institutions include instructional methods, literacy, and diversity.

Graduates should meet the general pedagogy competencies within the first three years of teaching, including a minimum of six semester hours per school year. Additional requirements, such as pre-service training and passing the PRAXIS, are required for licensure.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit

A. Major Courses

1. Core Courses

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
EDU	131	Child, Family, & Community	3	0	0	3
EDU	163	Classroom Mgt & Instruction	3	0	0	3
EDU	243	Learning Theory	3	0	0	3
EDU	244	Human Growth/Development	3	0	0	3
EDU	245	Policies and Procedures	3	0	0	3
EDU	271	Educational Technology	2	2	0	3

Total Credit Hours   **18**

SEMESTER SCHEDULE
LATERAL ENTRY (CERTIFICATE)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
EDU	131	Child, Family, & Community	3	0	0	3
EDU	163	Classroom Mgt & Instruction	3	0	0	3
EDU	271	Educational Technology	2	2	0	3
			8	2	0	9
First Year – Spring Semester						
EDU	243	Learning Theory	3	0	0	3
EDU	244	Human Growth/Development	3	0	0	3
EDU	245	Policies and Procedures	3	0	0	3
			9	0	0	9

Total Credit Hours   18

A cohort model will be utilized. Courses will be offered in a hybrid and/or online format during monthly mini-semesters. The courses will be offered annually allowing students the flexibility of entering and completing courses throughout the year.

The courses that are required to be offered in conjunction with a four-year college will be offered during the summer terms. They will be offered on the Richmond Community College campus or made available through distance learning.

Each student enrolled in the Lateral Entry Certificate program will have a documented plan of study on file. Applicants for this certificate program must hold at least a bachelor's degree from an accredited institution.

MECHANICAL ENGINEERING TECHNOLOGY (A40320)

The Mechanical Engineering Technology curriculum prepares graduates for employment as technicians in the diversified mechanical and manufacturing engineering fields. Mechanical Engineering technicians assist in design, development, testing, process design and improvement, and troubleshooting and repair of engineered systems. Emphasis is placed on the integration of theory and hands-on application of engineering principles.

In addition to course work in engineering graphics, engineering fundamentals, materials and manufacturing processes, mathematics, and physics, students will study 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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
		Humanities/Fine Arts Elective*	3	0	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
DFT	151	CAD I	2	3	0	3
DFT	152	CAD II	2	3	0	3
ISC	132	Manufacturing Quality Control	2	3	0	3
MEC	111	Machine Processes I	1	4	0	3
MEC	180	Engineering Materials	2	3	0	3
MEC	250	Statics & Strength of Materials	4	3	0	5
2. Other Major Courses						
CHM	151	General Chemistry I	3	3	0	4

			Class	Lab		Credit
DFT	110	Basic Drafting	1	2	0	2
DFT	115	Architectural Drafting	1	2	0	2
DFT	153	CAD III	2	3	0	3
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
MAT	271	Calculus I	3	2	0	4
MEC	110	Introduction to CAD/CAM	1	2	0	2
MEC	270	Machine Design	3	3	0	4
MEC	271	Machine Design Project	0	3	0	1
PLA	120	Injection Molding	2	3	0	3

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **69**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

MECHANICAL ENGINEERING TECHNOLOGY (DAY)

			Class	Lab	Work Exp/ Clinical	Credit
		First Year— Fall Semester				
ACA	115	Success & Study Skills	0	2	0	1
DFT	110	Basic Drafting	1	2	0	2
DFT	151	CAD I	2	3	0	3
ENG	111	Expository Writing	3	0	0	3
MEC	111	Machine Processes I	1	4	0	3
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
			10	13	0	16
		First Year— Spring Semester				
DFT	115	Architectural Drafting	1	2	0	2
DFT	152	CAD II	2	3	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
MEC	180	Engineering Materials	2	3	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			14	10	0	18

First Year— Summer Semester

			Class	Lab	Clinical	Credit
DFT	153	CAD III	2	3	0	3
ISC	132	Manufacturing Quality Control	2	2	0	3
			4	5	0	6

Second Year— Fall Semester

			Class	Lab	Clinical	Credit
CHM	151	General Chemistry I	3	3	0	4
MAT	271	Calculus I	3	2	0	4
MEC	250	Statics & Strength of Materials	4	3	0	5
PLA	120	Injection Molding	2	3	0	3
			12	11	0	16

Second Year— Spring Semester

			Class	Lab	Clinical	Credit
HYD	110	Hydraulics/Pneumatics I	2	3	0	3
MEC	110	Introduction to CAD/CAM	1	2	0	2
MEC	270	Machine Design	3	3	0	4
MEC	271	Machine Design Project	0	3	0	1
		Social/Behavioral Sciences Elective*	3	0	0	3
			9	11	0	13

Total Credit Hours   **69**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

MECHANICAL ENGINEERING TECHNOLOGY (DIPLOMA) (D40320) (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit

First Year — Fall Semester

			Class	Lab	Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
DFT	110	Basic Drafting	1	2	0	2
DFT	151	CAD I	2	3	0	3
			3	7	0	6

First Year — Spring Semester

			Class	Lab	Clinical	Credit
DFT	115	Architectural Drafting	1	2	0	2
DFT	152	CAD II	2	3	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			6	5	0	8

First Year — Summer Semester

			Class	Lab	Work Exp/ Clinical	Credit
DFT	153	CAD III	2	3	0	3
MEC	180	Engineering Materials	2	3	0	3
			4	6	0	6

Second Year — Fall Semester

			Class	Lab	Work Exp/ Clinical	Credit
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
MEC	111	Machine Processes I	1	4	0	3
			4	6	0	7

Second Year — Spring Semester

			Class	Lab	Work Exp/ Clinical	Credit
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
CHM	151	General Chemistry	3	3	0	4
			6	5	0	8

Second Year — Summer Term

			Class	Lab	Work Exp/ Clinical	Credit
ENG	111	Expository Writing	3	0	0	3
ISC	132	Manufacturing Quality Control	2	3	0	3
			5	3	0	6

Total Credit Hours   **41**

*Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

MECHANICAL ENGINEERING TECHNOLOGY/COMPUTER-AIDED DRAFTING (CERTIFICATE) (C40320) (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit
DFT	110	Basic Drafting	1	2	0	2
DFT	151	CAD I	2	3	0	3
DFT	152	CAD II	2	3	0	3
DFT	153	CAD III	2	3	0	3
ISC	132	Manufacturing Quality Control	2	3	0	3
MEC	180	Engineering Materials	2	3	0	3
			11	17	0	17

Total Credit Hours   **17**

MEDICAL ASSISTING (A45400)

The Medical Assisting curriculum prepares multi-skilled health care professionals qualified to perform administrative, clinical, and laboratory procedures.

Course work includes instruction in scheduling appointments, coding and processing insurance accounts, billing, collections, medical transcription, computer operations; assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, supervised medication administration; and ethical/legal issues associated with patient care.

Graduates of CAAHEP-accredited medical assisting programs may be eligible to sit for the American Association of Medical Assistants' Certification Examination to become Certified Medical Assistants. Employment opportunities include physicians' offices, health maintenance organizations, health departments, and hospitals.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
BIO	163	Basic Anatomy and Physiology	4	2	0	5
MED	110	Orientation to Medical Assisting	1	0	0	1
MED	118	Medical Law and Ethics	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	122	Medical Terminology II	3	0	0	3
MED	130	Administrative Office Procedures I	1	2	0	2
MED	131	Administrative Office Procedures II	1	2	0	2
MED	140	Exam Room Procedures I	3	4	0	5
MED	150	Laboratory Procedures I	3	4	0	5
MED	260	MED Clinical Practicum	0	0	15	5

2. Other Major Courses

				Class	Lab	Work Exp/ Clinical	Credit
ACC	115	College Accounting		3	2	0	4
CIS	110	Introduction to Computers		2	2	0	3
MED	112	Orientation to Clinical Setting I		0	0	3	1
MED	114	Professional Interaction in Health Care		1	0	0	1
MED	232	Medical Insurance Coding		1	3	0	2
MED	270	Symptomatology		2	2	0	3
MED	272	Drug Therapy		3	0	0	3
OST	131	Keyboarding		1	2	0	2

C. Other Required Courses

				Class	Lab	Work Exp/ Clinical	Credit
ACA	115	Success & Study Skills		0	2	0	1

Total Credit Hours **68**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

MEDICAL ASSISTING (DAY)

			Class	Lab	Work Exp/ Clinical	Credit

First Year — Fall Semester

ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
MED	110	Orientation to Medical Assisting	1	0	0	1
MED	118	Medical Law and Ethics	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	130	Administrative Office Procedures I	1	2	0	2
OST	131	Keyboarding	1	2	0	2
			13	8	0	17

First Year — Spring Semester

BIO	163	Basic Anatomy and Physiology	4	2	0	5
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
MED	112	Orientation to Clinical Setting I	0	0	3	1
MED	122	Medical Terminology II	3	0	0	3
MED	131	Administrative Office Procedures II	1	2	0	2
MED	232	Medical Insurance Coding	1	3	0	2
			15	7	3	19

First Year — Summer Semester

MED	140	Exam Room Procedures I	3	4	0	5
			3	4	0	5

Second Year — Fall Semester

			Class	Lab	Clinical	Credit
ACC	115	College Accounting	3	2	0	4
MED	114	Professional Interaction in Health Care	1	0	0	1
MED	150	Laboratory Procedures I	3	4	0	5
MED	270	Symptomatology	2	2	0	3
MED	272	Drug Therapy	3	0	0	3
			12	8	0	16

Second Year — Spring Semester

			Class	Lab	Clinical	Credit
MED	260	MED Clinical Practicum	0	0	15	5
PSY	150	General Psychology	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			6	0	15	11

Total Credit Hours   **68**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

MEDICAL ASSISTING (CERTIFICATE) (C45400)

			Class	Lab	Work Exp/ Clinical	Credit
Fall Semester						
MED	110	Orientation to Medical Assisting I	1	0	0	1
MED	118	Medical Law and Ethics	2	0	0	2
MED	121	Medical Terminology I	3	0	0	3
MED	130	Administrative Office Procedures I	1	2	0	2
			7	2	0	8
Spring Semester						
MED	112	Orientation to Clinical Setting I	0	0	3	1
MED	122	Medical Terminology II	3	0	0	3
MED	131	Administrative Office Procedures II	1	2	0	2
MED	232	Medical Insurance Coding	1	3	0	2
			5	5	3	8

Total Credit Hours   **16**

NURSING ASSISTANT (CERTIFICATE) (C45480)

The Nursing Assistant curriculum prepares individuals to work under the supervision of licensed health care professionals in performing nursing care and services for persons of all ages.

Course work emphasizes growth and development throughout the life span, personal care, vital signs, communications, nutrition, medical asepsis, therapeutic activities, accident and fire safety, household environment and equipment management; family resources and services; and employment skills.

Graduates of this curriculum may be eligible to be listed in the registry as a Nursing Assistant I and Nursing Assistant II. They may be employed in home health agencies, hospitals, clinics, nursing homes, extended care facilities, and doctors' offices.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. Major Courses						
1. Core Courses						
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.						
NAS	101	Nursing Assistant I	3	4	3	6
NAS	102	Nursing Assistant II	3	2	6	6
NAS	103	Home Health Care	2	0	0	2
2. Other Major Courses						
CIS	110	Introduction to Computers	2	2	0	3
or						
PSY	150	General Psychology	3	0	0	3
Total Credit Hours						**17**

SEMESTER SCHEDULE
NURSING ASSISTANT (CERTIFICATE)

			Class	Lab	Work Exp/ Clinical	Credit
First Year—Fall/Spring Semesters						
NAS	101	Nursing Assistant I	3	4	3	6
NAS	103	Home Health Care	2	0	0	2
			5	4	3	8
Spring Semester						
NAS	102	Nursing Assistant II	3	2	6	6
CIS	110	Introduction to Computers	2	2	0	3
or						
PSY	150	General Psychology	3	0	0	3
			6	2	6	9
		Total Credit Hours				**17**

Note: The Nursing Assistant curriculum is designed to allow a student to progress from an entry point through both levels of Nursing Assistant certification in two semesters.

OFFICE ADMINISTRATION (A25370)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

				Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses							
1. Required Courses							
	COM	231	Public Speaking	3	0	0	3
	ENG	111	Expository Writing	3	0	0	3
	ENG	112	Argument-Based Research	3	0	0	3
	MAT	140	Survey of Mathematics	3	0	0	3
			Humanities/Fine Arts Elective*	3	0	0	3
			Social/Behavioral Sciences Elective*	3	0	0	3
B. Major Courses							
1. Core Courses							
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.							
	CIS	110	Introduction to Computers	2	2	0	3
	OST	136	Word Processing	2	2	0	3
	OST	164	Text Editing Applications	3	0	0	3
	OST	184	Records Management	2	2	0	3
	OST	289	Administrative Office Mgt	2	2	0	3
2. Other Major Courses							
	ACC	115	College Accounting	3	2	0	4
	CTS	130	Spreadsheet	2	2	0	3
	DBA	110	Database Concepts	2	3	0	3
	OST	122	Office Computations	1	2	0	2

OST	131	Keyboarding	1	2	0	2
OST	132	Keyboard Skill Building	1	2	0	2
OST	133	Advanced Keyboard Skill Building	1	2	0	2
OST	134	Text Entry & Formatting	2	2	0	3
OST	137	Office Software Applications	2	2	0	3
OST	236	Adv Word/Information Processing	2	2	0	3
OST	286	Professional Development	3	0	0	3
or						
COE	112	Co-op Work Experience I	0	0	20	2
		Elective**	1-4	0-3	0	2-4

C. Other Required Courses

ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours **68/71**

* Approved Electives are listed on the page before the Course Descriptions.

**Approved Elective may be selected from the following courses:

ACC	150	Accounting Software Applications	1	2	0	2
BUS	110	Introduction to Business	3	0	0	3
BUS	121	Business Management	2	2	0	3
BUS	125	Personal Finance	3	0	0	3
BUS	137	Principles of Management	3	0	0	3
BUS	153	Human Resource Management	3	0	0	3
BUS	228	Business Statistics	2	2	0	3
BUS	230	Small Business Management	3	0	0	3
BUS	261	Diversity in Management	3	0	0	3
BUS	280	REAL Small Business	4	0	0	4
CIS	115	Intro to Prog & Logic	2	3	0	3
CTS	120	Hardware/Software Support	2	3	0	3
ECO	251	Principles of Microeconomics	3	0	0	3
ECO	252	Principles of Macroeconomics	3	0	0	3
MED	121	Medical Terminology I	3	0	0	3
MKT	120	Principles of Marketing	3	0	0	3
MKT	221	Consumer Behavior	3	0	0	3
MKT	223	Customer Service	3	0	0	3
MKT	224	International Marketing	3	0	0	3
MKT	228	Service Marketing	3	0	0	3
PSY	150	General Psychology	3	0	0	3
WEB	110	Internet/Web Fundamentals	2	2	0	3
WEB	140	Web Development Tools	2	2	0	3

SEMESTER SCHEDULE
OFFICE ADMINISTRATION (DAY)

			Class	Lab	Work Exp/ Clinical	Credit

First Year—Fall Semester

			Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
OST	122	Office Computations	1	2	0	2
OST	131	Keyboarding	1	2	0	2
OST	184	Records Management	2	2	0	3
			12	10	0	17

First Year – Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
CTS	130	Spreadsheet	2	2	0	3
ENG	112	Argument-Based Research	3	0	0	3
OST	132	Keyboard Skill Building	1	2	0	2
OST	134	Text Entry & Formatting	2	2	0	3
OST	136	Word Processing	2	2	0	3
OST	164	Text Editing Applications	3	0	0	3
			13	8	0	17

Second Year—Fall Semester

			Class	Lab	Work Exp/Clinical	Credit
ACC	115	College Accounting	3	2	0	4
OST	133	Advanced Keyboard Skill Building	1	2	0	2
OST	137	Office Software Applications	2	2	0	3
OST	236	Adv Word/Information Processing	2	2	0	3
		Elective**	1-4	0-3	0	2-4
		Humanities/Fine Arts Elective*	3	0	0	3
			12-15	8-11	0	15-19

Second Year — Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
COM	231	Public Speaking	3	0	0	3
DBA	110	Database Concepts	2	3	0	3
OST	233	Office Publications Design	2	2	0	3
OST	286	Professional Development	3	0	0	3
or						
COE	112	Co-op Work Experience I	0	0	20	2
OST	289	Administrative Office Mgt	2	2	0	3
		Social/Behavioral Sciences Elective*	3	0	0	3
			15	7	0/20	17/18

Total Credit Hours   **68/71**

* Approved Electives are listed on the page before the Course Descriptions.

OFFICE ADMINISTRATION (CERTIFICATE) (C25370)
COURSE REQUIREMENTS

			Class	Lab	Work Exp/ Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
OST	131	Keyboarding	1	2	0	2
OST	136	Word Processing	2	2	0	3
OST	164	Text Editing Applications	3	0	0	3
OST	184	Records Management	2	2	0	3
			13	8	0	17

Total Credit Hours   **17**

PRACTICAL NURSING (DIPLOMA) (D45660)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
PSY	150	General Psychology	3	0	0	3
B. Major Courses						
1. Core Courses						
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.						
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
2. Other Major Courses						
BIO	163	Basic Anatomy and Physiology	4	2	0	5
CIS	110	Introduction to Computers	2	2	0	3
Total Credit Hours						**47**

SEMESTER SCHEDULE
PRACTICAL NURSING (DIPLOMA)

			Class	Lab	Work Exp/ Clinical	Credit
Fall Semester						
BIO	163	Basic Anatomy and Physiology	4	2	0	5
NUR	101	Practical Nursing I	7	6	6	11
PSY	150	General Psychology	3	0	0	3
			14	8	6	19
Spring Semester						
CIS	110	Introduction to Computers	2	2	0	3
ENG	111	Expository Writing	3	0	0	3
NUR	102	Practical Nursing II	8	0	12	12
			13	2	12	18
Summer Semester						
NUR	103	Practical Nursing III	6	0	12	10
			6	0	12	10

Total Credit Hours   **47**

SCHOOL-AGE EDUCATION (A55440)

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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A. General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
PSY	150	General Psychology	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
B. Major Courses						
1. Core Courses						

To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.

			Class	Lab	Work Exp/ Clinical	Credit
EDU	118	Princ & Prac of Inst Asst	3	0	0	3
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
EDU	145	Child Development II	3	0	0	3
EDU	163	Classroom Mgt & Instruct	3	0	0	3
EDU	221	Children with Exceptionalities	3	0	0	3
EDU	271	Educational Technology	2	2	0	3
EDU	285	Internship Experiences-School Age	1	9	0	4
EDU	289	Adv Issues/School Age	2	0	0	2

2. Other Major Hours

			Class	Lab	Work Exp/Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	146	Child Guidance	3	0	0	3
EDU	151	Creative Activities	3	0	0	3
EDU	151A	Creative Activities Lab	0	2	0	1
EDU	158	Healthy Lifestyles-Youth	3	0	0	3
EDU	235	School-Age Development & Programs	3	0	0	3
EDU	275	Effective Teacher Training	2	0	0	2
EDU	280	Language & Literacy Experiences	3	0	0	3
EDU	281	Instruc Strat/Read & Writ	2	2	0	3

C. Other Required Courses

			Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **73**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

SCHOOL-AGE EDUCATION (DAY)

			Class	Lab	Work Exp/Clinical	Credit
First Year – Fall Semester						
ACA	115	Success & Study Skills	0	2	0	1
CIS	110	Introduction to Computers	2	2	0	3
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	131	Child, Family, & Community	3	0	0	3
EDU	144	Child Development I	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			15	4	0	17
First Year – Spring Semester						
EDU	118	Princ & Prac of Inst Asst	3	0	0	3
EDU	145	Child Development II	3	0	0	3
EDU	146	Child Guidance	3	0	0	3
EDU	158	Healthy Lifestyles-Youth	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
PSY	150	General Psychology	3	0	0	3
			18	0	0	18
Second Year – Fall Semester						
COE	111	Co-op Work Experience I	0	0	10	1

			Class	Lab	Work Exp/Clinical	Credit
COE	115	Work Experience Seminar I	1	0	0	1
EDU	163	Classroom Mgt & Instruct	3	0	0	3
EDU	221	Children with Exceptionalities	3	0	0	3
EDU	235	School-Age Development & Program	3	0	0	3
EDU	280	Language & Literacy Experiences	3	0	0	3
EDU	281	Instruc Strat/Read & Writing	2	2	0	3
EDU	289	Adv Issues/School Age	2	0	0	2
			17	2	10	19

Second Year – Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
EDU	151	Creative Activities	3	0	0	3
EDU	151A	Creative Activities Lab	0	2	0	1
EDU	271	Educational Technology	2	2	0	3
EDU	275	Effective Teacher Training	2	0	0	2
EDU	285	Internship Experiences-School Age	1	9	0	4
MAT	140	Survey of Mathematics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			14	13	0	19

Total Credit Hours   **73**

* Approved Electives are listed on the page before the Course Descriptions.

SEMESTER SCHEDULE

SCHOOL-AGE EDUCATION (EVENING)

			Class	Lab	Work Exp/Clinical	Credit

First Year - Fall Semester

			Class	Lab	Work Exp/Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
EDU	119	Intro to Early Childhood Education	4	0	0	4
EDU	144	Child Development I	3	0	0	3
ENG	111	Expository Writing	3	0	0	3
			10	2	0	11

First Year - Spring Semester

			Class	Lab	Work Exp/Clinical	Credit
CIS	110	Introduction to Computers	2	2	0	3
EDU	145	Child Development II	3	0	0	3
EDU	146	Child Guidance	3	0	0	3
ENG	112	Argument-Based Research	3	0	0	3
			11	2	0	12

Second and Third Years (Alternating Sequences)

Even Years - Fall Semester

EDU	131	Child, Family, & Community	3	0	0	3
EDU	163	Classroom Mgt & Instruct	3	0	0	3
EDU	281	Instruc Strat/Read & Writ	2	2	0	3
PSY	150	General Psychology	3	0	0	3
			11	2	0	12

Odd Years - Spring Semester

EDU	118	Princ & Prac of Inst Asst	3	0	0	3
EDU	151	Creative Activities	3	0	0	3
EDU	151A	Creative Activities Lab	0	2	0	1
EDU	158	Healthy Lifestyles - Youth	3	0	0	3
EDU	271	Educational Technology	2	2	0	3
			11	4	0	13

Odd Years — Fall Semester

COE	111	Co-op Work Experience I	0	0	10	1
COE	115	Work Experience Seminar I	1	0	0	1
EDU	221	Children with Exceptionalities	3	0	0	3
EDU	235	School-Age Development & Program	3	0	0	3
EDU	280	Language & Literacy Exp	3	0	0	3
EDU	289	Adv Issues/School Age	2	0	0	2
			12	0	10	13

Even Years — Spring Semester

EDU	275	Effective Teacher Training	2	0	0	2
EDU	285	Internship Experiences-School Age	1	9	0	4
MAT	140	Survey of Mathematics	3	0	0	3
		Humanities/Fine Arts Elective*	3	0	0	3
			9	9	0	12

Total Credit Hours   **73**

* Approved Electives are listed on the page before the Course Descriptions.

WELDING TECHNOLOGY (DIPLOMA) (D50420)

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

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

Successful 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.

COURSE REQUIREMENTS

Richmond Community College provides day and evening course sequences for selected programs to enable students to better plan what courses to take to reach their educational goals. However, given the continued increase in the use of technology in instruction and increasing student demand for distance learning courses, the College may offer hybrid, online, web-based and information highway courses in place of traditional courses in any course sequence that is listed. Therefore, students should be aware of this possibility and prepare themselves to successfully function in a hybrid, online, web-based, or information highway course.

			Class	Lab	Work Exp/ Clinical	Credit
A.General Education Courses						
1. Required Courses						
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
B.Major Courses						
1. Core Courses						
To receive a degree, diploma or certificate from RCC, a student must have a grade of "C" or better in all core courses for the program of study.						
WLD	110	Cutting Processes	1	3	0	2
WLD	115	SMAW (Stick) Plate	2	9	0	5
WLD	121	GMAW (MIG) FCAW/Plate	2	6	0	4
WLD	131	GTAW (TIG) Plate	2	6	0	4
WLD	141	Symbols & Specifications	2	2	0	3
2. Other Major Courses						
DFT	151	CAD I	2	3	0	3
WLD	132	GTAW (TIG) Plate/Pipe	1	6	0	3
WLD	151	Fabrication I	2	6	0	4
WLD	215	SMAW (Stick) Pipe	1	9	0	4
C. Other Required						
ACA	115	Success & Study Skills	0	2	0	1

Total Credit Hours   **39**

SEMESTER SCHEDULE
WELDING TECHNOLOGY (EVENING)

			Work Exp/		
			Class	Lab	Clinical	Credit

First Year – Fall Semester

			Class	Lab	Clinical	Credit
ACA	115	Success & Study Skills	0	2	0	1
WLD	110	Cutting Processes	1	3	0	2
WLD	115	SMAW (Stick) Plate	2	9	0	5
WLD	141	Symbols & Specifications	2	2	0	3
			5	16	0	11

First Year – Spring Semester

			Class	Lab	Clinical	Credit
WLD	121	GMAW(MIG)FCA W/Plate	2	6	0	4
WLD	131	GTAW (TIG) Plate	2	6	0	4
WLD	215	SMAW (Stick) Pipe	1	9	0	4
			5	21	0	12

First Year – Summer Semester

			Class	Lab	Clinical	Credit
WLD	132	GTAW (TIG) Plate/Pipe	1	6	0	3
WLD	151	Fabrication I	2	6	0	4
			3	12	0	7

Second Year – Fall Semester

			Class	Lab	Clinical	Credit
DFT	151	CAD I	2	3	0	3
ENG	111	Expository Writing	3	0	0	3
MAT	140	Survey of Mathematics	3	0	0	3
			7	3	0	9

Total Credit Hours   **39**

SEMESTER SCHEDULE
WELDING TECHNOLOGY (CERTIFICATE C50420) (EVENING)

			Class	Lab	Work Exp/ Clinical	Credit
First Year – Fall Semester						
WLD	110	Cutting Processes	1	3	0	2
WLD	115	SMAW (Stick) Plate	2	9	0	5
WLD	141	Symbols & Specifications	2	2	0	3
			5	14	0	10
First Year – Spring Semester						
WLD	121	GMAW (MIG) FCAW/Plate	2	6	0	4
WLD	131	GTAW (TIG) Plate	2	6	0	4
			4	12	0	8

Total Credit Hours   **18**

APPROVED ELECTIVES

* **APPROVED HUMANITIES/FINE ARTS ELECTIVES**

Students in A.A.S. programs may select a humanities elective from any of these prefix areas: ART, DRA, ENG (Literature courses only), HUM, MUS, PHI, REL, and SPA (Intermediate Spanish I only).

* **APPROVED SOCIAL/BEHAVIORAL SCIENCES ELECTIVES**

Students in A.A.S. programs may select a social/behavioral sciences elective from any of these prefix areas: ANT, ECO+, GEO, HIS, POL, PSY, and SOC.

+Some business and accounting curricula require economics and do not accept ECO courses as fulfillment of the social/behavioral sciences elective requirement.

A.A.S. programs do not allow the use of COM courses as a humanities elective.

Course Descriptions

COURSE NUMBERING SYSTEM

Course designations consist of a three-letter course prefix followed by a three-digit number. The course number is followed by the title of the course. Course titles are followed by a sequence of four numbers: (1) class lecture hours per week; (2) lab hours per week; (3) clinical or shop or work experience hours per week; and (4) semester-hour credits (SHC) earned when the course is successfully completed.

Developmental education courses have numbers between 010-095. Examples: ENG 080, DMA 010.

Courses that can only be used for diploma and certificate curriculum have numbers between 100-109 and 200-209. Examples: ENG 102, PSY 101.

All associate degree, diploma, and certificate curriculum courses have numbers between 110-199 and 210-299. Examples: ENG 112, SOC 210.

College Transfer courses are identified in course descriptions with the statements: "This course has been approved to satisfy the Comprehensive Articulation agreement general education core requirement." or "This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement." These courses are approved for transfer to the 16 universities of The University of North Carolina System.

PREREQUISITES AND COREQUISITES

Many courses have prerequisites--other courses that must be completed prior to enrollment. For example, a student must complete PSY 150 before enrolling in PSY 241.

Many courses have developmental English, mathematics, or reading course prerequisites: for example, DMA 010-050 or MAT 080 must be completed before taking MAT 155. To gain admission to the curriculum courses, students must either pass the appropriate developmental prerequisites or make appropriate scores on the ASSET or COMPASS placement inventory that measures skills in English, mathematics, and reading.

Corequisites are courses that are generally taken at the same time as other related courses: for example, BIO 140 with BIO 140A. In many cases, corequisites may be taken at the same time or earlier. For example, RED 090 is a corequisite for BUS 110. Students may either complete RED 090 before taking BUS 110 or they may take RED 090 at the same time as BUS 110.

REQUIRED ACA COURSES

Students enrolled in programs of study requiring an ACA course will be required to enroll in that course during the first semester enrolled at Richmond Community College. Exceptions from this requirement will be given only upon written approval by the Vice President of Instruction/Chief Academic Officer or the Vice President of Student Services.

Work Exp/
Class Lab Clinical Credit

ACA 115   Success & Study Skills   0   2   0   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 118   College Study Skills   1   2   0   2
Prerequisites: None
Corequisites: None
This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, students should be able to apply appropriate study strategies and techniques to the development of an effective study plan.

ACA 122   College Transfer Success   1   0   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 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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

ACA 115, ACA 118 and ACA 122 are interchangeable. ACA 118 or ACA 122 may be substituted for ACA 115. Only one ACA course can be used to fulfill graduation requirements.

ACC 111   Financial Accounting   3   0   0   3
Prerequisites: None
Corequisites: None
This course introduces the basic framework of accounting. Emphasis is placed on the accounting cycle and financial statement preparation and analysis. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

	Work Exp/		
	Class	Lab	Clinical	Credit

ACC 115   College Accounting   3   2   0   4
Prerequisites: DMA 010-040 or MAT 070, RED 080
Corequisites: RED 090
This course introduces basic accounting principles for a business. Topics include the complete accounting cycle with end-of-period statements, bank reconciliation, payrolls, and petty cash. Upon completion, students should be able to demonstrate an understanding of accounting principles and apply those skills to a business organization. This course is not intended as a substitute for ACC 120.

ACC 120   Principles of Financial Accounting   3   2   0   4
Prerequisites: DMA 010-040 or MAT 070, RED 090
Corequisites: MAT 140
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 to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.**

ACC 121   Principles of Managerial Accounting   3   2   0   4
Prerequisites: ACC 120 with minimum grade of "C"
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 to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.**

ACC 122   Principles of Financial Acct II   3   0   0   3
Prerequisites: ACC 120 with minimum grade of "C"
Corequisites: None
This course provides additional instruction in the financial accounting concepts and procedures introduced in ACC 120. Emphasis is placed on the analysis of specific balance sheet accounts, with in-depth instruction of the accounting principles applied to these accounts. Upon completion, students should be able to analyze data, prepare journal entries, and prepare reports in compliance with generally accepted accounting principles.

Work Exp/
Class Lab Clinical Credit

ACC 129   Individual Income Taxes   2   2   0   3
Prerequisites: DMA 010-040 or MAT 070, RED 090
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 130   Business Income Taxes   2   2   0   3
Prerequisites: ACC 120 with minimum grade of "C"
Corequisites: None
This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms.

ACC 149   Intro to Accounting Spreadsheets   1   2   0   2
Prerequisites: ACC 115 or ACC 120
Corequisites: None
This course provides a working knowledge of computer spreadsheets and their use in accounting. Topics include pre-programmed problems, model-building problems, beginning-level macros, graphics, and what-if analysis enhancements of template problems. Upon completion, students should be able to use a computer spreadsheet to complete many of the tasks required in accounting.

ACC 150   Accounting Software Applications   1   2   0   2
Prerequisites: ACC 115 or ACC 120, CIS 110
Corequisites: None
This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems.

ACC 151   Accounting Spreadsheet Applications   1   2   0   2
Prerequisites: ACC 149
Corequisites: None
This course is designed to facilitate the use of spreadsheet technology as applied to accounting principles. Emphasis is placed on using spreadsheet software as a problem-solving and decision-making tool. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

	Class	Lab	Work Exp/ Clinical	Credit

ACC 220   Intermediate Accounting I   3   2   0   4
Prerequisites: ACC 120 and ACC 121 or ACC 122 with minimum grade of "C"
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 an extensive analyses of financial statements. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.

ACC 221   Intermediate Accounting II   3   2   0   4
Prerequisites: ACC 220 with minimum grade of "C"
Corequisites: None
This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

ACC 225   Cost Accounting   3   0   0   3
Prerequisites: ACC 121
Corequisites: None
This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered.

AHR 110   Intro to Refrigeration   2   6   0   5
Prerequisites: None
Corequisites: None
This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade.

	Class	Lab	Work Exp/ Clinical	Credit

AHR 111   HVACR Electricity   2   2   0   3
Prerequisites: None
Corequisites: None
This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams.

AHR 112   Heating Technology   2   4   0   4
Prerequisites: None
Corequisites: None
This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system.

AHR 113   Comfort Cooling   2   4   0   4
Prerequisites: None
Corequisites: None
This course covers the installation procedures, system operations, and maintenance of residential and light commercial comfort cooling systems. Topics include terminology, component operation, and testing and repair of equipment used to control and produce assured comfort levels. Upon completion, students should be able to use psychometrics, manufacturer specifications, and test instruments to determine proper system operation.

AHR 114   Heat Pump Technology   2   4   0   4
Prerequisites: AHR 110 or AHR 113
Corequisites: None
This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures.

AHR 115   Refrigeration Systems   1   3   0   2
Prerequisites: AHR 110
Corequisites: None
This course introduces refrigeration systems and applications. Topics include defrost methods, safety and operational control, refrigerant piping, refrigerant recovery and charging, and leak testing. Upon completion, students should be able to assist in installing and testing refrigeration systems and perform simple repairs.

		Work Exp/ Class Lab Clinical Credit		

AHR 130   HVAC Controls   2   2   0   3
Prerequisites: AHR 111 or ELC 111
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   0   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 layout and fabricate simple duct work.

AHR 160   Refrigerant Certification   1   0   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   0   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   0   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.

<table>
<tr><td></td><td></td><td colspan="4">**Work Exp/**</td></tr>
<tr><td></td><td></td><td>**Class**</td><td>**Lab**</td><td>**Clinical**</td><td>**Credit**</td></tr>
</table>

AHR 212   Advanced Comfort Systems   2   6   0   4
Prerequisites: AHR 114
Corequisites: None
This course covers water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pump systems including variable speed drives and controls. Emphasis is placed on the application, installation, and servicing of water-source systems and the mechanical and electronic control components of advanced comfort systems. Upon completion, students should be able to test, analyze, and troubleshoot water-cooled comfort systems, water-source/geothermal heat pumps, and high efficiency heat pumps.

AHR 213   HVACR Building Code   1   2   0   2
Prerequisites: None
Corequisites: None
This course covers the North Carolina codes that are applicable to the design and installation of HVACR systems. Topics include current North Carolina codes as applied to HVACR design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of North Carolina codes that apply to specific areas of the HVACR trade.

AHR 235   Refrigeration Design   2   2   0   3
Prerequisites: AHR 110
Corequisites: None
This course covers the principles of commercial refrigeration system operation and design. Topics include walk-in coolers, walk-in freezers, system components, load calculations, equipment selection, defrost systems, refrigerant line sizing, and electric controls. Upon completion, students should be able to design, adjust, and perform routine service procedures on a commercial refrigeration system.
Minimum State Prerequisites

AHR 250   HVAC System Diagnostics   0   4   0   2
Prerequisites: None
Corequisites: AHR 212
This course is a comprehensive study of air conditioning, heating, and refrigeration system diagnostics and corrective measures. Topics include advanced system analysis, measurement of operating efficiency, and inspection and correction of all major system components. Upon completion, students should be able to restore a residential or commercial AHR system so that it operates at or near manufacturers' specifications.

AHR 255 Indoor Air Quality   1   2   0   2
Prerequisites: None
Corequisites: None
This course introduces the techniques of assessing and maintaining the quality of the indoor environment in residential and commercial structures. Topics include handling and investigating complaints, filter selection, humidity control, testing for sources of carbon monoxide, impact of mechanical ventilation, and building and duct pressures. Upon completion, students should be able to assist in investigating and solving common indoor air quality problems.

ANT 220 Cultural Anthropology   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

ART 111 Art Appreciation   3   0   0   3
Prerequisites: RED 090
Corequisites: ENG 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts**.

ART 131 Drawing I   0   6   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Class	Lab	Clinical	Work Exp/ Credit

AST 111   Descriptive Astronomy   3   0   0   3
Prerequisites: DMA 010-060 or MAT 070, RED 090
Corequisites: AST 111A, ENG 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

AST 111A Descriptive Astronomy Lab   0   2   0   1
Prerequisites: None
Corequisites: AST 111
The 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

ATR 218   Computer Integrated Manufacturing   2   3   0   3
Prerequisites: ELN 260
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.

BIO 094   Concepts of Human Biology   3   2   0   4
Prerequisites: None
Corequisites: RED 090
This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level anatomy and physiology courses.

	Work Exp/		
	Class Lab Clinical Credit		

BIO 110 Principles of Biology   3   3   0   4
Prerequisites: ENG 090, DMA 010-050 or MAT 070, RED 090
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. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

BIO 111 General Biology I   3   3   0   4
Prerequisites: ENG 090, DMA 010-050 or MAT 070, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics**.

BIO 112 General Biology II   3   3   0   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 to satisfy the Comprehensive Agreement general education core requirement in natural sciences/mathematics.**

BIO 120 Introductory Botany   3   3   0   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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

	Work Exp/		
	Class Lab Clinical Credit		

BIO 130   Introductory Zoology   3   3   0   4
Prerequisites: BIO 110 or BIO 111
Corequisites: None
This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

BIO 140   Environmental Biology   3   0   0   3
Prerequisites: ENG 090, DMA 010-050 or MAT 070, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

BIO 140A Environmental Biology Lab   0   3   0   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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

BIO 163   Basic Anatomy and Physiology   4   2   0   5
Prerequisites: ENG 090, DMA 010-050 or MAT 070, RED 090
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 has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BIO 165   Anatomy and Physiology I   3   3   0   4
Prerequisites: ENG 090, DMA 010-050 or MAT 070, RED 090
Corequisites: None
This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. 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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BIO 166   Anatomy and Physiology II   3   3   0   4
Prerequisites: BIO 165
Corequisites: None
This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BIO 275   Microbiology   3   3   0   4
Prerequisites: BIO 110, BIO 111, BIO 163, BIO 165 or BIO 168
Corequisites: None
This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial 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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BPR 111   Blueprint Reading   1   2   0   2
Prerequisites: DMA 010-020
Corequisites: None
This course introduces the basic principles of blueprint reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic blueprints and visualize the features of a part.

**Work Exp/
Class Lab Clinical Credit**

BPR 121   Blueprint Reading: Mechanical   1   2   0   2
Prerequisites: BPR 111
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   Blueprint Reading-Const   1   2   0   2
Prerequisites: None
Corequisites: None
This course covers the interpretation of blueprints and specifications that are associated with the construction trades. Emphasis is placed on interpretation of details for foundations, floor plans, elevations, and schedules. Upon completion, students should be able to read and interpret a set of construction blueprints.

BTC 181   Basic Lab Techniques   3   3   0   4
Prerequisites: None
Corequisites: None
This course introduces the basic skills and knowledge necessary in a biological or chemical laboratory. Emphasis is placed on good manufacturing practices, safety, solution preparation, and equipment operation and maintenance following standard operating procedures. Upon completion, students should be able to prepare and perform basic laboratory procedures using labware, solutions, and equipment according to prescribed protocols.

BUS 110   Introduction to Business   3   0   0   3
Prerequisites: None
Corequisites: RED 090
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BUS 115   Business Law I   3   0   0   3
Prerequisites: None
Corequisites: RED 090
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Class	Lab	Clinical	Work Exp/ Credit

BUS 116   Business Law II   3   0   0   3
Prerequisites: BUS 115
Corequisites: None
This course continues the study of ethics and business law. Emphasis is placed on bailments, sales, risk-bearing, forms of business ownership, and copyrights. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations.

BUS 121   Business Mathematics   2   2   0   3
Prerequisites: DMA 010-040 or MAT 070
Corequisites: RED 090
This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business.

BUS 125   Personal Finance   3   0   0   3
Prerequisites: DMA 010-030 or MAT 060, RED 090
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   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BUS 139   Entrepreneurship I   3   0   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.

Work Exp/
Class Lab Clinical Credit

BUS 153   Human Resource Management   3   0   0   3
Prerequisites: RED 090
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 228   Business Statistics   2   2   0   3
Prerequisites: MAT 140
Corequisites: None
This course introduces the use of statistical methods and tools in evaluating research data for business applications. Emphasis is placed on basic probability, measures of spread and dispersion, central tendency, sampling, regression analysis, and inductive inference. Upon completion, students should be able to apply statistical problem solving to business. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

BUS 230   Small Business Management   3   0   0   3
Prerequisites: RED 090
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 239   Business Applications Seminar   1   2   0   2
Prerequisites: ACC 120, BUS 115, BUS 137, ECO 151 or 251 or 252, MKT 120
Corequisites: None
This course is designed as a capstone course for Business Administration majors. Emphasis is placed on decision making in the areas of management, marketing, production, purchasing, and finance. Upon completion, students should be able to apply the techniques, processes, and vital professional skills needed in the work place.

BUS 260   Business Communication   3   0   0   3
Prerequisites: ENG 111
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 workplace.

	Class	Lab	Work Exp/ Clinical	Credit

BUS 261   Diversity in Management   3   0   0   3

Prerequisites: RED 090
Corequisites: None
This course is designed to help managers recognize the need to incorporate diversity into all phases of organizational management. Topics include self-evaluation, management, sexual harassment, workforce diversity, dual careers, role conflict, and communication issues. Upon completion, students should be able to implement solutions that minimize policies, attitudes, and stereotypical behaviors that block effective team building.

BUS 280   REAL Small Business   4   0   0   4

Prerequisites: None
Corequisites: None
This course introduces hands-on techniques and procedures for planning and opening 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, students should be able to write and implement a viable business plan and seek funding.

CET 111   Computer Upgrade/Repair I   2   3   0   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 222   Computer Architecture   2   0   0   2

Prerequisites: CET 111
Corequisites: None
This course introduces the organization and design philosophy of computer systems with respect to resource management, throughput, and operating system interaction. Topics include instruction sets, registers, data types, memory management, virtual memory, cache, storage management, multiprocessing, and pipelining. Upon completion, students should be able to evaluate system hardware and resources for installation and configuration purposes.

	Work Exp/		
	Class Lab Clinical Credit		

CHI 111   Elementary Chinese I 　　　　　　　3 　　0 　　0 　　3
Prerequisites: None
Corequisites: None
This course introduces the fundamental elements of the Chinese 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 Chinese and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

CHI 112   Elementary Chinese II 　　　　　　3 　　0 　　0 　　3
Prerequisites: CHI 111
Corequisites: None
This course includes the basic fundamentals of the Chinese language within a cultural context of the Chinese people and its history. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, student should be able to comprehend and respond with increasing proficiency to spoken and written Chinese and demonstrate further cultural awareness.

CHM131   Introduction to Chemistry 　　　　　3 　　0 　　0 　　3
Prerequisites: RED 090, DMA 010-060 or MAT 070
Corequisites: CHM 131A, ENG 090
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 demonstrate a basic understanding of chemistry as it applies to other fields. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

CHM131A Introduction to Chemistry Lab 　　　0 　　3 　　0 　　1
Prerequisites: None
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

| | Work Exp/ |
| | Class Lab Clinical Credit |

CHM 132   Organic and Biochemistry   3   3   0   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.

CHM151   General Chemistry I   3   3   0   4
Prerequisites: ENG 090, DMA 010-060 or MAT 070, RED 090
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.**

CHM152   General Chemistry II   3   3   0   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 complex ions. 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

CHM251   Organic Chemistry I   3   3   0   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, sterochemistry, 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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

CHM252   Organic Chemistry II   3   3   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

CIS 110   Introduction to Computers   2   2   0   3
Prerequisites: OST 080
Corequisites: RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (quantitative option).**

CIS 115   Intro to Prog & Logic   2   3   0   3
Prerequisites: DMA 010-040 or MAT 070
Corequisites: RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (quantitative option).**

CJC 111   Introduction to Criminal Justice   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

**Work Exp/
Class Lab Clinical Credit**

CJC 112   Criminology   3   0   0   3
Prerequisites: ENG 090, RED 090
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   0   3
Prerequisites: ENG 090, RED 090
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 131   Criminal Law   3   0   0   3
Prerequisites: ENG 090, RED 090
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   0   3
Prerequisites: ENG 090, RED 090
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.

	Work Exp/		
	Class Lab Clinical Credit		

CJC 141   Corrections   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement**.

CJC 160   Terrorism: Underlying Issues   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning consideration involving threat assessments. Upon completion, the student should be able to identify and discuss the methods used in terrorists' activities and complete a threat assessment for terrorists' incidents.

CJC 211   Counseling   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the basic elements of counseling and specific techniques applicable to the criminal justice setting. Topics include observation, listening, recording, interviewing, and problem exploration necessary to form effective helping relationships. Upon completion, students should be able to discuss and demonstrate the basic techniques of counseling.

CJC 212   Ethics & Community Relations   3   0   0   3
Prerequisites: ENG 090, RED 090
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.

	Class	Lab	Work Exp/ Clinical	Credit

CJC 215   Organization & Administration   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations.

CJC 221   Investigative Principles   3   2   0   4
Prerequisites: ENG 090, RED 090
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   0   3
Prerequisites: CJC 221
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 231   Constitutional Law   3   0   0   3
Prerequisites: ENG 090, RED 090
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.

	Class	Lab	Work Exp/ Clinical	Credit

CJC 233   Correctional Law 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces statutory/case law pertinent to correctional concepts, facilities, and related practices. Topics include examination of major legal issues encompassing incarceration, probation, parole, restitution, pardon, restoration of rights, and other related topics. Upon completion, students should be able to identify/discuss legal issues which directly affect correctional systems and personnel.

COE 111   Co-op Work Experience I 0 0 10 1
Prerequisites: 9 SHC in the major core courses
Corequisites: COE 115
This course provides work 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.

COE 112   Co-op Work Experience I 0 0 20 2
Prerequisites: 9 SHC in the major core courses
Corequisites: None
This course provides work 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.

COE 115   Work Experience Seminar I 1 0 0 1
Prerequisites: 9 SHC in the major core courses
Corequisites: COE 111 or COE 112
This course provides an opportunity to discuss fieldwork experiences with peers and faculty. Emphasis is placed on discussing application of concepts and principles from related course content to the fieldwork placement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes required in fieldwork experiences.

COE 121   Co-op Work Experience II 0 0 10 1
Prerequisites: 14 SHC in the major core courses
Corequisites: COE 125
This course provides work 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.

	Work Exp/
	Class Lab Clinical Credit

COE 125   Work Experience Seminar II   **1   0   0   1**
Prerequisites: 14 SHC in the major core courses
Corequisites: COE 121
This course provides an opportunity to discuss fieldwork experiences with peers and faculty. Emphasis is placed on discussing application of concepts and principles from related course content to the fieldwork placement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes required in fieldwork experiences.

COM110   Introduction to Communication   **3   0   0   3**
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal, group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts in A.A. and A.S. programs (substitute). This cannot be used as a humanities in any A.A.S. program.**

COM120   Interpersonal Communication   **3   0   0   3**
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts in A.A. and A.S. programs (substitute). This cannot be used as a humanities in any A.A.S. program**.

	Work Exp/		
	Class Lab Clinical Credit		

COM231   Public Speaking   **3   0   0   3**
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts in A.A. and A.S. programs (substitute). This cannot be used as a humanities in any A.A.S. program.**

CSC 139   Visual BASIC Programming   **2   3   0   3**
Prerequisites: CIS 115
Corequisites: None
This course introduces computer programming 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 and debug at a beginning level. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

CSC 151   JAVA Programming   **2   3   0   3**
Prerequisites: CIS 115
Corequisites: None
This course introduces computer programming using the JAVA 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 JAVA language programs. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

| | Work Exp/ | | |
| Class Lab Clinical Credit | | | |

CTS 120   Hardware/Software Support   2   3   0   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 130   Spreadsheet   2   2   0   3
Prerequisites: CIS 110 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 285   Systems Analysis & Design   3   0   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   0   3
Prerequisites: CSC 139, CTS 285, DBA 110, NOS 120, NOS 230, SEC 110
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.

DBA 110   Database Concepts   2   3   0   3
Prerequisites: CIS 110
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.

Work Exp/
Class Lab Clinical Credit

DFT 110   Basic Drafting   1   2   0   2
Prerequisites: None
Corequisites: None
This course introduces basic drafting skills, terminology, and applications. Topics include basic mathematics; sketching; introduction to CAD, ANSI, and ISO drafting standards; and a survey of various drafting applications. Upon completion, students should be able to perform basic calculations for CAD drafting, sketch drawings using appropriate standards, and recognize drawings from different drafting fields.

DFT 111   Technical Drafting I   1   3   0   2
Prerequisites: DMA 010-030 or MAT 060, RED 090
Corequisites: None
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 115   Architectural Drafting   1   2   0   2
Prerequisites: DFT 151
Corequisites: None
This course introduces basic drafting practices used in residential and light commercial design. Topics include floor plans, foundations, details, electrical components, elevations, and dimensioning practice. Upon completion, students should be able to complete a set of working drawings for a simple structure.

DFT 151   CAD I   2   3   0   3
Prerequisites: DMA 010-030 or MAT 060, RED 080
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   0   3
Prerequisites: DFT 151
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.

	Work Exp/		
	Class Lab Clinical Credit		

DFT 153 CAD III   2   3   0   3
Prerequisites: DFT 151
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.

DMA 010 Operations with Integers   0.75   0.50   0   1
Prerequisites: None
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   0   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, student should be able to demonstrate an understanding of the connections between fractions and decimals.

DMA 030 Propor/Ratio/Rate/Percent   0.75   0.50   0   1
Prerequisites: DMA 010-020
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 Express/Lin Equat/Inequal   0.75   0.50   0   1
Prerequisites: DMA 010-030 or MAT 060
Corequisites: None
The 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.

Work Exp/
Class Lab Clinical Credit

DMA 050   Graphs/Equations of Lines   0.75   0.50   0   1
Prerequisites: DMA 010-040 or MAT 060 and 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 Appl   0.75   0.50   0   1
Prerequisites: DMA 010-050 or MAT 060 and MAT 070
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/Express/Equation   0.75   0.50   0   1
Prerequisites: DMA 010-060 or MAT 060 and MAT 070
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 questions, 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 Express/Equations   0.75   0.50   0   1
Prerequisites: DMA 010-070 or MAT 060 and MAT 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.

	Class	Lab	Work Exp/ Clinical	Credit

DRA 111   Theatre Appreciation   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

DRE 096   Integrated Reading and Writing   2.5   1   0   3
Prerequisites: None
Corequisites: None
This course is designed to develop 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 and primarily taught at the introductory level using texts primarily in a Lexile ™ range of 960 to 1115.   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   2.5   1   0   3
Prerequisites: DRE 096
Corequisites: None
This course is designed to develop 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 1070 to 1220. Upon completion, students should be able 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   2.5   1   0   3
Prerequisites: DRE 097
Corequisites: None
This course is designed to develop 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; these topics are taught using texts primarily in a Lexile ™ range of 1185 to 1385. Upon completion, students should be able demonstrate and apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essays.

Work Exp/
Class Lab Clinical Credit

ECO 151   Survey of Economics   **3   0   0   3**
Prerequisites: DMA 010-020 or MAT 060, RED 090
Corequisites: ENG 090
This course introduces basic concepts of micro- and macroeconomics. Topics include supply and demand, optimizing economic behavior, prices and wages, money, interest rates, banking system, unemployment, inflation, taxes, government spending, and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

ECO 251   Principles of Microeconomics   **3   0   0   3**
Prerequisites: DMA 010-020 or MAT 060, RED 090
Corequisites: ENG 090
This course introduces economic analysis of individual, 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

ECO 252   Principles of Macroeconomics   **3   0   0   3**
Prerequisites: DMA 010-020 or MAT 060, RED 090
Corequisites: ENG 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

EDU 118   Princ & Prac of Inst Asst   **3   0   0   3**
Prerequisites: ENG 080, RED 080
Corequisites: None
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. *This course is a unique concentration requirement in the Teacher Associate concentration in the Early Childhood Education program.*

	Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

EDU 119   Intro to Early Childhood Education   4   0   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, & Community   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
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   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
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. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

EDU 145   Child Development II   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
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. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

EDU 146   Child Guidance   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
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. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

EDU 151   Creative Activities   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: EDU 151A
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 151A Creative Activities Lab   0   2   0   1
Prerequisites: ENG 080, RED 080
Corequisites: EDU 151
This course provides a laboratory component to complement EDU 151. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate creative activities.

	Work Exp/ Class Lab Clinical Credit			

EDU 153   Health, Safety & Nutrit   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
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/Emotion/Behav Dev   3   0   0   3
Prerequisites: ENG 080, RED 080, EDU 144, and EDU 145
Corequisites: None
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 158   Healthy Lifestyles – Youth   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
This course introduces the topics of health, safety, nutrition, physical activities and environments for the school-age child/youth that promote development, fitness and healthy lifestyles. Topics include the use of physical and nutritional/cooking activities (indoor/outdoor, teacher-directed/youth-directed) appropriate for youth developing typically/atypically; safe/healthy menu planning; safe/healthy environmental design, assessment and supervision. Upon completion, students should be able to plan/facilitate safe/healthy physical and nutritional/cooking activities, discuss safety policies/regulations and identify health/safety/nutritional needs of youth.

EDU 162   Observ & Assess in Ece   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
This course introduces the research, benefits, goals, and ethical considerations associated with observation and assessment in Early Childhood environments. Emphasis is placed on the implementation of multiple observation/assessment strategies including anecdotal records, event samples, rating scales, and portfolios to create appropriate learning experiences. Upon completion, students should be able to practice responsible assessment and use assessments to enhance programming and collaboration for children and families.

Work Exp/
Class Lab Clinical Credit

EDU 163   Classroom Mgt & Instruct   3   0   0   3
Prerequisites: ENG 080, RED 080
Corequisites: None
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 216   Foundations of Education   3   2   0   4
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education; contemporary educational, structural, legal, and financial issues, PRAXIS I preparation 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. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

EDU 221   Children with Exceptionalities   3   0   0   3
Prerequisites: EDU 144, EDU 145, ENG 090, RED 090
Corequisites: None
This course, based on the foundation of typical development, introduces working with children with exceptionalities. Emphasis is placed on the characteristics and assessment of children and strategies for adapting the learning environment. Upon completion, students should be able to recognize atypical development, make appropriate referrals, collaborate with families and professionals to plan, implement, and evaluate inclusion strategies. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement at select institutions only.**

EDU 223   Specific Learning Disab   3   0   0   3
Prerequisites: ENG 090, RED 090, EDU 144, and EDU 145
Corequisites: None
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.

Work Exp/
Class Lab Clinical Credit

EDU 234   Infants, Toddlers, & Twos   3   0   0   3
Prerequisites: EDU 119, ENG 090, RED 090
Corequisites: None
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 235   School-Age Dev & Program   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course includes developmentally appropriate practices in group settings for school-age children. Emphasis is placed on principles of development, environmental planning, and positive guidance techniques. Upon completion, students should be able to discuss developmental principles for all children ages five to twelve and plan and implement developmentally-appropriate activities.

EDU 243   Learning Theory   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides lateral entry teachers an introduction to learning theory, various styles of learning, and motivational factors involved in the learning process. Emphasis is placed on the development of cognitive skills using the eight types of intelligence and applying these to practical classroom situations. Upon completion, students should be able to describe theories and styles of learning and discuss the relationship between different types of intelligence to learning motivation.

EDU 244   Human Growth/Development   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces lateral entry teachers to theories and ages and stages related to human growth and development from birth through adolescence. Emphasis is placed on development through the stages of a child's life in the areas of physical, emotional, social, intellectual, and moral development. Upon completion, students should be able to identify and describe milestones of each stage in all areas of development and discuss factors that influence growth.

	Work Exp/		
	Class Lab Clinical Credit		

EDU 245   Policies and Procedures   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course is designed to introduce new lateral entry teachers to the policies and procedures established by the local education agency. Topics include emergency situation procedures, acceptable discipline, chain of command, role of mentors, evaluation procedures, employment requirements, dress codes, and other policies and procedures. Upon completion, students should be able to explain the policies and procedures to students, parents, or others and discuss the purpose of each policy category.

EDU 247 Sensory & Physical Disab   3   0   0   3
Prerequisites: ENG 090, RED 090, EDU 144, and EDU 145
Corequisites: None
This course covers characteristics, intervention strategies, assistive technologies, and inclusive practices for children with sensory and physical disabilities. Topics include inclusive placement options, utilization of support services, other health impairments and family involvement for children with sensory and physical disabilities. Upon completion, students should be able to identify and utilize intervention strategies and service delivery options for those specific disabilities.

EDU 248 Developmental Delays   3   0   0   3
Prerequisites: ENG 090, RED 090, EDU 144, and EDU 145
Corequisites: None
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 250   Praxis I Preparation   1   0   0   1
Prerequisites: ENG 090, RED 090
Corequisites: None
This course is designed to prepare potential teachers for the PRAXIS I exam that is necessary to enter the field of education. Emphasis is placed on content specifications of the PRAXIS I exam, study skills and simulated examinations. Upon completion, students should be able to demonstrate an understanding of the content necessary for successfull completion of the PRAXIS I exam.

	Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

EDU 251   Exploration Activities   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course covers discovery experiences in science, math, and social studies. Emphasis is placed on developing concepts for each area and encouraging young children to explore, discover, and construct concepts. Upon completion, students should be able to discuss the discovery approach to teaching, explain major concepts in each area, and plan appropriate experiences for children.

EDU 259   Curriculum Planning   3   0   0   3
Prerequisites: EDU 119, ENG 090, RED 090
Corequisites: None
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   0   3
Prerequisites: ENG 090, RED 090
Corequisites: 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   0   3
Prerequisites: EDU 261, ENG 090, RED 090
Corequisites: 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.

	Work Exp/ Class Lab Clinical Credit			

EDU 271   Educational Technology   2   2   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
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 Teacher Training   2   0   0   2
Prerequisites: ENG 090, RED 090
Corequisites: None
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 & Literacy Experiences   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
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   Instruc Strat/Read & Writ   2   2   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
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.

	Class	Lab	Work Exp/ Clinical	Credit

EDU 282 Early Childhood Literature 3 0 0 3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course covers the history, selection, and integration of literature and language in the early childhood curriculum. Topics include the history and selection of developmentally appropriate children's literature and the use of books and other media to enhance language and literacy in the classroom. Upon completion, students should be able to select appropriate books for storytelling, reading aloud, puppetry, flannel board use, and other techniques.

EDU 284 Early Child Capstone Prac 1 9 0 4
Prerequisites: EDU 119, 144, 145, 146, 151, ENG 090, RED 090
Corequisites: None
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.

EDU 285 Internship Experiences-School Age 1 9 0 4
Prerequisites: EDU 118, EDU 144, EDU 145, EDU 163, ENG 090, RED 090
Corequisites: None
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 Adv Issues/School Age 2 0 0 2
Prerequisites: ENG 090, RED 090
Corequisites: None
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.

Work Exp/
Class Lab Clinical Credit

EGR 285   Design Project   0   4   0   2
Prerequisites: ELN 133, ELN 137, ELN 260
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.

ELC 112   DC/AC Electricity   3   6   0   5
Prerequisites: DMA 010-030
Corequisites: 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   Basic Wiring I   2   6   0   4
Prerequisites: ELC 112
Corequisites: None
This course introduces the care/usage of tools and materials used in electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical blueprint 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 basic electrical installations.

ELC 114   Basic Wiring II   2   6   0   4
Prerequisites: ELC 113
Corequisites: None
This course provides additional instruction in the application of electrical tools, materials, and test equipment associated with 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 electrical installations.

ELC 117   Motors and Controls   2   6   0   4
Prerequisites: ELC 112 or ELC 131
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.

	Class	Lab	Work Exp/ Clinical	Credit

ELC 118   National Electric Code   1   2   0   2
Prerequisites: None
Corequisites: RED 070
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   0   2
Prerequisites: DMA 010-030 or MAT 060
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 120   Introduction to Wiring   2   2   0   3
Prerequisites: None
Corequisites: None
This course is an introduction to wiring concepts for non-electricians. Topics include safety, tools, materials, techniques and terminology associated with electrical wiring. Upon completion, students should be able to use and/or identify wiring tools, materials and procedures at an introductory level.

ELC 125   Diagrams and Schematics   1   2   0   2
Prerequisites: None
Corequisites: None
This course covers the interpretation of electrical diagrams, schematics, and drawings common to electrical applications. Emphasis is placed on reading and interpreting electrical diagrams and schematics. Upon completion, students should be able to read and interpret electrical diagrams and schematics.

ELC 128   Intro to PLC   2   3   0   3
Prerequisites: ELC 112 or ELC 131
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 install PLCs and create simple programs.

	Class	Lab	Work Exp/ Clinical	Credit

ELC 131   DC/AC Circuit Analysis   4   3   0   5
Prerequisites: DMA 010-050 or MAT 070
Corequisites: ENG 080, RED 080
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC 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, verify, and analyze DC/AC circuits; and properly use test equipment.

ELC 134   Transformer Applications   1   2   0   2
Prerequisites: None
Corequisites: None
This course covers single- and three-phase transformer applications as found in industrial/commercial buildings and machinery. Topics include transformer principles, single- and three-phase calculations, and connections. Upon completion, students should be able to understand single-and three-phase transformers, make transformer connections, and make calculations.

ELN 132   Linear IC Applications   3   3   0   4
Prerequisites: ELN 137
Corequisites: None
This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, waveform generators, active filters, IC voltage regulators, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment.

ELN 133   Digital Electronics   3   3   0   4
Prerequisites: ELC 112 or ELC 131
Corequisites: None
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, AD/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 137   Electr Devices & Circuits   4   3   0   5
Prerequisites: ELC 131
Corequisites: None
This course covers diodes, transistors, linear integrated circuits, and IC voltage regulators. Topics include power supplies, switching circuits, amplifiers, oscillators, active filters, and other related topics. Upon completion, students should be able to analyze and troubleshoot circuits using schematic diagrams, appropriate test equipment, and manufacturer's data sheets.

	Work Exp/ Class Lab Clinical Credit			

ELN 229   Industrial Electronics   3   3   0   4
Prerequisites: ELC 112
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 install and/or troubleshoot these devices for proper operation in an industrial electronic circuit.

ELN 232   Introduction to Microprocessors   3   3   0   4
Prerequisites: ELN 133
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 237   Local Area Networks   2   3   0   3
Prerequisites: ELN 133
Corequisites: None
This course introduces the fundamentals of local area networks and their operation. Topics include the characteristics of network topologies, system hardware, system configuration, installation and operation of the LAN. Upon completion, students should be able to install and maintain a local area network.

ELN 260   Prog Logic Controllers   3   3   0   4
Prerequisites: ELC 131
Corequisites: ELN 133
This course provides a detailed study of PLC applications, with a focus on design of industrial controls using the PLC. Topics include PLC components, memory organization, math instructions, documentation, input/output devices, and applying PLCs in industrial control systems. Upon completion, students should be able to select and program a PLC system to perform a wide variety of industrial control functions.

ENG 080   Writing Foundations   3   2   0   4
Prerequisites: None
Corequisites: None
This course introduces the writing process and stresses effective sentences. Emphasis is placed on applying the conventions of written English, reflecting standard usage and mechanics in structuring a variety of sentences. Upon completion, students should be able to write correct sentences and a unified, coherent paragraph. *This course does not satisfy the developmental reading and writing prerequisite for ENG 111 or ENG 111A.*

Work Exp/
Class Lab Clinical Credit

ENG 090   Composition Strategies   3   0   0   3
Prerequisites: ENG 080, RED 070
Corequisites: ENG 090A
This course provides practice in the writing process and stresses effective paragraphs. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay. *This course satisfies the developmental writing requirement for ENG 111 and ENG 111A.*

ENG 090A Composition Strategies Lab   0   2   0   1
Prerequisites: ENG 080
Corequisites: ENG 090
This writing lab is designed to practice the skills introduced in ENG 090. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay.

ENG 102   Applied Communications II   3   0   0   3
Prerequisites: ENG 080, RED 070
Corequisites: None
This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications. In order to pass this course, a student must earn at least a "C" average on required oral presentations. *This is a diploma-level course.*

ENG 111   Expository Writing   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: OST 080
This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. In order to pass this course, a student must earn at least a "C" average on required oral presentations. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.**

	Class	Lab	**Work Exp/ Clinical**	**Credit**

ENG 112   Argument-Based Research   3   0   0   3

Prerequisites: ENG 111
Corequisites: None

This course, the second in a series of two, introduces research techniques, documentation styles, and argumentative strategies. Emphasis is placed on analyzing data and incorporating research findings into documented argumentative essays and research projects. Upon completion, students should be able to summarize, paraphrase, interpret, and synthesize information from primary and secondary sources using standard research format and style. In order to pass this course, a student must earn at least a "C" average on required oral presentations. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.**

ENG 113   Literature-Based Research   3   0   0   3

Prerequisites: ENG 111
Corequisites: None

This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. In order to pass this course, a student must earn at least a "C" average on required oral presentations. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.**

ENG 114   Professional Research & Reporting   3   0   0   3

Prerequisites: ENG 111
Corequisites: None

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. In order to pass this course, a student must earn at least a "C" average on required oral presentations. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.**

	Class	Lab	Work Exp/ Clinical	Credit

ENG 125   Creative Writing I   3   0   0   3
Prerequisites: ENG 111
Corequisites: None
This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

ENG 131   Introduction to Literature   3   0   0   3
Prerequisites: ENG 111
Corequisites: ENG 112 or ENG 113 or ENG 114
This course introduces the principal genres of literature. Emphasis is placed on literary terminology, devices, structure, and interpretation. Upon completion, students should be able to analyze and respond to literature. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 231   American Literature I   3   0   0   3
Prerequisites: ENG 112 or 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 interpret, analyze, and respond to literary works in their historical and cultural contexts. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 232   American Literature II   3   0   0   3
Prerequisites: ENG 112 or ENG 113, or ENG 114
Corequisites: Non
This course covers selected works in American literature from 1865 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

	Work Exp/		
	Class	Lab	Clinical Credit

ENG 233   Major American Writers   3   0   0   3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course provides an intensive study of the works of several major American authors. Emphasis is placed on American history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 241   British Literature I   3   0   0   3
Prerequisites: ENG 112 or 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 242   British Literature II   3   0   0   3
Prerequisites: ENG 112 or 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 243   Major British Writers   3   0   0   3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course provides an intensive study of the works of several major British authors. Emphasis is placed on British history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

Work Exp/
Class Lab Clinical Credit

ENG 261   World Literature I   3   0   0   3
Prerequisites: ENG 112 or 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 contexts, 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 262   World Literature II   3   0   0   3
Prerequisites: ENG 112 or 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

ENG 272   Southern Literature   3   0   0   3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

ENG 273   African-American Literature   3   0   0   3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course provides a survey of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Class	Lab	Work Exp/ Clinical	Credit

EUS 110   Intro to Elect Util Ind   3   3   0   4
Prerequisites: ENG 090, DMA 010-080 or MAT 080, RED 090
Corequisites: None
This course provides the student with an overview of the electric (power) utility industry. Topics include electric utility regulation and its scope, regulatory agencies and codes, general safety, electric system overview, electric generation, electric transmission, and electric distribution. Upon completion, students should be able to understand the need for electric utilities, their structure, and regulatory requirements on electric utilities.

EUS 130   Electric Util Print Reading   1   2   0   2
Prerequisites: ELC 131 and EUS 110
Corequisites: None
This course introduces the basic principles of reading electrical drawings used in the utility industry. Topics include functional diagrams, AC and DC control schematics, wiring diagrams, control wiring diagrams, and logic diagrams. Upon completion, the student should be able understand the purpose of each type of drawing and answer questions based on the information in the drawings.

EUS 210 Lg High Volt Power Trans I   2   3   0   3
Prerequisites: EUS 110
Corequisites: None
This course introduces the fundamentals of large power transformers used in the electrical utility industry with emphasis on function and criticality. Topics include understanding the various designs, load calculations, dissolved gas analysis, assembly, commissioning tests, available accessories, bushings, maintenance, and trouble shooting. Upon completion, students should be able to identify the various winding configurations and connections, interpret nameplate information, and perform various tests on transformers.

EUS 215   Lg High Volt Power Trans II   2   3   0   3
Prerequisites: EUS 210
Corequisites: None
This course covers complex electrical testing of power transformers. This course will focus primarily on the complex electrical testing of power transformers. Topics include understanding of power factor testing, winding resistance testing and trouble shooting. Upon completion, students should be able to perform various tests on transformers.

		Work Exp/	
Class	**Lab**	**Clinical**	**Credit**

EUS 220   High Volt Power Cir Br   2   3   0   3
Prerequisites: ELC 117, EUS 130
Corequisites: None
This course introduces the fundamentals of high voltage power circuit breakers used in the electrical utility industry with emphasis on function and criticality. Topics include understanding the various designs and interrupting mediums, how circuit breakers interrupt fault currents, Sulfur Hexafluoride gas (SF6), breaker timing, and maintenance. Upon completion, students should be able to identify various types of circuit breakers, interpret nameplate information, and perform various tests on these devices.

EUS 230   Electric Util Prot Rel I   2   3   0   3
Prerequisites: EUS 130
Corequisites: None
This course introduces protective relaying used in the electrical utility industry with emphasis on function and criticality. Topics include substations zones protection, transmission lines, switchyards, relays, and power line carrier components. Upon completion, students should be able to understand the purpose for various relay schemes and protective relays.

EUS 235   Elect Util Prot Rel II   2   3   0   3
Prerequisites: EUS 230
Corequisites: None
This course provides advanced studies of protective relaying and includes single and three-phase metering principles, meter construction, and component parts. Topics include instrument transformer theory and applications, sizing instrument transformers, wiring transformers, meter installations, and electronic meter functionality. Upon completion, students should be able to describe and test overcurrent schemes, transformer differential schemes, and transmission line protection schemes.

EUS 240   Substation Ancillary Sys   2   3   0   3
Prerequisites: EUS 130
Corequisites: None
This course introduces many of the supporting systems used in substations and generating plant switchyards to support the operation of the electric power grid. Topics include instrument transformers, capacitor banks, reactor banks, batteries, circuit switchers, bushings, disconnect switches, and ground grids. Upon completion, the student should be able to understand the design and purpose of each of these devices and systems.

	Work Exp/		
	Class	**Lab Clinical**	**Credit**

EUS 260   Cap & Case Studies in EUSRT   2   0   0   2

Prerequisites: EUS 215

Corequisites: EUS 235

This course is a capstone course that will utilize topics that were covered throughout the curriculum. A large portion of the course will examine case studies from the utility and other industries.   Upon completion, students will understand how the proper use of program components can minimize the risks of accidents.

FRE 111   Elementary French I   3   0   0   3

Prerequisites: ENG 090, RED 090

Corequisites: None

This course introduces the fundamental elements of the French 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 French and demonstrate cultural awareness. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

FRE 112   Elementary French II   3   0   0   3

Prerequisites: FRE 111

Corequisites: None

This course is a continuation of FRE 111 focusing on the fundamental elements of the French 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 French and demonstrate further cultural awareness. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

GEL 111   Introductory Geology   3   2   0   4

Prerequisites: DMA 010-050 or MAT 070, ENG 080, RED 090

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.

		Work Exp/	
Class	**Lab**	**Clinical**	**Credit**

GEL 120   Physical Geology   3   2   0   4
Prerequisites: DMA 010-050 or MAT 070, ENG 080, RED 090
Corequisites: None
This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on weathering, erosional and despositional processes, mountain building forces, rocks and minerals, and structural changes. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust.

GEO 111   World Regional Geography   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

GEO 112   Cultural Geography   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course is designed to explore the diversity of human cultures and to describe their shared characteristics. Emphasis is placed on the characteristics, distribution, and complexity of earth's cultural patterns. Upon completion, students should be able to demonstrate an understanding of the differences and similarities in human cultural groups. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

GER 111   Elementary German I   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the fundamental elements of the German 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 German and demonstrate cultural awareness. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

	Work Exp/			
	Class	**Lab**	**Clinical**	**Credit**

GER 112   Elementary German II   3   0   0   3
Prerequisites: GER 111
Corequisites: None
This course is a continuation of GER 111 focusing on the fundamental elements of the German 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 German and demonstrate further cultural awareness. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

GRO 120   Gerontology   3   0   0   3
Prerequisites: PSY 150
Corequisites: None
This course covers the psychological, social, and physical aspects of aging. Emphasis is placed on the factors that promote mental and physical well-being. Upon completion, students should be able to recognize the aging process and its psychological, social, and physical aspects.

HBI 110   Issues and Trends in HBI   3   0   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   0   3
Prerequisites: BUS 110
Corequisites: 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   0   3
Prerequisites: DBA 110
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.

	Class	Lab	Work Exp/ Clinical	Credit

HEA 110   Personal Health/Wellness   3   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

HEA 112   First Aid & CPR   1   2   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

HEA 120   Community Health   3   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

HIS 111   World Civilizations I   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

	Work Exp/		
	Class Lab Clinical Credit		

HIS 112   World Civilizations II   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

HIS 121   Western Civilization I   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces western civilization from pre-history to the early modern era. Topics include ancient Greece, Rome, and Christian institutions of the Middle Ages and emergence of national monarchies in western Europe. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early western civilization. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

HIS 122   Western Civilization II   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces western civilization from the early modern era to the present. Topics include the religious wars, the Industrial Revolution, World Wars I and II, and the Cold War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern western civilization. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

HIS 131   American History I   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

Work Exp/
Class Lab Clinical Credit

HIS   132   American History II   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

HIS   162   Women and History   3   0   0   3
Prerequisites: ENG 090 and RED 090
Corequisites: None
This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

HIS   221   African-American History   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

HIS   226   The Civil War   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Work Exp/		
	Class	Lab	Clinical Credit

HIS 227   Native American History　　　　3　　0　　0　　3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course surveys the history and cultures of Native Americans from pre-history to the present. Topics include Native American civilizations, relations with Europeans, and the continuing evolution of Native American cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments among Native Americans. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

HIS 236   North Carolina History　　　　3　　0　　0　　3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course is a study of geographical, political, economic, and social conditions existing in North Carolina from America's discovery to the present. Topics include native and immigrant backgrounds; colonial, antebellum, and Reconstruction periods; party politics; race relations; and the transition from an agrarian to an industrial economy. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in North Carolina. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

HIT 110   Fundamentals of HIM　　　　3　　0　　0　　3
Prerequisites: ENG 090, DMA 010-040 or MAT 070, RED 090
Corequisites: None
This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations and initiatives; payment and reimbursement systems, healthcare providers and disciplines; and electronic health records (EHRs). Upon completion, students should be able to demonstrate an understanding of health information management and healthcare organizations, professions and trends.

HIT 112   Health Law and Ethics　　　　3　　0　　0　　3
Prerequisites:ENG 090, DMA 010-040 or MAT 070, RED 090
Corequisites: None
This course covers legislative and regulatory processes, legal terminology, and professional-related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. Upon completion, students should be able to apply policies and procedures for access and disclosure of Protected Health Information and apply and promote ethical standards.

	Class	Lab	Work Exp/ Clinical	Credit

HIT 114   Health Data Sys/Standards   2   3   0   3
Prerequisites: BIO 165, CIS 110, HIT 110, HIT 112, MED 121
Corequisites: BIO 166, DBA 110, MAT 140, MED 122
This course covers concepts and techniques for managing and maintaining manual and electronic health records (EHR). Topics include structure and use of health information including data collection and analysis, data sources/sets, archival systems, and quality and integrity of healthcare data. Upon completion, students should be able to monitor and apply system-wide clinical documentation guidelines and comply with regulatory standards.

HIT 210   Healthcare Statistics   2   2   0   3
Prerequisites:BIO 166, DBA 110, HIT 114, MAT 140, MED 122
Corequisites: HIT 211, HIT 216, HIT 220, HIT 226
This course covers maintenance, compilation, analysis, and presentation of healthcare statistics and research protocols and techniques. Topics include basic statistical principles, indices, databases, registries, vital statistics, descriptive statistics, research protocol monitoring, Institutional Review Board processes, and knowledge-based research techniques. Upon completion, students should be able to apply, interpret, and present healthcare statistics and utilize research techniques to gather and interpret healthcare data.

HIT 211   ICD Coding   2   6   0   4
Prerequisites:BIO 166, DBA 110, HIT 114, MAT 140, MED 122
Corequisites: HIT 210, HIT 216, HIT 220, HIT 226
This course covers ICD diagnostics and procedural coding conventions and guidelines for inpatient, outpatient and ambulatory care. Emphasis is placed on a comprehensive application of anatomy, physiology and interrelationships among organ systems. Upon completion, students should be able to accurately assign and sequence diagnostic and procedural codes for patient outcomes, statistical and reimbursement purposes.

HIT 214   CPT/Other Coding Systems   1   3   0   2
Prerequisites: HIT 210, HIT 211, HIT 216, HIT 220, HIT 226
Corequisites:HIT 215, HIT 222, HIT 280
This course covers application of principles and guidelines of CPT/HCPCS coding. Topics include clinical classification/nomenclature systems such as SNOMED, DSM, ICD-O and the use of encoders. Upon completion, students should be able to apply coding principles to correctly assign CPT/HCPCS codes.

	Class	Lab	Work Exp/ Clinical	Credit

HIT 215   Reimbursement Methodology   1   2   0   2
Prerequisites: HIT 210, HIT 211, HIT 216, HIT 220, HIT 226
Corequisites: HIT 214, HIT 222, HIT 280
This course covers reimbursement methodologies used in all healthcare settings as they relate to national billing, compliance, and reporting requirements. Topics include prospective payment systems, billing process and procedures, chargemaster maintenance, regulatory guidelines, reimbursement monitoring, and compliance strategies and reporting. Upon completion, students should be able to perform data quality reviews to validate code assignment and comply with reimbursement and reporting requirements.

HIT 216   Quality Management   1   3   0   2
Prerequisites:BIO 166, DBA 110, HIT 114, MAT 140, MED 122
Corequisites: HIT 210, HIT 211, HIT 220, HIT 226
This course introduces principles of quality assessment and improvement, and utilization, risk, and case management, in healthcare. Topics include Continuous Quality Improvement, and case management processes, data analysis/reporting techniques, credentialing, regulatory quality monitoring requirements, and outcome measures and monitoring. Upon completion, students should be able to abstract, analyze, and report clinical data for facility-wide quality management/performance improvement programs and monitor compliance measures.

HIT 220   Health Informatics & EHRs   1   2   0   2
Prerequisites:BIO 166, CIS 110, DBA 110, HIT 114, MAT 140, MED 122
Corequisites: HIT 210, HIT 211, HIT 216, HIT 226
This course covers EHR systems, design, implementation and application. Topics include EHR, Informatics, speech & imaging technology, information/network security & integrity, data dictionaries, modeling and warehousing. Upon completion, students should be able to facilitate usage of electronic health record systems and other technologies.

HIT 222   Prof Practice Exp III   0   0   6   2
Prerequisites: HIT 210, HIT 211, HIT 216, HIT 220, HIT 226
Corequisites:HIT 214, HIT 215, HIT 280
This course provides supervised clinical experience in healthcare settings. Emphasis is placed on practical application of curriculum concepts to the healthcare setting. Upon completion, students should be able to apply health information theory to healthcare facility practices.

HIT 226   Principles of Disease   3   0   0   3
Prerequisites:BIO 166, DBA 110, HIT 114, MAT 140, MED 122
Corequisites: HIT 210, HIT 211, HIT 216, HIT 220
This course covers disease etiology and organ system involvement, including physical signs and symptoms, prognoses, and common complications and their management. Topics include basic microbiology, basic pharmacology, and principles of disease. Upon completion, students should be able to relate disease processes to etiology, physical signs and symptoms, prognosis, and common complications and their management.

	Work Exp/			
	Class	**Lab**	**Clinical**	**Credit**

HIT 280   Professional Issues   2   0   0   2
Prerequisites: HIT 210, HIT 211, HIT 216, HIT 220, HIT 226
Corequisites:HIT 214, HIT 215, HIT 222
This course provides a comprehensive discussion of topics common to the health information profession. Emphasis is placed on application of professional competencies, job search tools, and preparation for the certification examination. Upon completion, students should be able to demonstrate competence in entry-level domains and sub domains for health information technologies.

HMT 110   Intro to Healthcare Management   3   0   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   0   3
Prerequisites: MED 122
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 Administration   3   0   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 212   Mgt of Healthcare Organizations   3   0   0   3
Prerequisites: HMT 110
Corequisites: None
This course examines current issues affecting the management of healthcare delivery systems. Topics include current problems, changes, and challenges in the healthcare environment. Upon completion, students should be able to identify current health care issues and their impact on healthcare management.

	Class	Lab	Work Exp/ Clinical	Credit

HMT 220   Healthcare Financial Management   4   0   0   4
Prerequisites: ACC 121, HMT 110
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   0   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.

HSE 110   Introduction to Human Services   2   2   0   3
Prerequisites: None
Corequisites: ENG 090, RED 090
This course introduces the human services field, including the history, agencies, roles, and careers. Topics include personal/professional characteristics, diverse populations, community resources, disciplines in the field, systems, ethical standards, and major theoretical and treatment approaches. Upon completion, students should be able to identify the knowledge, skills, and roles of the human services worker.

HSE 112   Group Process I   1   2   0   2
Prerequisites: Enrollment in the HSE program
Corequisites: ENG 090, RED 090
This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

HSE 123   Interviewing Techniques   2   2   0   3
Prerequisites: None
Corequisites: ENG 090, RED 090
This course covers the purpose, structure, focus, and techniques employed in effective interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing of personal histories with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to function in the helping relationship.

	Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

HSE 125   Counseling   2   2   0   3
Prerequisites: PSY 150
Corequisites: None
This course covers the major approaches to psychotherapy and counseling, including theory, characteristics, and techniques. Emphasis is placed on facilitation of self-exploration, problem solving, decision making, and personal growth. Upon completion, students should be able to understand various theories of counseling and demonstrate counseling techniques.

HSE 155   Community Resources Management   2   0   0   2
Prerequisites: None
Corequisites: ENG 090, RED 090
This course focuses on the working relationships between human services agencies and the community. Emphasis is placed on identification and observation of community resources which contribute to the achievement of the human services mission. Upon completion, students should be able to demonstrate knowledge about mobilizing of community resources, marshaling public support, and determining appropriate sources of funding.

HSE 210   Human Services Issues   2   0   0   2
Prerequisites: Successful completion of 12 SHC in the HSE major courses
Corequisites: None
This course covers current issues and trends in the field of human services. Emphasis is placed on contemporary topics with relevance to special issues in a multifaceted field. Upon completion, students should be able to integrate the knowledge, skills, and experiences gained in classroom and clinical experiences with emerging trends in the field.

HSE 220   Case Management   2   2   0   3
Prerequisites: HSE 110
Corequisites: None
This course covers the variety of tasks associated with professional case management. Topics include treatment planning, needs assessment, referral procedures, and follow-up and integration of services. Upon completion, students should be able to effectively manage the care of the whole person from initial contact through termination of services.

HSE 225   Crisis Intervention   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces the basic theories and principles of crisis intervention. Emphasis is placed on identifying and demonstrating appropriate and differential techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond appropriately.

	Class	Lab	Work Exp/ Clinical	Credit

HSE 227   Children & Adolescents in Crisis   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course covers the crises affecting children and adolescents in contemporary society. Emphasis is placed on abuse and neglect, suicide and murder, dysfunctional family living, poverty, and violence. Upon completion, students should be able to identify and discuss intervention strategies and available services for the major contemporary crises affecting children and adolescents.

HSE 250   Financial Services   2   0   0   2
Prerequisites: None
Corequisites: ENG 090, RED 090
This course introduces those agencies that provide income maintenance casework services. Emphasis is placed on qualifying applicants for a variety of economic assistant programs offered by human services agencies. Upon completion, students should be able to make a factual and objective assessment of a client's economic situation to qualify them for economic assistance.

HSE 251   Activities Therapy   2   2   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces skills and techniques used in recreation and leisure activities to enhance the lives of special populations. Emphasis is placed on music, art, and recreational therapy. Upon completion, students should be able to define, plan, and adapt recreational activities for selected groups and individuals.

HUM110   Technology and Society   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

Work Exp/
Class Lab Clinical Credit

HUM 115   Critical Thinking   3   0   0   3
Prerequisites: ENG 090, RED 090
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.**

HUM120   Cultural Studies   3   0   0   3
Prerequisites: None
Corequisites: ENG 090, RED 090
This course introduces the distinctive features of a particular culture. Topics include art, 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

HUM122   Southern Culture   3   0   0   3
Prerequisites: ENG 090, RED 090
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.**

HUM130   Myth in Human Culture   3   0   0   3
Prerequisites: None
Corequisites: ENG 111
This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

	Class	Lab	Work Exp/ Clinical	Credit

HUM150 American Women's Studies 3 0 0 3

Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides an inter-disciplinary study of the history, literature, and social roles of American women from Colonial times to the present. Emphasis is placed on women's roles as reflected in American language usage, education, law, the workplace, and mainstream culture. Upon completion, students should be able to identify and analyze the roles of women as reflected in various cultural forms. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in humanities/fine arts.**

HUM160 Introduction to Film 2 2 0 3

Prerequisites: None
Corequisites: ENG 111
This course introduces the fundamental elements of film artistry and production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in humanities/fine arts.**

HUM211 Humanities I 3 0 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 to satisfy the Comprehensive Articulation Agreement general education core requirements in humanities/fine arts.**

HUM212 Humanities II 3 0 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 to satisfy the Comprehensive Articulation Agreement general education core requirements in humanities/fine arts.**

	Work Exp/		
	Class Lab Clinical Credit		

HYD 110   Hydraulics/Pneumatics I   2   3   0   3
Prerequisites: DMA 010-030 or MAT 060
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.

HYD 115   Industrial Hydraulics   2   2   0   3
Prerequisites: None
Corequisites: None
This course introduces basic principles, components, and concepts of industrial hydraulic systems. Topics include standard symbols, actuators, control valves and other hydraulic components. Upon completion, the student should be able to demonstrate an understanding of the principles, concepts, and operation of an industrial hydraulic system.

HYD 180   Pneumatics in Automation   2   3   0   3
Prerequisites: None
Corequisites: None
This course introduces the basic components and functions of pneumatic systems and their application to automated machinery. Topics include standard symbols, compressors, control valves, control circuits, actuators, maintenance procedures, switching and control devices as applied to automated machinery. Upon completion, students should be able to demonstrate an understanding of the operation of compressed air and vacuum systems including design, troubleshooting, and applications.

INT 110   International Business   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides an overview of the environment, concepts, and basic differences involved in international business. Topics include forms of foreign involvement, international trade theory, governmental influences on trade and strategies, international organizations, multinational corporations, personnel management, and international marketing. Upon completion, students should be able to describe the foundation of international business.

ISC 112   Industrial Safety   2   0   0   2
Prerequisites: None
Corequisites: None
This course introduces the principles of industrial safety. Emphasis is placed on industrial safety, OSHA, and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance.

	Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

ISC 132   Manufacturing Quality Control   2   3   0   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.

MAC 111   Machining Technology I   2   12   0   6
Prerequisites: None
Corequisites: None
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

MAC 112   Machining Technology II   2   12   0   6
Prerequisites: MAC 111
Corequisites: None
This course provides additional instruction and practice in the use of precision measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection and use of work holding devices, speeds, feeds, cutting tools, and coolants. Upon completion, students should be able to perform basic procedures on precision grinders and advanced operations of measuring, layout, drilling, sawing, turning, and milling.

MAC 113   Machining Technology III   2   12   0   6
Prerequisites: MAC 112
Corequisites: None
This course provides an introduction to advanced and special machining operations. Emphasis is placed on working to specified tolerances with special and advanced setups. Upon completion, students should be able to produce a part to specifications.

MAC 114   Introduction to Metrology   2   0   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.

	Class	Lab	Work Exp/ Clinical	Credit

MAC 122   CNC Turning   **1   3   0   2**
Prerequisites: MAC 111 or MEC 111
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   0   2**
Prerequisites: MAC 111 or MEC 111
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 151   Machining Calculations   **1   2   0   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.

MAT 140   Survey of Mathematics   **3   0   0   3**
Prerequisites: DMA 010-040 or MAT 070
Corequisites: None
This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics may include, but are not limited to, sets, logic, probability, statistics, matrices, mathematical systems, geometry, topology, mathematics of finance, and modeling. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

MAT 145   Analytical Mathematics   **3   0   0   3**
Prerequisites: DMA 010-050 or MAT 080
Corequisites: None
This course is designed to develop problem-solving and reasoning skills by the study of selected areas of mathematics. Topics include elementary and Boolean algebra, sets, logic, number theory, numeration systems, probability, statistics, and linear programming. Upon completion, students should be able to apply logic and other mathematical concepts. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Work Exp/ Class Lab Clinical Credit		

MAT 155   Statistical Analysis   3   0   0   3
Prerequisites: DMA 010-050 or MAT 080
Corequisites: None
This course is an introduction to descriptive and inferential statistics. Topics include sampling, distributions, plotting data, central tendency, dispersion, Central Limits Theorem, confidence intervals, hypothesis testing, correlations, regressions, and multinomial experiments.   Upon completion, students should be able to describe data and test inferences about populations using sample data. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics (Quantitative Option).**

MAT 165   Finite Mathematics   3   0   0   3
Prerequisites: MAT 171
Corequisites: None
This course provides topics used to formulate models and to solve and interpret solutions using an algorithmic approach. Topics include linear algebra, linear programming, simplex method, sets and counting, probability, mathematics of finance, and logic. Upon completion students should be able to demonstrate both an understanding of the theoretical concepts of finite mathematics and the ability to solve related problems. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

MAT 167   Discrete Mathematics   3   0   0   3
Prerequisites: MAT 171
Corequisites: None
This course is a study of discrete mathematics with emphasis on applications. Topics include number systems, combinations/permutations, mathematical logic/proofs, sets/counting, Boolean algebra, mathematical induction, trees/graphs, and algorithms. Upon completion, students should be able to demonstrate competence in the topics covered. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

MAT 171   Precalculus Algebra   3   0   0   3
Prerequisites: DMA 010-080 or MAT 080
Corequisites: MAT 171A
This is the first of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions (linear, polynomial, rational), systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

Work Exp/
Class Lab Clinical Credit

MAT 171A Precalculus Algebra Lab   0   2   0   1
Prerequisites: DMa 010-080 or MAT 080
Corequisites: MAT 171
This course is a laboratory for MAT 171. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

MAT 172   Precalculus Trigonometry   3   0   0   3
Prerequisites: MAT 171
Corequisites: MAT 172A
This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

MAT 172A Precalculus Trig Lab   0   2   0   1
Prerequisites: MAT 171
Corequisites: MAT 172
This course is a laboratory for MAT 172. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

MAT 271   Calculus I   3   2   0   4
Prerequisites: MAT 172
Corequisites: None
This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

	Class	Lab	Work Exp/ Clinical	Credit

MAT 272   Calculus II   3   2   0   4
Prerequisites: MAT 271
Corequisites: None
This course provides a rigorous treatment of integration and is the second calculus course in a three-course sequence. Topics include 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 use integration and approximation techniques to solve application problems. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

MAT 273   Calculus III   3   2   0   4
Prerequisites: MAT 272
Corequisites: None
This course covers the calculus of several variables and is the third calculus course in a three-course sequence. Topics include functions of several variables, partial derivatives, multiple integrals, solid analytical geometry, vector-valued functions, and line and surface integrals. Upon completion, students should be able to solve problems involving vectors and functions of several variables. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

MAT 280   Linear Algebra   3   0   0   3
Prerequisites: MAT 271
Corequisites: None
This course provides a study of linear algebra topics with emphasis on the development of both abstract concepts and applications. Topics include vectors, systems of equations, matrices, determinants, vector spaces, linear transformations in two or three dimensions, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts and appropriate use of linear algebra models to solve application problems. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

MAT 285   Differential Equations   3   0   0   3
Prerequisites: MAT 272
Corequisites: None
This course provides an introduction to ordinary differential equations with an emphasis on applications. Topics include first-order, linear higher-order, and systems of differential equations; numerical methods; series solutions; eigenvalues and eigenvectors; Laplace transforms; and Fourier series. Upon completion, students should be able to use differential equations to model physical phenomena, solve the equations, and use the solutions to analyze the phenomena. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

		Work Exp/	
Class	**Lab**	**Clinical**	**Credit**

MEC 110   Introduction to CAD/CAM   1   2   0   2
Prerequisites: DMA 010-060 or MAT 070
Corequisites: ENG 090, RED 090
This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.

MEC 111   Machine Processes I   1   4   0   3
Prerequisites: DMA 010-020 or MAT 060
Corequisites: None
This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to safely machine simple parts to specified tolerances.

MEC 130   Mechanisms   2   2   0   3
Prerequisites: DMA 010-020 or MAT 060
Corequisites: None
This course introduces the purpose and action of various mechanical devices. Topics include cams, cables, gear trains, differentials, screws, belts, pulleys, shafts, levers, lubricants, and other devices. Upon completion, students should be able to analyze, maintain, and troubleshoot the components of mechanical systems.

MEC 141   Intro Manufacturing Processes   2   2   0   3
Prerequisites: MAC 111 or MEC 111
Corequisites: None
This course covers the properties and characteristics of manufacturing materials and the processes used to form them. Emphasis is placed on manufacturing materials, heat-treating processes, and manufacturing processes. Upon completion, students should be able to identify physical characteristics of materials and describe processes used to manufacture a part.

MEC 180   Engineering Materials   2   3   0   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.

	Class	Lab	Work Exp/ Clinical	Credit

MEC 250   Statics & Strength of Materials   4   3   0   5
Prerequisites: MAT 172
Corequisites: None
This course covers the concepts and principles of statics and stress analysis. Topics include systems of forces on structures in equilibrium and analysis of stresses and strains on these components. Upon completion, students should be able to analyze forces and the results of stresses and strains on structural components.

MEC 270   Machine Design   3   3   0   4
Prerequisites: DFT 151, MEC 180, MEC 250
Corequisites: None
This course covers the basic principles and 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   0   1
Prerequisites: DFT 151, MEC 180, MEC 250
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.

MED 110   Orientation to Medical Assisting   1   0   0   1
Prerequisites: ENG 090, DMA 010-040 or MAT 070, RED 090, Enrollment in Medical Asst.
                program
Corequisites: MED 130
This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting.

MED 112   Orientation to Clinical Setting I   0   0   3   1
Prerequisites: MED 110, MED 118, MED 121, MED 130
Corequisites: None
This course provides an early opportunity to observe and/or perform in the medical setting. Emphasis is placed on medical assisting procedures including appointment scheduling, filing, greeting patients, telephone techniques, billing, collections, medical records, and related medical procedures. Upon completion, students should be able to identify administrative and clinical procedures in the medical environment.

Work Exp/
Class Lab Clinical Credit

MED 114   Prof Interaction in Health Care   1   0   0   1
Prerequisites: MED 140, Enrollment in the Medical Assisting program
Corequisites: None
This course is designed to identify various patient behaviors encountered in the medical setting. Emphasis is placed on stressors related to illness, cultural influences, death and dying, and needs specific to patients. Upon completion, students should be able to utilize appropriate methods of verbal and nonverbal communications with empathy and impartiality.

MED 118   Medical Law and Ethics   2   0   0   2
Prerequisites: ENG 090, RED 090
Corequisites: None
This course covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional.

MED 121   Medical Terminology I   3   0   0   3
Prerequisites: ENG 090, RED 090
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 treatment 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   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 treatment 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 130   Administrative Office Procedures I   1   2   0   2
Prerequisites: ENG 090, RED 090, Enrollment in the Medical Assisting program
Corequisites: MED 110
This course introduces medical office administrative procedures.   Topics include the appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.

	Work Exp/ Class Lab Clinical Credit			

MED 131   Administrative Office Procedures II   1   2   0   2
Prerequisites: MED 130
Corequisites: None
This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.

MED 140   Exam Room Procedures I   3   4   0   5
Prerequisites: BIO 163, MED 121, MED 122
Corequisites: None
This course provides instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures.

MED 150   Laboratory Procedures I   3   4   0   5
Prerequisites: MED 140
Corequisites: None
This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/ skills based on course topics.

MED 232   Medical Insurance Coding   1   3   0   2
Prerequisites: MED 121
Corequisites: None
This course is designed to develop coding skills. Emphasis is placed on advanced diagnostic and procedural coding in the outpatient facility. Upon completion, students should be able to demonstrate proficiency in coding for reimbursement.

MED 260   MED Clinical Practicum   0   0   15   5
Prerequisites: MED 112, MED 114, MED 150, MED 232, MED 270, MED 272
Corequisites: None
This course provides the opportunity to apply clinical, laboratory, and administrative skills in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and strengthening professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional.

| | Work Exp/ | | |
| | Class | Lab | Clinical | Credit |

MED 270   Symptomatology   2   2   0   3
Prerequisites: MED 122, MED 131, Enrollment in the Medical Assisting program
Corequisites: None
This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions.

MED 272   Drug Therapy   3   0   0   3
Prerequisites: MAT 140, MED 140, Enrollment in the Medical Assisting program
Corequisites: None
This course focuses on major drug groups, including their side effects, interactions, methods of administration, and proper documentation. Emphasis is placed on the theory of drug administration. Upon completion, students should be able to identify, spell, recognize side effects of, and document the most commonly used medications in a physician's office.

MED 276   Patient Education   1   2   0   2
Prerequisites: MED 112, MED 114, MED 150, MED 232, MED 270, MED 272
Corequisites: None
This course is designed to provide communication skills, basic education principles, and knowledge of available community resources and to apply this knowledge to the clinical setting. Emphasis is placed on identifying appropriate community resources, developing patient education materials, and perfecting written and oral communication skills. Upon completion, students should be able to instruct, communicate effectively, and act as a liaison between the patient and community agencies.

MKT 120   Principles of Marketing   3   0   0   3
Prerequisites: ENG 090, RED 090
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 221   Consumer Behavior   3   0   0   3
Prerequisites: RED 090
Corequisites: None
This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.

	Class	Lab	Work Exp/ Clinical	Credit

MKT 223   Customer Service   3   0   0   3
Prerequisites: RED 090
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 224   International Marketing   3   0   0   3
Prerequisites: RED 090
Corequisites: None
This course covers the basic concepts of international marketing activity and theory. Topics include product promotion, placement, and pricing strategies in the international marketing environment. Upon completion, students should be able to demonstrate a basic understanding of the concepts covered.

MKT 228   Service Marketing   3   0   0   3
Prerequisites: RED 090
Corequisites: None
This course is designed to define service marketing, demonstrate its importance, and note its special characteristics. Topics include basic building blocks of service marketing, distinctive aspects of services, and applications of service marketing mix. Upon completion, students should be able to demonstrate a basic understanding of the marketing mix as it applies to the service industry.

MNT 110   Intro to Maintenance Procedures   1   3   0   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 230   Pumps & Piping Systems   1   3   0   2
Prerequisites: None
Corequisites: None
This course covers pump installation and maintenance and related valves and piping systems. Topics include various types of pump systems and their associated valves, piping requirements, and other related topics. Upon completion, students should be able to select and install pump and piping systems and demonstrate proper maintenance and troubleshooting procedures.

	Work Exp/		
	Class Lab Clinical Credit		

MNT 240   Industrial Equip Troubleshooting 1 3 0 2
Prerequisites: ELC 112 or ELC 131
Corequisites: ELC 128
This course covers the various service procedures, tools, instruments, and equipment necessary to analyze and repair typical industrial equipment. Emphasis is placed on electro-mechanical and fluid power equipment troubleshooting, calibration, and repair, including common techniques and procedures. Upon completion, students should be able to troubleshoot and repair industrial equipment.

MUS 110   Music Appreciation 3 0 0 3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

NAS 101   Nursing Assistant I 3 4 3 6
Prerequisites: None
Corequisites: None
This course introduces basic nursing skills required to provide personal care for patients, residents, or clients in a health care setting. Topics include communications, safety, patients' rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant I with the North Carolina Nurse Aide I Registry. *This is a certificate-level course.*

NAS 102   Nursing Assistant II 3 2 6 6
Prerequisites: Must have current CNA certification before clinical
Corequisites: None
This course provides training in selected advanced nursing assistant procedures. Emphasis is placed on sterile techniques, respiratory procedures, catheterizations, wound and trach care, irrigations, and ostomy care. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant II with the North Carolina Board of Nursing. *This is a certificate-level course.*

	Class	Lab	Work Exp/ Clinical	Credit

NAS 103   Home Health Care   2   0   0   2
Prerequisites: High school diploma or GED
Corequisites: None
This course covers basic health issues that affect clients in the home setting. Emphasis is placed on home safety, recognizing significant changes in the client's condition, family dynamics, and use of home health care equipment. Upon completion, students should be able to identify care for clients at home. *This is a certificate-level course.*

NET 125   Networking Basics   1   4   0   3
Prerequisites: DMA 010-050 or MAT 070
Corequisites: RED 090
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.

NOS 110   Operating System Concepts   2   3   0   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   0   3
Prerequisites: NOS 110 or CET 211
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   0   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.

	Class	Lab	Work Exp/ Clinical	Credit

NOS 230   Windows Administration I   2   2   0   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.

NUR 101   Practical Nursing I   7   6   6   11
Prerequisites: Admission to the Practical Nursing program
Corequisites: BIO 163
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. *This is a diploma-level course.*

NUR 102   Practical Nursing II   8   0   12   12
Prerequisites: NUR 101
Corequisites: None
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. *This is a diploma-level course.*

NUR 103   Practical Nursing III   6   0   12   10
Prerequisites: NUR 102
Corequisites: None
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. *This is a diploma-level course.*

	Work Exp/		
Class	**Lab**	**Clinical**	**Credit**

NUR 111   Intro to Health Concepts   4   6   6   8
Prerequisites: Admission to the Associate Degree Nursing program
Corequisites: BIO 165, CIS 110, PSY 150
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 166, ENG 111, PSY 241
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 111, NUR 112, NUR 114
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 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, NUR 112
Corequisites: BIO 166, ENG 111, PSY 241
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.

	Class	Lab	Work Exp/ Clinical	Credit

NUR 211   Health Care Concepts   **3   0   6   5**
Prerequisites: NUR 111, NUR 112, NUR 113, NUR 114
Corequisites: BIO 275, ENG 112
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 Systems Concepts   **3   0   6   5**
Prerequisites: NUR 111, NUR 112, NUR 113, NUR 114, NUR 211
Corequisites: BIO 275, ENG 112
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, and NUR 212
Corequisites: SOC 210
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.

OST 080   Keyboarding Literacy   **1   2   0   2**
Prerequisites: None
Corequisites: None
This course is designed to develop elementary keyboarding skills. Emphasis is placed on mastery of the keyboard. Upon completion, students should be able to demonstrate basic proficiency in keyboarding.

OST 122   Office Computations   **1   2   0   2**
Prerequisites: None
Corequisites: None
This course introduces the keypad and the touch method using the electronic calculator. Topics include mathematical functions in business applications. Upon completion, students should be able to use the electronic calculator to solve a wide variety of problems commonly encountered in business.

	Work Exp/		
	Class Lab Clinical Credit		

OST 131   Keyboarding   1   2   0   2
Prerequisites: OST 080
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. This course also includes setting and using tabs, formatting business letters, and formatting interoffice memorandums.

OST 132   Keyboard Skill Building   1   2   0   2
Prerequisites: OST 131
Corequisites: None
This course is designed to increase speed and improve accuracy in keyboarding. Emphasis is placed on diagnostic tests to identify accuracy and speed deficiencies followed by corrective drills. Upon completion, students should be able to keyboard rhythmically with greater accuracy and speed.

OST 133   Advanced Keyboard Skill Building   1   2   0   2
Prerequisites: OST 132
Corequisites: None
This course is designed to increase speed and improve accuracy to meet employment tests and job requirements. Emphasis is placed on individualized diagnostic and prescriptive drills. Upon completion, students should be able to keyboard with greater speed and accuracy as measured by five-minute timed writings and skill-development paragraphs. This course also includes formatting, itineraries, minutes of meetings, reports with enhancements, news releases, and resumes.

OST 134   Text Entry & Formatting   2   2   0   3
Prerequisites: OST 131
Corequisites: OST 132
This course is designed to provide 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   0   3
Prerequisites: OST 131
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.

Work Exp/
Class Lab Clinical Credit

OST 137   Office Software Applications   2   2   0   3
Prerequisites: CIS 110, OST 131
Corequisites: None
This course introduces the concepts and functions of software that meets the changing needs of the community. Emphasis is placed on the terminology and use of software through a hands-on approach. Upon completion, students should be able to use software in a business environment.

OST 164   Text Editing Applications   3   0   0   3
Prerequisites: OST 131
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   0   3
Prerequisites: ENG 080, RED 090
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 223   Admin Office Transcription I   2   2   0   3
Prerequisites: ENG 111, OST 134, OST 136, OST 164
Corequisites: None
This course provides experience in transcribing documents. Emphasis is placed on appropriate formatting, advanced text editing skills, and transcription techniques. Upon completion, students should be able to transcribe office documents.

OST 233   Office Publications Design   2   2   0   3
Prerequisites: OST 136
Corequisites: None
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications.

OST 236   Adv Word/Information Processing   2   2   0   3
Prerequisites: OST 136
Corequisites: None
This course develops proficiency in the utilization of advanced word/information processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents.

	Class	Lab	Work Exp/ Clinical	Credit

OST 286   Professional Development   3   0   0   3
Prerequisites: ENG 111
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   0   3
Prerequisites: ENG 111, OST 134, OST 136, OST 164, OST 236
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.

PED 110   Fit and Well for Life   1   2   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

PED 120   Walking for Fitness   0   3   0   1
Prerequisites: None
Corequisites: None
This course introduces fitness through walking. Emphasis is placed on stretching, conditioning exercises, proper clothing, fluid needs, and injury prevention. Upon completion, students should be able to participate in a recreational walking program. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

	Work Exp/		
	Class Lab Clinical Credit		

PED 142   Lifetime Sports   0   2   0   1
Prerequisites: None
Corequisites: None
This course is designed to give an overview of a variety of sports activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime sports. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime sports activities. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

PED 210   Team Sports   0   3   0   1
Prerequisites: None
Corequisites: None
This course introduces the fundamentals of popular American team sports. Emphasis is placed on rules, equipment, and motor skills used in various sports. Upon completion, students should be able to demonstrate knowledge of the sports covered. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

PHI 210   History of Philosophy   3   0   0   3
Prerequisites: ENG 111
Corequisites: None
This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstonecraft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

PHI 240   Introduction to Ethics   3   0   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 utilitarianism, rule-based ethics, existentialism, relativism versus objectivism, and egoism. Upon completion, student should be able to apply various ethical theories to individual moral issues such as euthanasia, abortion, crime and punishment, and justice.

	Class	Lab	Work Exp/ Clinical	Credit

PHY 110   Conceptual Physics   3   0   0   3
Prerequisites: DMA 010-060 or MAT 070, RED 090
Corequisites: PHY 110A
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

PHY 110A Conceptual Physics Lab   0   2   0   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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

PHY 151   College Physics I   3   2   0   4
Prerequisites: MAT 171, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

PHY 152   College Physics II   3   2   0   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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

**Work Exp/
Class Lab Clinical Credit**

PHY 251   General Physics I   3   3   0   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   0   4
Prerequisites: MAT 272, 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 had been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.**

PKG 130   Basic Electronics   1   3   0   2
Prerequisites: None
Corequisites: None
This course covers the basic electronic components of industrial systems. Topics include safety, PC boards, diodes, power supplies, transducers, transistors, SCRs, Triacs, amplifiers, FETs, ICs, fiber optics, and other related topics. Upon completion, students should be able to demonstrate a working knowledge of basic interfacing and controls associated with industrial machinery electronics.

PLA 120   Injection Molding   2   3   0   3
Prerequisites: DMA 010-030 or MAT 060, RED 080
Corequisites: None
This course provides theory and processing experience with the injection molding process. Topics include machine type, molds, controls, machine polymer part relationship, molding factors, troubleshooting, and molding problems/solutions. Upon completion, students should be able to demonstrate an understanding of machine setup and operation and be able to optimize common injection molding machines.

	Class	Lab	Work Exp/ Clinical	Credit

POL 110   Introduction to Political Science   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

POL 120   American Government   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course is a study of the origins, development, structure, and functions of American national 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 formation. 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

POL 220   International Relations   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides a study of the effects of ideologies, trade, armaments, and alliances on relations among nation-states. Emphasis is placed on regional and global cooperation and conflict, economic development, trade, non-governmental organizations, and international institutions such as the World Court and UN. Upon completion, students should be able to identify and discuss major international relationships, institutions, and problems. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

PSY 101   Applied Psychology   3   0   0   3
Prerequisites: None
Corequisites: None
This course introduces the basic principles of psychology as they apply to daily life. Topics include perception, emotions, motivation, adjustment, behavior management, communication, and related topics that promote growth and development on the job and in one's personal life. Upon completion, students should be able to apply the principles learned in this class to everyday living. *This course is intended for diploma programs.*

	Work Exp/
	Class Lab Clinical Credit

PSY 150   General Psychology   **3   0   0   3**
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

PSY 237   Social Psychology   **3   0   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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

PSY 241   Developmental Psychology   **3   0   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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

PSY 281   Abnormal Psychology   **3   0   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 behavioral patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

		Work Exp/		
	Class	**Lab**	**Clinical**	**Credit**

RED 070   Essential Reading Skills   3   2   0   4
Prerequisites: None
Corequisites: None
This course is designed to strengthen reading skills. Emphasis is placed on basic word attack skills, vocabulary, transitional words, paragraph organization, basic comprehension skills, and learning strategies. Upon completion, students should be able to demonstrate competence in the skills required for RED 080. *This course does not satisfy the developmental reading prerequisite for ENG 111 or ENG 111A.*

RED 080   Introduction to College Reading   3   2   0   4
Prerequisites: RED 070
Corequisites: None
This course introduces effective reading and inferential thinking skills in preparation for RED 090. Emphasis is placed on vocabulary, comprehension, and reading strategies. Upon completion, students should be able to determine main ideas and supporting details, recognize basic patterns of organization, draw conclusions, and understand vocabulary in context. *This course does not satisfy the developmental reading prerequisite for ENG 111 or ENG 111A.*

RED 090   Improved College Reading   3   2   0   4
Prerequisites: RED 080
Corequisites: None
This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. *This course satisfies the developmental reading prerequisite for ENG 111 or ENG 111A.*

REL 110   World Religions   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

Work Exp/
Class Lab Clinical Credit

REL 111   Eastern Religions   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

REL 112   Western Religions   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

REL 211   Introduction to Old Testament   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

REL 212   Introduction to New Testament   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

	Class	Lab	Work Exp/ Clinical	Credit

REL 221   Religion in America   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.**

SCI 090   Skills for the Sciences   2   2   0   3
Prerequisites: DMA 010-060 or MAT 060
Corequisites: RED 090
This course is designed to provide fundamental skills necessary for entry into college-level science courses. Topics include scientific vocabulary, measurement, scientific notation, the scientific method for solving problems, collaborative skills, and applications to various areas of science. Upon completion, students should be able to demonstrate a readiness for college-level science courses.

SEC 110   Security Concepts   2   2   0   3
Prerequisites: NOS 110
Corequisites: NET 125
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.

SOC 210   Introduction to Sociology   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

	Work Exp/		
	Class	Lab	Clinical	Credit

SOC 213   Sociology of the Family   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

SOC 220   Social Problems   3   0   0   3
Prerequisites: ENG 090, RED 090
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

SOC 225   Social Diversity   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course provides a comparison of diverse roles, interests, opportunities, contributions, and experiences in social life. Topics include race, ethnicity, gender, sexual orientation, class, and religion.   Upon completion, students should be able to analyze how cultural and ethnic differences evolve and how they affect personality development, values, and tolerance. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

SOC 240   Social Psychology   3   0   0   3
Prerequisites: PSY 150 or SOC 210
Corequisites: None
This course examines the influence of culture and social groups on individual behavior and personality. Emphasis is placed on the process of socialization, communication, conformity, deviance, interpersonal attraction, intimacy, race and ethnicity, small group experiences, and social movements. Upon completion, students should be able to identify and analyze cultural and social forces that influence the individual in a society. **This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.**

| | **Work Exp/** | | |
| | **Class** | **Lab** | **Clinical** | **Credit** |

SPA 111   Elementary Spanish I   3   0   0   3
Prerequisites: None
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 general education core requirement in humanities/fine arts.**

SPA 112   Elementary Spanish II   3   0   0   3
Prerequisites: SPA 111
Corequisites: SPA 182
This course is 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 general education core requirement in humanities/fine arts.**

SPA 120   Spanish for the Workplace   3   0   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 students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA 161   Cultural Immersion   2   3   0   3
Prerequisites: SPA 111
Corequisites: None
This course explores Hispanic culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate understanding of cultural differences. **This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

**Work Exp/
Class Lab Clinical Credit**

SPA 181 Spanish Lab 1   0   2   0   1
Prerequisites: None
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

SPA 182 Spanish Lab 2   0   2   0   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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.**

SPA 211 Intermediate Spanish I   3   0   0   3
Prerequisites: SPA 112
Corequisites: None
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 general education core requirement in humanities/fine arts.**

SPA 212 Intermediate Spanish II   3   0   0   3
Prerequisites: SPA 211
Corequisites: None
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 general education core requirement in humanities/fine arts.**

		Class	Lab	Work Exp/ Clinical	Credit

SWK 113   Working with Diversity   3   0   0   3
Prerequisites: ENG 090, RED 090
Corequisites: None
This course examines and promotes understanding, sensitivity, awareness, and knowledge of human diversity. Emphasis is placed on professional responsibilities, duties, and skills critical to multicultural human services practice. Upon completion, students should be able to integrate and expand knowledge, skills, and cultural awareness relevant to diverse populations.

WEB 110   Internet/Web Fundamentals   2   2   0   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 140   Web Development Tools   2   2   0   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 230   Implementing Web Serv   2   2   0   3
Prerequisites: NET 125, NOS 120, SEC 110
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   0   3
Prerequisites: DBA 110, WEB 140
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.

	Class	Lab	Work Exp/ Clinical	Credit

WLD 110   Cutting Processes   **1**   **3**   **0**   **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**   **0**   **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**   **0**   **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 117   Industrial SMAW   **1**   **4**   **0**   **3**

Prerequisites: WLD 112
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, students should be able to safely perform SMAW fillet and groove welds on carbon steel plates with prescribed electrodes.

WLD 121   GMAW (MIG) FCAW/Plate   **2**   **6**   **0**   **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.

	Class	Lab	Work Exp/ Clinical	Credit

WLD 131   GTAW (TIG) Plate   2   6   0   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   0   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 & Specifications   2   2   0   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 151   Fabrication I   2   6   0   4

Prerequisites: WLD 141
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   0   4

Prerequisites: WLD 115
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 discontinuites. Upon completion, students should be able to perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions.

Work Exp/
Class Lab Clinical Credit

WLD 231   GTAW (TIG) Pipe   1   6   0   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 262   Inspection & Testing   2   2   0   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.

CATALOG REVISIONS

06/10/2013 Curriculum Committee approved changes
- Add course description for PHI 240 Introduction to Ethics
- Updated programs of study for Associate in Arts and Associate in Science to include PHI 240

06/17/2013 Changed title from Course Catalog to Program and Course Catalog per VP for Instruction.

07/08/2013 Corrections and changes approved by VP for Instruction
- Change prerequisites for BUS 125, CIS 115, EDU 235, MEC 111 and MEC 130

07/30/2013 Replaced Distance Learning Options on page 8 with Types of Instruction

10/03/2013 Curriculum Committee approved changes
- Added CHI 112 to Associate in Arts and Associate in Science programs.
  Added course description.
- Added GEL 111 and GEL 120 to Associate in Arts and Associate in Science programs.
  Added course descriptions.
- Added DRE 096, 097, and 098 course descriptions.

10/3/2013 Editorial corrections
- Added Machining certificate to programs list (Page 7)
- Delete ETR course descriptions