



NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
Dr. R. Scott Ralls, President

July 23, 2012

MEMORANDUM

TO: Presidents
Chief Academic Officers

FROM: Sharon E. Morrissey
Senior Vice President and Chief Academic Officer

SUBJECT: State Board Action on July 20, 2012

On July 20, 2012, the State Board of Community Colleges approved the requested revisions to the following curriculum standards:

Barbering (Diploma) (D55110)
Electric Lineman Technology (A35210)*
Electric Utility Substation and Relay Technology (A50510)
Nuclear Technology (A50460)

Please be aware that you must implement the revised standard no later than one year after the effective term. You must update your college's electronic programs of study and receive approval from the System Office prior to implementation of the revised program.

In addition, the State Board of Community Colleges approved curriculum courses and a curriculum standard for the following new curriculum program:

Mammography (Certificate) (C45830)

The State Board of Community Colleges also approved a Tier I funding classification for the following curriculum prefixes:

AET – Aviation Electronics Technology
MAM – Mammography

**Please note that the curriculum code for this program has changed to A35230 to accommodate the revised curriculum title.*

Presidents
Chief Academic Officers
Page 2
July 23, 2012

The curriculum standard and new courses are attached for your convenience. You may view all curriculum standards, courses, and curriculum Tier funding classifications by visiting the Academic Programs website at:

<http://www.nccommunitycolleges.edu/Programs/index.html>

If you have any questions concerning the State Board action items, please contact Ms. Jennifer Frazelle at (919) 807-7120 or frazellej@nccommunitycolleges.edu.

SEM/JF/gr
Attachments

c: Dr. Van Wilson
Ms. Jennifer Haygood
Ms. Elizabeth Self
Ms. Jennifer Frazelle
Program Coordinators

CC12-022
Email

CURRICULUM STANDARD

Effective Term
Fall 2012
[2012*03]

Curriculum Program Title

Barbering (Diploma)

Code

A55110

Concentration

(not applicable)

Curriculum Description

The Barbering Curriculum is designed to provide competency-based knowledge, scientific/artistic principles and hands-on fundamentals associated with the barber industry. The curriculum also provides a simulated environment that enables students to develop manipulative skills.

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

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

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18

Major Hours

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** (if applicable). A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Barbering (A55110)**

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE <i>Courses required for the diploma and certificate are designated with *</i> Required Courses: *BAR 111 Barbering Concepts I 4 SHC *BAR 112 Barbering Clinic I 8 SHC *BAR 113 Barbering Concepts II 4 SHC *BAR 114 Barbering Clinic II 8 SHC *BAR 115 Barbering Concepts III 4 SHC *BAR 116 Barbering Clinic III 4 SHC *BAR 117 Barbering Concepts IV 2 SHC *BAR 118 Barbering Clinic IV 7 SHC Select additional 2 SHC from BAR courses Required Subject Areas: None	43 SHC	41 SHC	41 SHC**
B. CONCENTRATION (Not applicable)			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> ACC, ART, BAR, BUS, CIS, COE, CSC, DRA, ETR, ISC, PSY, SPA and WEB <i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in this program up to a maximum of 1 semester hour of credit.</i>		0-1	NA
D. OTHER REQUIRED HOURS		0-1	NA

** This program is approved by the State Board of Community Colleges to exceed maximum standard hours for a certificate program.
 [ref. 23 NCAC 02E.0201(d)];

CURRICULUM STANDARD

Effective Term
Fall 2012
[2012*03]

Curriculum Program Title

Electric Line Construction Technology

Code

A35230

Concentration

(not applicable)

Curriculum Description

The Electric Line Construction Technology curriculum prepares individuals to work as electric line construction technicians in the preparation and repair of rural electrical utility service. Students will combine electrical theory with laboratory and practical applications in the course of study.

Students will be expected to master competencies such as those included in elements of electricity, overhead pole and electrical line construction, safety codes and applications, electric power system, transformer and meter installations, and exploration of underground electrical distribution.

Upon successful completion of the program, individuals will receive the Associate of Applied Science degree and will possess the necessary skills for employment in the dynamic electrical utility field.

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** *(if applicable)*. A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Electric Line Construction Technology A35230

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE Required Courses: ELC 231 Electric Power Systems 4 SHC ELC 233 Energy Management 3 SHC ELT 111 Intro to Electric Line Construct 2 SHC ELT 112 National Elec Safety Code 3 SHC ELT 114 Overhead Line Const I 2 SHC ELT 115 Overhead Line Const II 2 SHC ELT 116 Overhead Line Const III 2 SHC ELT 117 Overhead Line Const IV 2 SHC ELT 211 Underground Line Const I 2 SHC ELT 212 Underground Line Const II 2 SHC ELT 221 Advanced Line Const 2 SHC Required Subject Areas: Basic Electricity. Select 3-5 SHC: ELC 111 Intro to Electricity 3 SHC ELC 112 DC/AC Electricity 5 SHC	29-31 SHC		
B. CONCENTRATION <i>(Not applicable)</i>			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> CIS, COE, CSC, ELC, ELT, and HEA <i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i>			

CURRICULUM STANDARD

Effective Term
Fall 2012
[2012*03]

Curriculum Program Title **Electric Utility Substation and Relay Technology**

Code **A50510**

Concentration **(not applicable)**

Curriculum Description

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 are designed to develop student understanding of maintenance and troubleshooting on transmission equipment, including three phase power theory, protective relaying, power transformers, voltage regulators, capacitors, and power circuit breakers common to electric utility and numerous other industries.

Graduates should qualify for entry-level employment in electric utility, renewable energy, and industrial facilities as technicians who diagnose and service equipment and components used for electrical power transmission.

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

MAMMOGRAPHY

*Effective Term – Fall 2012 [2012*03] – SBCC 07/20/12*

MAM 101 – Mam Proc & Image Analysis

3 3 0 4

Prerequisites: None

Corequisites: None

This course provides the fundamentals of mammography positioning, patient care, and image analysis. Topics include breast anatomy/physiology, pathology and treatment of breast disease, patient preparation/education, mammographic procedures, and interventional procedures. Upon completion, students should be able to demonstrate competence in these areas.

*Effective Term – Fall 2012 [2012*03] – SBCC 07/20/12*

MAM 102 – Mam Instrumentation & QA

3 0 0 3

Prerequisites: None

Corequisites: None

This course is a comprehensive study of physics, instrumentation, quality assurance, and quality control for analog and digital mammography imaging systems. Topics include system components, imaging principles, and guidelines for selecting exposure factors. Upon completion, students should be able to demonstrate an understanding of mammographic equipment, quality assurance, and quality control.

*Effective Term – Fall 2012 [2012*03] – SBCC 07/20/12*

MAM 103 – Digital Mammography

1 0 0 1

Prerequisites: None

Corequisites: None

This course is a comprehensive study of digital mammography. Topics include producing digital mammograms, understanding image processing, display, archive, and communication techniques, and determining proper image quality, radiation dose, and quality control procedures. Upon completion, students should be able to demonstrate the concepts of digital imaging, the process to produce digital mammograms, and the establishment of QC procedures.

*Effective Term – Fall 2012 [2012*03] – SBCC 07/20/12*

MAM 105 –Mammography Clinical Ed

0 0 15 5

Prerequisites: None

Corequisites: None

This course provides the opportunity to apply knowledge gained from classroom instruction to the mammography clinical setting. Emphasis is placed on patient care and positioning, mammographic procedures, interventional/special examinations, image analysis, and quality control testing. Upon completion, students should be able to demonstrate successful completion of clinical objectives.

*Effective Term – Fall 2012 [2012*03] – SBCC 07/20/12*

MAM 109 – Mammography Capstone

3 0 0 3

Prerequisites: None

Corequisites: None

This course provides an overview of mammographic topics as practiced in the didactic and clinical settings. Emphasis is placed on critical thinking and integration of didactic and clinical components. Upon completion, students should be able to demonstrate the comprehensive knowledge required of an entry-level mammographer.

CURRICULUM STANDARD

*Effective Term
Fall 2012
[2012*03]*

Curriculum Program Title	Mammography (Certificate)	Code	C45830
Concentration	(not applicable)		

Curriculum Description

The Mammography curriculum provides registered radiologic technologists the didactic and clinical experience necessary to become registered mammographers.

Course work includes clinical rotations to mammography facilities, breast anatomy/physiology, patient preparation/education, mammographic procedures, interventional procedures, image analysis, mammographic instrumentation, physics, quality control, and quality assurance.

Graduates will meet the Mammography Quality Standards Act initial training requirements for mammography and may be eligible to apply to take the American Registry of Radiologic Technologists (ARRT) post primary certification in Mammography.

Curriculum Requirements*

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.

- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*

- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit in Program	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration (if applicable).** A concentration of study must include a minimum of 12 semester hours of credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Mammography (Certificate)(C45830)

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE			16 SHC
Required Courses: MAM 101 Mam Proc & Image Analysis 4 SHC MAM 102 Mam Instrumentation & QA 3 SHC MAM 103 Digital Mammography 1 SHC MAM 105 Mammography Clinical Ed 5 SHC MAM 109 Mammography Capstone 3 SHC			
B. CONCENTRATION (if applicable)			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> Not applicable <i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of-2 semester hours of credit.</i>			

CURRICULUM STANDARD

Effective Term
Fall 2012
[2012*03]

Curriculum Program Title

Nuclear Technology

Code

A50460

Concentration

(not applicable)

Curriculum Description

The Nuclear Technology curriculum prepares individuals to become qualified reactor field technicians who are employed by licensed nuclear reactor facilities.

Course work includes theory and application related to industrial and engineering technology disciplines including nuclear reactor theory, reactor systems, industrial and nuclear safety, instrumentation, electrical generation, automation and robotics, and may include quality control, welding, and various metallurgical inspection procedures.

Upon completion, graduates should qualify as entry-level nuclear reactor technicians and have academic preparations to advance into other industrial or engineering technician positions within the commercial nuclear power industry.

Curriculum Requirements*

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204(3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** *(if applicable)*. A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Nuclear Technology A50460

	AAS	Diploma	Certificate																																																								
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC																																																								
<p>A. CORE <i>A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the required subject/course core of the AAS degree.</i></p> <p>Required Courses:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">NUC</td> <td style="width: 10%;">110</td> <td style="width: 60%;">Nuclear Reactor Systems</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td>NUC</td> <td>120</td> <td>Nuclear Reactor Theory</td> <td style="text-align: right;">4 SHC</td> </tr> <tr> <td>PHY</td> <td>131</td> <td>Physics–Mechanics</td> <td style="text-align: right;">4 SHC</td> </tr> <tr> <td>PHY</td> <td>132</td> <td>Physics–Elec and Magnetism</td> <td style="text-align: right;">4 SHC</td> </tr> </table> <p>Required Subject Areas:</p> <p>Computers. Choose one:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">CIS</td> <td style="width: 10%;">110</td> <td style="width: 60%;">Introduction to Computers</td> <td style="width: 20%; text-align: right;">3 SHC <i>or</i></td> </tr> <tr> <td>CIS</td> <td>115</td> <td>Intro to Prog & Logic</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p>Fluids/Hydraulics. Choose one:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">HYD</td> <td style="width: 10%;">110</td> <td style="width: 60%;">Hydraulics/Pneumatics I</td> <td style="width: 20%; text-align: right;">3 SHC <i>or</i></td> </tr> <tr> <td>MEC</td> <td>265</td> <td>Fluid Mechanics</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p>Nuclear Systems/Operations. Choose a group (8 –9 shc):</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">NUC</td> <td style="width: 10%;">210</td> <td style="width: 60%;">Nuclear Steam Plant Systems</td> <td style="width: 20%; text-align: right;">4 SHC</td> </tr> <tr> <td>NUC</td> <td>220</td> <td>Nuclear Primary Plant Systems</td> <td style="text-align: right;">4 SHC</td> </tr> </table> <p style="text-align: center;"><i>Or</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">ISC</td> <td style="width: 60%;">130 Intro to Quality Control</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td>NUC</td> <td>130</td> <td>Applied NDE-Nuclear</td> <td style="text-align: right;">2 SHC</td> </tr> <tr> <td></td> <td>WLD</td> <td>112 Basic Welding Processes</td> <td style="text-align: right;">2 SHC</td> </tr> <tr> <td></td> <td>WLD</td> <td>143 Welding Metallurgy</td> <td style="text-align: right;">2 SHC</td> </tr> </table>	NUC	110	Nuclear Reactor Systems	3 SHC	NUC	120	Nuclear Reactor Theory	4 SHC	PHY	131	Physics–Mechanics	4 SHC	PHY	132	Physics–Elec and Magnetism	4 SHC	CIS	110	Introduction to Computers	3 SHC <i>or</i>	CIS	115	Intro to Prog & Logic	3 SHC	HYD	110	Hydraulics/Pneumatics I	3 SHC <i>or</i>	MEC	265	Fluid Mechanics	3 SHC	NUC	210	Nuclear Steam Plant Systems	4 SHC	NUC	220	Nuclear Primary Plant Systems	4 SHC		ISC	130 Intro to Quality Control	3 SHC	NUC	130	Applied NDE-Nuclear	2 SHC		WLD	112 Basic Welding Processes	2 SHC		WLD	143 Welding Metallurgy	2 SHC	29-30 SHC	12 SHC	
NUC	110	Nuclear Reactor Systems	3 SHC																																																								
NUC	120	Nuclear Reactor Theory	4 SHC																																																								
PHY	131	Physics–Mechanics	4 SHC																																																								
PHY	132	Physics–Elec and Magnetism	4 SHC																																																								
CIS	110	Introduction to Computers	3 SHC <i>or</i>																																																								
CIS	115	Intro to Prog & Logic	3 SHC																																																								
HYD	110	Hydraulics/Pneumatics I	3 SHC <i>or</i>																																																								
MEC	265	Fluid Mechanics	3 SHC																																																								
NUC	210	Nuclear Steam Plant Systems	4 SHC																																																								
NUC	220	Nuclear Primary Plant Systems	4 SHC																																																								
	ISC	130 Intro to Quality Control	3 SHC																																																								
NUC	130	Applied NDE-Nuclear	2 SHC																																																								
	WLD	112 Basic Welding Processes	2 SHC																																																								
	WLD	143 Welding Metallurgy	2 SHC																																																								
B. CONCENTRATION <i>(Not applicable)</i>																																																											
<p>C. OTHER MAJOR HOURS <i>To be selected from the following prefixes: ATR, CIS, COE, ELC, HYD, ISC, MAT, MEC, NUC, PCI, PHY, and WLD</i></p> <p><i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i></p>																																																											