NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
Mr. Peter Hans
President

May 21, 2018

MEMORANDUM

TO: Presidents
Chief Academic Officers

FROM: Wesley E. Beddard, Associate Vice President
Programs

SUBJECT: State Board Action on May 18, 2018
Revised Curriculum Standard

On May 18, 2018, the State Board of Community Colleges approved revision of the following attached curriculum standard:

Associate in Engineering (A10500)

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

An outline of the specific curriculum standard revision is attached for your convenience. You may view all curriculum standards and courses by visiting the Academic Programs website at:

http://www.nccommunitycolleges.edu/academic-programs

If you have any questions concerning the May State Board action items listed above, please contact Ms. Jennifer Frazelle, Director, at 919.807.7120 or frazellej@nccommunitycolleges.edu.

WB/JF/gr
Attachments
c: Dr. Lisa M. Chapman
Ms. Jennifer Frazelle
Ms. Elizabeth Self
Program Coordinators

CC18-016
Email

Attachment

Outline of Curriculum Standard Revision
State Board of Community Colleges
May 18, 2018

Associate in Engineering (A10500):

Revision:

- Added the following course as an option under "other required":

EGR 214 Numerical Methods for Engineers

Associate in Engineering (A10500) Curriculum

Effective Term: Fall 2018

The Associate in Engineering (AE) degree shall be granted for a planned program of study consisting of a minimum of 60 semester hours of credit (SHC) of courses. Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic computer use.

The degree plan includes required general education and prerequisite courses that are acceptable to all state funded Bachelor of Engineering programs. Students who follow the degree progression plan will meet the entrance requirements at all of the North Carolina public Bachelor of Science Engineering programs. Associate in Engineering graduates may then apply to any of these programs without taking additional and sometimes duplicative courses. *Admission to Engineering programs is highly competitive and admission is not guaranteed.*

To be eligible for the transfer of credits under the AE to the Bachelor of Science in Engineering Articulation Agreement, community college graduates must obtain a grade of "C" or better in each course and an overall GPA of at least 2.5 on a 4.0 scale.

GENERAL EDUCATION (42 SHC) The general education common course pathway includes study in the areas of English composition; humanities and fine arts; social and behavioral sciences; natural sciences and mathematics.

UNIVERSAL GENERAL EDUCATION TRANSFER COMPONENT

(Universal General Education Transfer Component (UGETC) courses will transfer for equivalency credit to all UNC institutions.) ***Exceptions (i.e. courses which are not classified as UGETC) are italicized.***

English Composition (**6 SHC**) The following two English composition courses are required:

ENG 111	Writing and Inquiry	(3 SHC)
ENG 112	Writing/Research in the Disciplines	(3 SHC)

Humanities/Fine Arts and Communication: Select one course from each category (6 SHC)

Humanities: Choose One:

ENG 231	American Literature I	(3 SHC)
ENG 232	American Literature II	(3 SHC)
ENG 241	British Literature I	(3 SHC)
ENG 242	British Literature II	(3 SHC)
PHI 215	Philosophical Issues	(3 SHC)
PHI 240	Introduction to Ethics	(3 SHC)
REL 110	*World Religions*	*(3 SHC)**

(REL 110 will transfer for equivalency credit to the engineering programs at all five UNC institutions that offer undergraduate engineering programs. It may not transfer with equivalency to other programs.)

Fine Arts and Communication: Choose One:

COM 231	Public Speaking	(3 SHC)
ART 111	Art Appreciation	(3 SHC)
ART 114	Art History Survey I	(3 SHC)
ART 115	Art History Survey II	(3 SHC)
MUS 110	Music Appreciation	(3 SHC)
MUS 112	Introduction to Jazz	(3 SHC)

Social/Behavioral Sciences: One course required. Select second course. (6 SHC)

Required:

ECO 251	Principles of Microeconomics	(3 SHC)

Choose One:

HIS 111	World Civilizations I	(3 SHC)
HIS 112	World Civilizations II	(3 SHC)
HIS 131	American History I	(3 SHC)
HIS 132	American History II	(3 SHC)
POL 120	American Government	(3 SHC)
PSY 150	General Psychology	(3 SHC)
SOC 210	Introduction to Sociology	(3 SHC)

Mathematics (12 SHC) *Calculus I is the lowest level math course that will be accepted by the engineering programs for transfer as a math credit. Students who are not calculus-ready will need to take additional math courses.*

MAT 271 Calculus I	(4 SHC)
MAT 272 Calculus II	*(4 SHC)**
MAT 273 Calculus III	*(4 SHC)**

Natural Sciences (12 SHC)

CHM 151 General Chemistry I	(4 SHC)
PHY 251 General Physics I	(4 SHC)
PHY 252 General Physics II	(4 SHC)

Total General Education Hours Required: 42 SHC

OTHER REQUIRED HOURS (18 SHC)

Academic Transition (1 SHC)

ACA 122 College Transfer Success (1 SHC)

Students must complete ACA 122 within the first 30 hours of enrollment.

Pre-major Elective (2 SHC)

EGR 150 Introduction to Engineering (2 SHC)

Other General Education and Pre-major Elective Hours: (15 SHC)

Select 15 SHC of courses from the following courses classified as pre-major, elective, or general education courses within the Comprehensive Articulation Agreement. *(Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.)*

Students should choose courses appropriate to the specific university and engineering major requirements.

BIO 111	General Biology I	(4 SHC)
CHM 152	General Chemistry II	(4 SHC)
COM 110	Introduction to Communication	(3 SHC)
CSC 134	C++ Programming	(3 SHC)
CSC 151	JAVA Programming	(3 SHC)
DFT 170	Engineering Graphics	(3 SHC)
ECO 252	Principles of Macroeconomics	(3 SHC)
EGR 210	Intro to Electrical/Computer Engineering Lab	(2 SHC)
EGR 212	Logic System Design I	(3 SHC)
EGR 214	Num Methods for Engineers	(3 SHC)
EGR 215	Network Theory I	(3 SHC)
EGR 216	Logic and Network Lab	(1 SHC)
EGR 220	Engineering Statics	(3 SHC)
EGR 225	Engineering Dynamics	(3 SHC)
EGR 228	Introduction to Solid Mechanics	(3 SHC)
HUM 110	Technology and Society	(3 SHC)
MAT 280	Linear Algebra	(3 SHC)
MAT 285	Differential Equations	(3 SHC)
PED 110	Fitness and Wellness for Life	(2 SHC)

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

Total Semester Hours Credit (SHC) in Program: 60-61**

Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.

SBCC Approved 02/20/2015; BOG approved 02/27/2015; SBCC Revised 07/15/16; SBCC Revised 05/18/18.