

PROPOSAL FOR A UNIFORM ARTICULATION AGREEMENT

BETWEEN

THE UNIVERSITY OF NORTH CAROLINA BACCALAUREATE
ENGINEERING PROGRAMS

AND

NORTH CAROLINA COMMUNITY COLLEGE SYSTEM ASSOCIATE IN
ENGINEERING PROGRAMS

Approved by the State Board of Community Colleges on 02/20/2015

Approved by The UNC Board of Governors on 02/27/2015

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I. Background

Engineering Pathways is a joint project of the North Carolina Community College System and the University of North Carolina engineering programs focused on developing the pathways for students to begin engineering studies at a community college and then transfer as seamlessly as possible to one of the UNC engineering programs. The Engineering Pathways group, including 31 North Carolina Community College System participants as well as representatives from all University of North Carolina engineering programs worked together to develop an articulation agreement that supports an Associate In Engineering designed specifically to meet prerequisite requirements of the University of North Carolina engineering programs.

II. Purpose and Rationale

This document presents a uniform, statewide academic progression agreement that will promote educational advancement opportunities for Associate in Engineering degree completers moving between North Carolina community colleges and the constituent institutions of The University of North Carolina in order to complete Bachelor of Science in Engineering degrees. It describes a progression degree plan that includes required general education and prerequisite courses that are acceptable to all state funded Bachelor of Engineering programs. Students who follow the progression degree 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.

This proposal supports the mission of the North Carolina State Board of Community Colleges and Goals 1 and 2 of the University of North Carolina's strategic document *Our Time Our Future, University of North Carolina Strategic Direction*. It moves these objectives forward by creating a more seamless and rational transfer process for community college Associate In Engineering students. This coordinated approach should increase the number of engineering graduates, thereby serving state workforce needs.

III. Policies

The Associate in Engineering to Bachelor of Science in Engineering Articulation Agreement (AE to BSE AA) is made between the State Board of the North Carolina Community College System and The University of North Carolina Board of Governors. It applies to all North Carolina community colleges that operate Associate in Engineering programs and to those constituent institutions of The University of North Carolina that operate Bachelor of Science Engineering Programs. For the list of participating programs, see Appendix A. The AE to BSE AA applies to all community college students who enter the Associate in Engineering degree programs after the effective date of this agreement and who successfully complete the AE degree. The AE to BSE Transfer Committee (AEBSETC) oversees refinements of and changes in the regulations.

A. AE to BSE Transfer Committee (AEBSETC)

Authority to interpret and make changes in the AE to BSE AA rests with the AEBSETC. The AEBSETC is a twelve member co-chaired committee appointed by the Presidents of the North Carolina Community College System and The University of North Carolina. Questions concerning the AE to BSE AA should be directed to the appropriate system's chief academic office (CAO) with an explanation of the institutional policy that may (appear to) be in conflict with AE to BSE AA policy. The CAO will forward unresolved questions to the AEBSETC for resolution. Each system will appoint one ex-officio non-voting member of the AEBSETC. For further details, see Appendices B and C.

B. Transfer Credit Appeal

If an AE to BSE student perceives that the terms of the AEBSETC have not been honored, he or she may follow the AE to BSE Transfer Credit Appeal Process as outlined in Appendix D. Each university and community college engineering program covered by this agreement will provide a link to that Appeal Process on its web site.

IV. Regulations

A. Transfer of Credits

The AE to BSE AA establishes the procedures governing the transfer of credits for students who graduate from North Carolina Community College AE programs and apply to BSE programs at constituent institutions of The University of North Carolina. The AE to BSE AA does not address admission to a specific institution or BSE program within an institution.

1. Eligibility

To be eligible for the transfer of credits under the AE to BSE AA, an applicant must enter a community college AE program on or after the effective date of this agreement and must earn an AE degree in a North Carolina Community College with a GPA of at least 2.5 and a grade of C or better in all AE courses.

In order to use the AE to BSE AA effectively, students should follow the prescribed AE course list. (Appendix E)

2. Procedures governing transfer of Associate in Engineering into Bachelor of Science Engineering degrees.

- a. The AE to BSE enables students who have graduated from North Carolina community college AE programs to complete a common list of courses that meet the entrance requirements at all of the BSE programs at the constituent institutions of The University of North Carolina. However, because

engineering program admissions are competitive, no student is guaranteed admission to an engineering program.

- b. A student who completes an AE with a GPA of at least 2.5 and a grade of C or better in the AE courses listed in Appendix E will have fulfilled the engineering program entry requirements, and all courses in the Universal General Education Transfer Component will transfer with course equivalency to fulfill General Education requirements for the BSE.
- c. These students will receive at least 60 semester hours of academic credit upon admission to a UNC institution.

3. Certification of the Associate in Engineering degree completion

Certification of completion of the Associate in Engineering degree is the responsibility of the community college at which the courses were completed. Transcript identification of the Universal General Education Transfer Component Courses is also the responsibility of the community college at which the courses were completed.

4. Transfer of Courses not originated at North Carolina community colleges

Transfer courses that do not originate in a North Carolina Community College or UNC institution may be used under the AE to BSE AA with the following stipulations:

- a. Courses must be completed at a regionally accredited institution of higher education;
- b. Courses must meet general education requirements; and
- c. Courses may total no more than 14 hours of general education course credit.
- d. If the courses are used to complete the AE degree, the courses will transfer as a part of the degree.

5. Transfer of Advanced Placement (AP) course credit

Advanced Placement (AP) course credits, awarded for a score three or higher, are acceptable as part of a student's successfully completed AE degree under the AE to BSE AA.

B. Impact of the AE to BSE AA on other articulation agreements

The AE to BSE AA takes precedence over bilateral articulation agreements established between constituent institutions of The University of North Carolina and the North Carolina Community College System but does not necessarily preclude such agreements. Institution-to-institution articulation agreements that fall within the parameters of the AE to BSE AA and enhance transferability of students from community colleges to senior institutions are acceptable. Institutional agreements conflicting with the AE to BSE AA are not permitted.

C. Compliance Procedures

The AE to BSE Transfer Committee (AEBSETC) is charged with ensuring compliance of institutional policies and practices regarding the AE to BSE AA. To that end, an AE to BSE AA Review Team comprised of two UNC representatives and two community college representatives will survey and review the engineering program's transfer credit policies and procedures of the five UNC institutions annually. The AEBSETC will report its findings to the chief academic officers of University of North Carolina and the North Carolina Community College System.

Appendices

Appendix A:

Participating Programs 2015

NCCCS Associate in Engineering Programs

Participating North Carolina community colleges must receive State Board approval to offer the Associate in Engineering degree. Approval is based on the following based on the following criteria:

- I. Program of Study which is in compliance with the AE Curriculum Standard
- II. Institutional certification of the following:
 - a. Master's credentialed faculty for each course provided under the AE
 - b. Adequate facilities/resources to provide the AE
 - c. Evidence of sufficient student demand

The following North Carolina community colleges have received State Board approval to offer the Associate in Engineering degree:

Asheville Buncombe Technical Community College
Blue Ridge Community College
Brunswick Community College
Catawba Valley Community College
Central Piedmont Community College
Coastal Carolina Community College
College of The Albemarle
Craven Community College
Durham Technical Community College
Fayetteville Technical Community College

Guilford Technical Community College
Forsyth Technical Community College
Gaston College
Johnston Community College
Mitchell Community College
Pitt Community College
Richmond Community College
Sandhills Community College
Wake Technical Community College
Wilkes Community College

UNC System Engineering Programs

East Carolina University
North Carolina Agricultural and Technical University
North Carolina State University
University of North Carolina Charlotte
Western Carolina University

Appendix A updated on 7/17/2015 to reflect AE programs approved by the State Board of Community Colleges

Appendix B:

Associate In Engineering to Bachelor of Science In Engineering Transfer Committee Procedures

Articulation between the North Carolina Community College System and The University of North Carolina is a dynamic process. To ensure the currency of the AE to BSE, occasional modifications to that agreement may be necessary. These modifications may include the addition, deletion, and/or revision of courses on the transfer list. The AEBETC will receive requests for modification only upon the recommendation of the chief academic officer of the NCCCS or UNC. Additions, deletions, and modifications may be subject to faculty review under the direction of the AEBSETC. Because the modification process involves faculty and administrative review, this process may require up to 12 months for final action. Decisions made by the AEBSETC will be consistent with all pertinent accreditation standards.

The Faculty Review Process

Any member of the AEBSETC may request that a course under consideration be forwarded to the Faculty Review Committee. The Faculty Review Committee will be asked to review the course and the proposed action.

1. The Faculty Review Committee will consist of the following representatives:
 - a. 3 UNC faculty members
 - b. 3 NCCCS faculty members
2. Appointments to the committee will be for three years but may be renewed.
3. The Faculty Review Committee will receive a request to review a course(s) from the assigned representative(s) of the AEBSETC within one week of the AEBSETC meeting where the request was made.
4. Faculty Review Committee members will forward their comments, suggestions, and recommendations to the assigned representative(s) of the AEBSETC prior to the next scheduled AEBSETC meeting.

The assigned representative(s) of the AEBSETC will report the results of the Faculty Review Committee at the next AEBSETC scheduled meeting for action.

Approval of the requested action will require a majority of the AEBSETC members.

Addition of Courses to the Transfer List

All additions to the AE to BSE AA transfer list must be drawn from the Comprehensive Articulation Agreement in effect at the time that the request for the addition is made. Such additions may be recommended by a participating institution through the following process:

1. The chair of an engineering program at any one of the participating colleges or universities makes a written request for inclusion of a specific course as a universal general education transfer component course, a general education course, a pre-major or elective course to the CAO of their college or university. That CAO submits a written request for inclusion on the transfer list to The University of North Carolina CAO. That individual will consult with the CAO of the North Carolina Community College System.
2. The CAOs or their designees at UNC and at NCCCS will then seek feedback and endorsement about whether to pursue the change from their respective campuses. A two-thirds favorable response is required for the change to be pursued.
3. The CAO of either system may submit the request for action to the AEBSETC a minimum of thirty days prior to the next AEBSETC meeting.
4. The AEBSETC reviews the request. Any member of the AEBSETC may request that a course be referred to the Faculty Review Committee. For all courses that are approved, the Committee records their action and rationale of action.
5. The NCCCS Office or the UNC System Office will distribute notification of action to all the participating colleges or universities.

Deletion of a Course from the Transfer List

The chair of an engineering program at any one of the participating colleges or universities may request that a course be removed from the AE to BSE AA transfer list by following similar procedures as outlined in items 1-5 in the *Addition of Courses to the Transfer List*.

Change in the Designation of a Course

The chair of an engineering program at any one of the participating colleges or universities may request a change in the designation of a course in the AE to BSE AA (i.e. Elective to General Education or Pre-Major) by sending the request and rationale to the CAOs of the two systems. Either of the system CAOs may submit the request to the AEBSETC for action. Any member of the AEBSETC may request that a course under consideration be forwarded to the Faculty Review Committee. The Faculty Review Committee will be asked to review the course and the proposed action.

Appendix C

AE to BSE Transfer Committee Membership

AEBSETC members shall serve three-year, staggered terms. An individual may serve no more than two consecutive terms. Some initial appointments may be for 1 or 2 years to allow for staggering of terms.

AEBSETC shall have co-chairs, one from the NCCCS members, and one from the UNC Members. Co-chairs shall be elected by the membership, and shall serve staggered terms.

NCCCS Members:

- Six representatives including:
 - One representative from the NCCCS administration
 - Five representatives from the community college member schools. These five members will be nominated by their peers and reviewed for approval by the CAO of the NCCCS. Self-nomination with endorsement by peers is permitted.

UNC Members:

- Six representatives including:
 - One representative from the University of North Carolina
 - Five representatives from each of the university engineering schools. These members will be nominated by their peers and reviewed for approval by the CAO of UNC. Self-nomination with endorsement by peers is permitted.

Appendix D

AE to BSE Articulation Agreement Transfer Credit Appeal Procedure

Guiding Principle: If a student from a North Carolina Community College System (NCCCS) college believes the terms of the AE to BSE AA have not been honored by a University of North Carolina (UNC) institution to which the student has been admitted, the student may invoke the AE to BSE AA Transfer Credit Appeal Procedure.

Steps in Filing an Appeal

Step #1:

- **By the last day of classes of the first semester for which admission is offered**, the student must submit an AE to BSE Transfer Credit Appeal Form along with any supporting documentation to the Director of Admissions or other campus designee at the UNC campus to which the student has been admitted. Students first enrolling at the senior institution in a summer session must submit their appeal by the end of the subsequent fall semester.
- **The student must specify on the appeal form the specific AE to BSE AA language that is in contention. Appeals that lack this information will not be considered.**
- The Director of Admission or other campus designee will review the appeal and respond in writing (email or letter) to the student within 15 business days.

Step #2:

- If the student is not satisfied with the decision of the Director of Admission or other campus designee, he/she may appeal on the same form to the Chief Academic Officer (Provost) of the specific University within 15 days of written notice of the director's decision.
- The Provost will review the appeal and respond in writing (email or letter) to the student within 15 business days of receiving the student's appeal.

Step #3

- If the student is not satisfied with the decision of the Provost, he/she may appeal to the AEBSETC subcommittee, composed of the Co-chairs, a representative from the UNC General Administration, and a representative from the NCCCS. The student must submit the appeal to the subcommittee within 15 days of the receipt of the Provost's decision. The appeal to the AEBSETC subcommittee should be sent to:

UNC-GA AE to BSE Transfer Committee
AE to BSE AA Appeal
PO Box 2688, Chapel Hill, NC 27515

If a consensus is reached by the subcommittee, the student will be notified within 15 business days; if a consensus resolution is not reached, the appeal will be forwarded by the subcommittee to the full AEBSETC within 10 business days. The AEBSETC will review the appeal and notify the student of the final decision within 10 business days of receiving the appeal.

AE to BSE Transfer Credit Appeal Procedure

University of North Carolina/North Carolina Community College System

Section 1: Student Information *(to be completed by the student submitting the form)*

- The completed form and any supporting documentation **must be submitted to the UNC institution's Director of Admission by the last day of classes of the first semester for which admission is offered or by the end of the subsequent fall semester for students enrolling in the summer.**
- You must specify the nature of the appeal and cite the specific AE to BSE AA language that is in contention. Appeals that do not include this information cannot be considered.

Last Name: _____ First: _____ MI: _____
(Please print or type)

Address: _____
(Number and Street) (City) (State) (Zip)

Telephone: _____ Email: _____
(Area code/Number)

Community College from which AE was earned: _____

UNC institution offering admission: _____ beginning (semester/yr) _____

Section 2: Basis for your appeal: State your concern(s), citing specific language in the AE to BSE AA that is applicable to your contention. Attach AE to BSE AA supporting documents.

Student Signature: _____ Date _____

Appendix E

Effective Term:

Associate in Engineering (A10500) Curriculum Standard Curriculum Standard

Fall 2015

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)
PHI 215	Philosophical Issues	(3 SHC)
PHI 240	Introduction to Ethics	(3 SHC)
<i>REL 110</i>	<i>World Religions</i>	<i>(3 SHC)*</i>

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

Pre-major Elective (2 SHC)

EGR 150 Introduction to Engineering	(2 SHC)
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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 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.