NC STATE UNIVERSITY

ENGINEERING

NORTH CAROLINA COMMUNITY COLLEGE
TRANSFER GUIDE
Located in Raleigh, North Carolina, NC State University's College of Engineering is a leading research, teaching and outreach engineering and computer science college offering 18 bachelor’s, 21 master’s and 13 doctoral degree programs. Annual enrollment exceeds 9,000 students, with more than 6,000 undergraduates and nearly 3,000 graduate students. The College also offers 15 online engineering master’s degrees.

THANK YOU!

We appreciate your interest in pursuing a degree in engineering or computer science and are ready to help you accomplish your goal. Each year, more than 25 percent of the students receiving engineering degrees from North Carolina State University began their education at another institution. You will find information on College of Engineering programs, curricula, student organizations, and much more by browsing the website at www.engr.ncsu.edu.

We would like to invite you, your parents and your friends to attend either the College of Engineering Open House held in the spring or the University Open House held in the fall. Both are wonderful opportunities to meet with faculty, staff and students in the College of Engineering and to tour our teaching and research facilities.
# THE BASICS

- Transfer Requirements
- Application Deadlines

# PLANNING FOR THE FUTURE

- Degree Options
- Off-Site Engineering Programs

# WHAT CAN I TAKE NOW?

- General Education Program
- Engineering Degree Requirements

# FREQUENTLY ASKED QUESTIONS

Make sure you’re on track to transfer to NC State. As you turn the following pages, you’ll find information on which courses are required, application deadlines, and GPA information for your intended area of study. We’re here to help with a successful transfer to the university.
WHAT YOU NEED

Since transfer admissions into the College are very competitive, meeting the eligibility requirements only guarantees that a transfer application may be considered; it does not guarantee admission. The minimum requirements listed below should be used as a baseline.

For a comprehensive list of North Carolina community college course equivalencies, visit bit.ly/1h8eAAY.

IMPORTANT NOTES

The NC State course number is written in red for your reference; North Carolina community college course numbers are written in bold. A course taken at another institution must be equivalent to the exact NC State course and completed with a grade of C- or better. If NC State courses are taken, the overall NC State GPA must be at least a 2.0. Core courses (chemistry, calculus and physics), also known as C-wall courses, require at least a C.

1. 30 credit hours or more of transferable college-level courses
2. 3.0 or higher cumulative GPA except where otherwise noted
3. Minimum 4 credit hours of English composition, 4 credits ENG 101 (ENG 111 in combination with ENG 112, ENG 113, or ENG 114 to fulfill the English requirement (total ≥ 4 credits))
4. College chemistry course with lab, 4 credits CH 101 + 102 (CHM 135, 151 or 131 and 131 A)
5. Calculus I, 4 credits MA 141 (MA 271)
6. Calculus II, 4 credits MA 241 (MA 272)
7. Minimum 2.5 math GPA over last two math courses at Calculus I MA 141 level or higher (MAT 271)
8. Calculus-based Physics I with lab, 4 credits PY 205 and PY 206 (PHY 251)

WHAT’S NEXT?

STEP 1
Talk to your North Carolina community college advisor. Visit www.engr.ncsu.edu/undergrad/curricula to learn more.

STEP 2
Plan ahead and apply early. www.admissions.ncsu.edu/apply

STEP 3
If you still have questions, send an email to an NC State engineering advisor at engineering@ncsu.edu.

APPLICATION DEADLINES

Priority Deadline – January 15 (notification by March 30)
International Applicant Deadline – January 15
Final Deadline – March 15 (notification by May 15)

NOTE: A pending decision for some transfer applicants may require a transcript with grades for completed spring coursework. All required transfer courses must be complete by the end of the spring semester. Those applicants will be notified by June 15. The College of Engineering does not offer spring transfer admission.

The NC State course number is written in red for your reference; North Carolina community college course numbers are written in bold. A course taken at another institution must be equivalent to the exact NC State course and completed with a grade of C- or better. If NC State courses are taken, the overall NC State GPA must be at least a 2.0. Core courses (chemistry, calculus and physics), also known as C-wall courses, require at least a C.
DEPARTMENT-SPECIFIC TRANSFER REQUIREMENTS

Joint NC State-UNC Department of Biomedical Engineering
- At least a 3.5 cumulative GPA
- Separate application for consideration at bit.ly/1iWvZKq
- Contact Dr. Lianne Cartee at 919.515.6726

Department of Mechanical and Aerospace Engineering
- At least a 3.5 cumulative GPA

Department of Civil, Construction, and Environmental Engineering
- At least a 3.5 cumulative GPA

NOTE: Applicants with a GPA between 3.2 and 3.49 may be considered for admission with additional departmental review. Students with a GPA between 3.0 and 3.2 will be required to demonstrate potential success by taking CE 214 or CE 313 at NC State. These students will be reviewed on an individual basis by the Department of Civil, Construction, and Environmental Engineering.
NC State offers 18 bachelor’s degree programs.

WHAT ARE MY DEGREE OPTIONS?

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>DEGREE</th>
<th>CONCENTRATION(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGICAL AND AGRICULTURAL ENGINEERING (BAE)</td>
<td>Biological Engineering (BE)</td>
<td>Agricultural</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bioprocess</td>
</tr>
<tr>
<td>BIOMEDICAL ENGINEERING (BME)</td>
<td>Biomedical Engineering (BME)</td>
<td></td>
</tr>
<tr>
<td>CHEMICAL AND BIOMOLECULAR ENGINEERING (CBE)</td>
<td>Chemical Engineering (CHE)</td>
<td>Biomanufacturing Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biomedical</td>
</tr>
<tr>
<td>CIVIL, CONSTRUCTION, AND ENVIRONMENTAL ENGINEERING (CCEE)</td>
<td>Civil Engineering (CE)</td>
<td>General Construction</td>
</tr>
<tr>
<td></td>
<td>Construction Engineering and Management (CEM)</td>
<td>Mechanical Construction</td>
</tr>
<tr>
<td></td>
<td>Environmental Engineering (ENE)</td>
<td></td>
</tr>
<tr>
<td>COMPUTER SCIENCE (CSC)</td>
<td>Computer Science (CSC)</td>
<td>Game Development</td>
</tr>
<tr>
<td>ELECTRICAL AND COMPUTER ENGINEERING (ECE)</td>
<td>Electrical Engineering (EE)</td>
<td>Renewable Electric Energy Systems</td>
</tr>
<tr>
<td>FOREST BIOMATERIALS (FB)</td>
<td>Forest Biotechnology (FB)</td>
<td></td>
</tr>
<tr>
<td>INDUSTRIAL AND SYSTEMS ENGINEERING (ISE)</td>
<td>Industrial Engineering (IE)</td>
<td></td>
</tr>
<tr>
<td>MATERIALS SCIENCE AND ENGINEERING (MSE)</td>
<td>Materials Science and Engineering (MSE)</td>
<td>Materials</td>
</tr>
<tr>
<td>MECHANICAL AND AEROSPACE ENGINEERING (MAE)</td>
<td>Aerospace Engineering (AE)</td>
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<td></td>
<td>Mechanical Engineering (ME)</td>
<td></td>
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<td></td>
<td>*Mechanical Engineering Systems</td>
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<tr>
<td></td>
<td>Nuclear Engineering (NE)</td>
<td></td>
</tr>
<tr>
<td>TEXTILE ENGINEERING, CHEMISTRY AND SCIENCE (TECS)</td>
<td>Textile Engineering (TE)</td>
<td>Chemical Processing</td>
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<td></td>
<td>Textile Engineering (TE) (concentration required)</td>
<td>Information Systems</td>
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<td></td>
<td>Product Engineering</td>
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*Off-Site Engineering Programs

MECHANICAL ENGINEERING SYSTEMS
Bill Fortney, PhD
NC State University Eastern Regional Director for Distance Engineering Programs
Phone: 252.514.5586
wbfortne@ncsu.edu

MECHATRONICS
NC State University Engineering Programs
UNC Asheville CPO 42980) One University Heights Asheville, NC 28804-0511
Phone: 828.251.6640 | Fax: 828.251.6749
engineering@unca.edu
WHAT CAN I TAKE NOW?

Many courses at your college transfer to NC State. Explore your course options.

The university also requires students to fulfill General Education Program requirements.
ENGINEERING DEGREE REQUIREMENTS

The North Carolina Community College System offers a number of courses that fulfill requirements within the NC State engineering curricula. Follow these two steps to create your own personalized community college/NC State curriculum:

1. Find your intended semester-by-semester plan at oucc.ncsu.edu/semester-semester-plans
2. Use the comprehensive list of North Carolina community college/NC State equivalencies at bit.ly/1h8eAA to select courses that fulfill degree requirements within your semester-by-semester plan.

Below is a list of North Carolina community college courses commonly selected by transfer students to fulfill various engineering curricula. Follow these two steps to create your own personalized community college/NC State curriculum:

1. CHM 152 → CHM 136
2. CHM 251
3. •
4. •
5. ECO 251
6. •
7. •
8. EGR 150
9. •
10. MAT 273 or MAT 285
11. PHY 252
12. MAT 285 or PHY 252
13. CSC 134 or CSC 136

AEROSPACE ENGINEERING
- DFT 170 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or MAT 285 or PHY 252
- CSC 134 or CSC 136

CIVIL ENGINEERING
- DFT 170 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or MAT 285 or PHY 252
- BIO 111, BIO 112, GEL 111 or GEL 120
- BIO 251 or BIO 253
- CSC 148, CSC 151, CSC 134, or CSC 136

COMPUTER ENGINEERING
- ECO 251 or EGR 150
- MAT 273 or PHY 252
- COM 231 or COM 233

COMPUTER SCIENCE
- ECO 251 or EGR 150
- MAT 273 or PHY 252
- CSC 148, CSC 151, CSC 134, or CSC 136

BIOMEDICAL ENGINEERING
- BIO 111 or BIO 112
- CHM 136, CHM 152, CHM 132, or CHM 152

BIOLOGICAL ENGINEERING
- ECO 251 or EGR 150 or EGR 220
- MAT 285 or PHY 252
- BIO 111 or BIO 112
- CHM 136, CHM 152

CHEMICAL ENGINEERING
- ECO 251 or EGR 150
- MAT 273 or PHY 252
- CHM 251 or CHM 252
- CHM 136 or CHM 152

BIOMEDICAL ENGINEERING
- BIO 111, CHM 261 or ECO 251 or EGR 150
- EGR 220 or MAT 273 or MAT 285 or PHY 252

CHEMICAL ENGINEERING
- ECO 251 or EGR 150
- MAT 273 or PHY 252
- CHM 251 or CHM 252
- CHM 136 or CHM 152

CONSTRUCTION ENGINEERING AND MANAGEMENT - GENERAL
- DFT 170 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or PHY 252
- COM 231 or COM 233
- CSC 148, CSC 151, CSC 134, or CSC 136
- BIO 111, GEL 111, GEL 120, MAT 280, MAT 285, CHM 136, or CHM 152

CONSTRUCTION ENGINEERING AND MANAGEMENT - MECHANICAL
- ACC 121 or DFT 170 or ECO 251 or EGR 150 or EGR 220 or MAT 273 or MAT 285 or PHY 252
- CSC 148, CSC 151, CSC 134 or CSC 136
- SOC 252, SOC 240, SOC 230, or POL 130

ELECTRICAL ENGINEERING
- ECO 251 or EGR 150 or MAT 273 or PHY 252
- COM 231 or COM 233

ENVIRONMENTAL ENGINEERING
- ECO 251 or EGR 150 or MAT 273 or PHY 252
- COM 231 or COM 233

INDUSTRIAL ENGINEERING
- ECO 251 or EGR 150 or MAT 273 or PHY 252
- COM 231 or COM 233
- CSC 148, CSC 151, CSC 134, or CSC 136

MECHANICAL ENGINEERING
- DFT 170 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or MAT 285 or PHY 252
- CSC 134 or CSC 136

MECHANICAL ENGINEERING SYSTEMS (HAVLOCK)
- DFT 170 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or MAT 285 or PHY 252
- CSC 134 or CSC 136

MECHATRONICS (UNC-ASHEVILLE)
- ECO 251 or EGR 150 or EGR 220 or MAT 273 or PHY 252

NUCLEAR ENGINEERING
- CSC 136 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or MAT 285 or PHY 252
- COM 231, COM 233, COM 252, FL_111, FL_112, or FL_221

NOTE: FL_111, 112, 221: Any foreign language at the 111, 112, and 221 level

PAPER SCIENCE AND ENGINEERING
- CHM 251 or CHM 252 or ECO 251 or EGR 150
- MAT 273 or MAT 285 or PHY 252
- CHM 136 or CHM 152

TEXTILE ENGINEERING
- DFT 170 or ECO 251 or EGR 150 or EGR 220
- MAT 273 or MAT 285 or PHY 252
- CSC 134 or CHM 152

Visit bit.ly/1h8eAA for more information.
COURSE DESCRIPTIONS

ACC 121 (ACC 200)
Principles of Accounting II

*AST 111 (PY 123)
Descriptive Astronomy

*AST 151 (PY 123)
General Astronomy I

AST 152 (PY 124)
General Astronomy II

*BIO 110 (BIO 105)
Principles of Biology

*BIO 111 (BIO 183)
General Biology I

*BIO 112 (BIO 181)
General Biology II

BIO 120 (PB 200)
Introductory Botany

BIO 145 (PB 200)
Ecology

BIO 163 (BIO 212)
Basic Anatomy and Physiology

BIO 165 (BIO 212)
Anatomy and Physiology I

BIO 168 (BIO 212)
Anatomy and Physiology I

BIO 221 (PB 200)
Botany I

BIO 243 (MEA 220)
Marine Biology

CHM 132 (CH 220)
Organic/Biochemistry

CHM 135 (CH 101 + 102)
Survey of Chemistry I

CHM 136 (CH 201+202)
Survey of Chemistry II

*CSC 148 or CSC 151
(CSC 116)
Java

DFT 170 (GC 120)
Engineering Graphics

*ECO 251 (EC 201)
Principles of Microeconomics

CHM 151 (CH 101 + 102)
General Chemistry I

CHM 152 (CH 201 + 202)
General Chemistry II

CHM 251 (CH 221+222)
Organic Chemistry I

CHM 252 (CH 223+224)
Organic Chemistry II

*COM 231 (COM 110)
Public Speaking

*COM 233 (COM 110)
Persuasive Speaking

COM 252 (COM 211)
Debate II

CSC 134 (CSC 114)
C++ Programming

CSC 136 (CSC 112)
FORTRAN Programming

*CSC 148 or CSC 151
(CSC 116)
Java

*GEL 111 (MEA 101 + 110)
Introductory Geology

GEL 113 (MEA 202 + 211)
Historical Geology

GEL 120 (MEA 101 + 110)
Physical Geology

GEL 230 (MEA 300)
Environmental Geology

JOU 216 (ENG 215)
Writing Mass Media

*MAT 271 (MA)
Calculus I

MAT 272 (MA)
Calculus II

MAT 273 (MA 242)
Calculus III

MAT 280 (MA 305)
Linear Algebra

MAT 285 (MA 341)
Differential Equations

PHS 140 (MEA 130)
Weather and Climate

*Universal General Education Transfer Component (UGETC) courses (see FAQs)
Each NC State student must complete the General Education Program (GEP) requirements. These courses are designed to offer graduates the opportunity to experience diverse and integrative disciplinary perspectives. GEP courses enhance intellectual engagement and prepare students for lifelong learning and the demands of professional careers.

NC State’s GEP is divided into several categories. However, within engineering degrees, courses within certain categories will already be selected. When College of Engineering faculty/staff refer to “GEP courses,” they are referring to the sub-section of the GEP wherein engineering students have choices — a total of seven courses, labeled on the following page ( ).

Along with those seven courses, engineering students must also fulfill two corequisites — US Diversity (USD) and Global Knowledge (GK). The corequisites can be fulfilled by taking courses within the broad GEP categories designated as USD or GK.

REMEMBER:
Throughout this section, keep in mind that NC State course numbers will be in red. North Carolina community college course numbers will be in bold. Also please note that Universal General Education Transfer Component (UGETC) courses are denoted with an asterisk (see FAQs).
GEP REQUIREMENTS - COURSE OPTIONS

2 Health and Exercise Sciences
1. PED 110, 115, 120, 154, or 155

Select two from different disciplines:

All engineering students must take
ECO 251 and one of the following:

Select from humanities listings above, social science listings above, or
ECO 252, COM 231, COM 233, *MUS 110GK

Selecting courses above designated as USD or GK also fulfills the respective corequisite. Please note that some engineering curricula also have an ethics corequisite. These ethics courses must be taken at NC State with the following exceptions: PHI 240 (humanities) will fulfill the ethics corequisite for MSE and HUM 110 (interdisciplinary perspectives) will fulfill the ethics corequisite for IE.

Please visit bit.ly/1hs4uAY for a complete list of course equivalencies.

NOTE: Universal General Education Transfer Component (UGETC) courses are denoted with an asterisk (see FAQs).
1. Does meeting the transfer requirements guarantee admission into the College of Engineering?
No. Admission to the College of Engineering is very competitive. The transfer requirements should be viewed as the minimum standard by which an applicant becomes eligible for review. Prospective students should always try to achieve the highest possible GPA to be as competitive as possible in the admissions process.

2. As a transfer applicant, do I need to take the ACT or SAT?
No. ACT/SAT scores are not required for transfer applicants.

3. How is my transfer GPA calculated?
College-level work must be completed with a C- or better to be considered for transfer credit. Work completed in technical programs is not considered for transfer credit or GPA calculation. The Office of Admissions at NC State will calculate a transfer GPA comprised of all transferable courses attempted, neglecting +/- modifiers (ex. B credit awarded instead of B- credit) in the calculations. Courses repeated at previous institutions are calculated with the original grades earned. The Office of Admissions at NC State will exclude the two lowest grades below a C when calculating the overall transfer GPA from all colleges attended outside of NC State. Please note that +/- modifiers remain on the student record. While C- grades are sufficient for NC State transfer credit, keep in mind that C- grades may not be sufficient to fulfill certain engineering degree requirements.

4. Can AP/IB credit be used to satisfy the 30 credit hour minimum requirement to be eligible for transfer?
No. Only courses taken at another institution will contribute to the 30 credit hour minimum required for eligibility to transfer.
TRANSFER CREDIT

1. Can I receive AP/IB credit as a transfer student?
Yes. All AP or IB scores should be sent directly from the testing agency and, if admitted, NC State credit will be awarded according to the charts provided at admissions.ncsu.edu/apply/credit-opportunities.

2. Does work experience or military experience count as transfer credit?
No. Neither work experience nor military experience counts toward transfer credits.

3. I have coursework outside the North Carolina Community College System. How will it transfer?
The Office of Admissions maintains a transfer equivalency database where students may map their previous coursework over to NC State course numbers: bit.ly/1h8eAAY

4. Can I transfer credit for E 115?
No. This course must be taken at NC State since it is an introduction to our computing and networking system.

5. Can I transfer credit for E 101?
Yes. While transfer credit for E 101 is not required for admission, EGR 150 from the North Carolina Community College System can fulfill the E 101 engineering degree requirement for graduation.

6. How long will I be at NC State?
Each engineering program is comprised of a critical path of engineering courses. The prerequisite structure for these courses and semester-specific course availability determine the length of stay at NC State. The chart below provides a summary of total engineering program credit hours, the maximum credit hours that can be acquired at a North Carolina community college, and the minimum credit hours that must be acquired at NC State for an engineering degree. Please note that this summary applies only to students with North Carolina community college transfer credit.

ATTENDING NC STATE AS A NON-DEGREE STUDENT

1. Can I start at NC State before officially transferring into an engineering program?
NC State offers a non-degree studies (NDS) program (www.ncsu.edu/nds). NDS students are limited to two courses per semester and enrollment is not guaranteed; only if space remains in classes are NDS students permitted to enroll, pending class and course permissions/restrictions.

2. Should I attend NC State as a non-degree studies (NDS) student?
There are advantages and disadvantages. An advantage might be an opportunity to take an engineering course that serves as a prerequisite for a number of other engineering courses. For example, a student who is able to enroll in CHE 205 as an NDS student would meet the prerequisite to enroll in CHE 225 the following semester. If accepted as a degree-seeking chemical engineering student for the fall, this strategy would enable the student to finish out the chemical engineering degree over the following four semesters as a degree-seeking student. If this student was not able to acquire CHE 205 and CHE 225 prior to becoming a degree-seeking chemical engineering student, the student would stay at NC State for six semesters as a degree-seeking student.

A disadvantage of taking courses at NC State as an NDS student is that this would be starting a brand new GPA that is highly visible to engineering departments. It is not unusual for some older transfer students to have some lower grades on their academic record. Hopefully, these grades are overshadowed by a stronger recent performance (at least so much so that the transfer GPA is greater than 3.0). However, should a prospective transfer student stumble in an NC State course while taking it as an NDS student, it is highly unlikely that there would be enough NDS coursework to overshadow the poor grade. All caution should be taken when choosing to enroll as an NDS student. Please see the NDS web page for details on enrolling and NDS policies.
1. What is a UGETC course?
Universal General Education Transfer Component (UGETC) courses are courses offered at every North Carolina community college that are also accepted as transfer credit at every UNC system institution. The courses listed in this guide are all transferrable to NC State, but no guarantee can be made that they are transferrable to other institutions. UGETC courses are marked to aid you in planning should you consider other institutions in the UNC system.

2. Should I finish my Associate in Arts or Associate in Science degree?
Each prospective transfer student should make a choice based on their own situation. The advantage of completing an Associate in Arts or Associate in Science at a North Carolina community college is that NC State will award credit as described by the Comprehensive Articulation Agreement (CAA). Specifically, credit is awarded for all General Education Program (GEP) courses, regardless of how/if the transferred coursework fills the specific NC State requirements (ex. humanities, social sciences, etc.). Completing GEP coursework is unlikely to reduce the overall time spent at NC State; see FAQ: How long will I be at NC State? Also, it is important to note that while NC State GEP requirements may be considered complete, engineering degree requirements still remain. For example, NC State requires that all graduates have two social sciences. The College of Engineering requires that all graduates have economics (ECO 251 at a North Carolina community college). Therefore, one of the social sciences must be economics for engineering students.

3. What is the fine print of the Comprehensive Articulation Agreement (CAA)?
- No more than 14 credit hours of the Associate in Arts or Associate in Science from the North Carolina community college system may originate outside of the North Carolina Community College System.
- The North Carolina community college transcript must show that the AA or AS was conferred. For more information, review the CAA at: http://bit.ly/1oynzi8
NC State University is an equal opportunity and affirmative action employer and is dedicated to equality of opportunity within its community. Accordingly, NC State University does not practice or condone discrimination, in any form, against students, employees, or applicants on the grounds of race, color, national origin, religion, sex, sexual orientation, age, veteran status, or disability. NC State University commits itself to positive action to secure equal opportunity regardless of those characteristics.

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