Welcome to New Student Orientation!

Go ahead — give yourself a round of applause. You’ve done a wonderful job in high school, excelling both inside and outside the classroom. Now, it’s time to begin the next chapter of your life as you pursue a degree in engineering.

From the moment you begin New Student Orientation to the time you turn your tassel at graduation, dedicated faculty and staff are here to remind you that your success is our number one goal. Our students don’t journey alone.

To get you started, we’ve filled this handbook with helpful resources, suggestions and answers to frequently asked questions. Please hold on to this packet and use it as a reference as you progress through your first year.

Inside, you will find information that will help you prepare for your first meeting with an advisor, identify questions that you should be asking and learn more about what to expect during your first year at NC State.

It may seem like you’re receiving an overwhelming amount of information over the next few days; however, we encourage you to hang in there. Remember, we’ll be with you every step of the way.

We can’t wait to see how you’ll make a difference.

Best wishes for a successful fall semester!

The NC State Engineering Team

Student success — your success — is our number one priority.
Welcome to NC State!

You have arrived on campus at an exciting time for the College of Engineering. There are big shoes to fill. The students who have come before you have gone on to become CEOs, astronauts and leading researchers. They have turned their ideas into life-changing products through undergraduate research and senior design projects. They study and serve abroad, representing the College and becoming globally minded problem solvers. Now, it’s your turn.

Our faculty and staff are fully engaged in preparing you — the next generation of engineers — to solve the Grand Challenges for Engineering for the 21st century identified by the National Academy of Engineering. They include vital tasks like providing access to clean water, securing cyberspace, restoring urban infrastructure and engineering better medicines.

You have been accepted into one of the top colleges of engineering in the nation. NC State is one of only two colleges of engineering in the country to lead two National Science Foundation Engineering Research Centers — the FREEDM Systems Center and the ASSIST Center — at once. Our faculty members are playing a major role leading the new Next Generation Power Electronics National Manufacturing Innovation Institute, which will spur the development of wide bandgap semiconductor technology.

Our faculty and students are developing a smarter power grid and inventing wearable health monitoring systems. They are tackling cancer, working to keep nuclear weapons out of the wrong hands and improving sanitation in the Third World. If being in the middle of this kind of important work sounds like fun, you have come to the right place.

Ahead of you are challenging courses taught by leading faculty that will inspire you and help you to think differently. It will mean long hours and intense studying, but you’ll come away with an engineering degree that will prepare you for whatever awaits you in the next phase of your life.

While you are here, I encourage you to enjoy everything that college life has to offer, including the chance to make lifelong friends. You’ll be spending the next few years in an area acknowledged on many lists and by many publications as one of the best in the United States in which to live. Centennial Campus and the amazing James B. Hunt Jr. Library are some of the best university facilities in the world.

From internships to study-abroad and service opportunities, your time on campus is sure to help you develop your full potential.

It’s a transformative journey, and it all starts here.

Louis A. Martin-Vega, Ph.D., P.E.
Dean
ACADEMIC ADVISORS

AEROSPACE ENGINEERING
Cheryl Tran
ccheryl_tran@ncsu.edu
919.513.7687
3205 Engineering Building III

ACADEMIC ADVISORS

CONSTRUCTION ENGINEERING
Dr. Tarek Aziz
tnaziz@ncsu.edu
919.515.1562
203B Mann Hall

ENGINEERING (GENERAL)
Dr. Mary Clare Robbins
mrobbins@ncsu.edu
919.515.3263
118 Page Hall

MECHANICAL ENGINEERING
Cheryl Tran
cheryl_tran@ncsu.edu
919.513.7687
3205 Engineering Building III

BIological ENGINEERING
Dr. Andy Hale
andy_hale@ncsu.edu
919.515.6760
108 Weaver Hall

ELECTRICAL ENGINEERING
Cecilia W. Townsend
cwt@ncsu.edu
919.515.5087
3006 Engineering Building II

NUCLEAR ENGINEERING
Lisa Marshall
lisa.marshall@ncsu.edu
919.515.5876
3150 Burlington Labs

CHEMICAL AND BIOMOLECULAR ENGINEERING
Dr. Lisa G. Bullard
lisa_bullard@ncsu.edu
919.515.7455
2012 Engineering Building I

PAPER SCIENCE AND ENGINEERING
Dr. Med V. Byrd Jr.
med_byrd@ncsu.edu
919.515.5790
2205 Biltmore Hall

CIVIL ENGINEERING
Dr. Tarek Aziz
tnaziz@ncsu.edu
919.515.1562
203B Mann Hall

TEXTILE ENGINEERING
Liz Moran
liz_moran@ncsu.edu
919.515.0030
3404 College of Textiles

COMPUTER ENGINEERING
Cecilia W. Townsend
cwt@ncsu.edu
919.515.5087
3006 Engineering Building II

Dr. Jeff Joines
jeffjoines@ncsu.edu
919.515.4188
3251 College of Textiles

COMPUTER SCIENCE
Dr. Barbara Jasmine Adams
barbara_adams@ncsu.edu
919.513.7888
1204 Engineering Building II

ENVIRONMENTAL ENGINEERING
Dr. Tarek Aziz
tnaziz@ncsu.edu
919.515.1562
203B Mann Hall

Heather Murphy Lyerly
heather_lyerly@ncsu.edu
919.515.1177
3405 College of Textiles

INDUSTRIAL AND SYSTEMS ENGINEERING
Dr. Anita R. Vila-Parrish
arvila@ncsu.edu
919.515.0605
410 Daniels Hall

MATERIALS SCIENCE AND ENGINEERING
Dr. Cheryl Parzel Cass
cheryl_cass@ncsu.edu
919.515.2479
3002B Engineering Building I

Heather Murphy Lyerly
heather_lyerly@ncsu.edu
919.515.1177
3405 College of Textiles
ASSIGNMENT OF ACADEMIC ADVISORS

- The College of Engineering seeks to assign advisors by mid-August. If you have questions between now and then you can contact the appropriate coordinator of advising found on the previous page.
- Academic advisors, once assigned, can be found within MyPack Portal.
- Advisors are assigned based on your engineering interest, as listed in your NC State application. Undecided students will see academic advisors in College of Engineering Academic Affairs.
- Please note that you may request an advisor change as your interests evolve. Requests should be made only after you are confident in your decision.
- General College of Engineering advisors are always available to assist you in 118 Page Hall, 919.515.3263, engineering@ncsu.edu.

THE ADVISING PROCESS

<table>
<thead>
<tr>
<th>STUDENT RESPONSIBILITIES</th>
<th>ADVISOR RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Plan programs of study and meet graduation requirements (specifics to follow);</td>
<td>■ Be available for conferences at appropriate times and places;</td>
</tr>
<tr>
<td>■ Keep up to date with university, school and department curriculum requirements through materials available from faculty advisors, your departmental coordinator of advising, and/or NC State's Registration and Records;</td>
<td>■ Provide accurate information about academic regulations and procedures, course prerequisites and graduation requirements;</td>
</tr>
<tr>
<td>■ Remain informed of academic deadlines and changes in academic policies as updated in the NC State policies, rules and regulations website;</td>
<td>■ Assist students in planning academic programs suited to their interests, abilities and career objective(s);</td>
</tr>
<tr>
<td>■ Consult with advisors at each pre-registration period and other times as needed;</td>
<td>■ Discuss with their advisees appropriate course choices in fulfilling curriculum requirements as well as possible consequences of alternative course choices;</td>
</tr>
<tr>
<td>■ Arrive at appointments prepared with any required paperwork/forms; and</td>
<td>■ Inform their advisees when their proposed course selections conflict with university academic or curricular regulations;</td>
</tr>
<tr>
<td>■ Check degree audits before and after enrollment and each semester to track progress through the degree.</td>
<td>■ Assist advisees with following proper procedures or various exceptions (e.g., registering for more than 18 hours, repeating a course);</td>
</tr>
<tr>
<td></td>
<td>■ Refer their advisees for special testing or counseling as needed; and</td>
</tr>
<tr>
<td></td>
<td>■ Assist their advisees in considering the appropriateness of academic adjustments where these become necessary in cases of serious injury or illness.</td>
</tr>
</tbody>
</table>
CHECKLIST | FALL 2016

July

☑ New Student Orientation
☐ Learn about your engineering program
   www.engr.ncsu.edu/academics/undergrad/firstyear
☐ Register for fall classes
   https://registrar.ncsu.edu/calendars/academic/#fall

August

☐ Finalize your fall schedule
☐ Participate in Wolfpack Welcome Week
☐ Begin the first day of the fall semester
☐ Attend the 16th Annual College of Engineering Welcome (mandatory, unless class schedule conflict exists)
☐ Join a student organization
   students.engr.ncsu.edu/orgs
☐ Apply for Alternative Service Break
   (Ex: Engineering Village ASB to Nicaragua)
☐ Submit First Year Writing Portfolio if eligible

September

☐ Apply for externships
   careers.ncsu.edu
☐ Tutoring
☐ Apply to study abroad in Summer 2017
   studyabroad.ncsu.edu
☐ Begin CODA application
☐ Attend the NC State Engineering Career Fair
   students.engr.ncsu.edu/careerfair

October

☐ Apply for an internship and/or Co-op
   careers.ncsu.edu
☐ Participate in an externship
☐ Seek academic advising for spring
☐ Pre-register for spring classes

NO CLASSES: FALL BREAK

November

☐ Participate in Freshman Engineering Design Day
   www.engr.ncsu.edu/academics/undergrad/firstyear/fedd
☐ Apply for the Caldwell Fellows Program
☐ Submit CODA application (by Dec. 1)
   www.engr.ncsu.edu/academics/undergrad/coda

NO CLASSES: THANKSGIVING

December

☐ Apply for an on-campus job
☐ Apply to the Engineering Ambassadors team
☐ Apply for College of Engineering scholarships
   www.engr.ncsu.edu/academics/undergrad/scholarships
☐ Review exam calendar
   https://registrar.ncsu.edu/calendars/exam

NO CLASSES: LABOR DAY
KEY TERMS

AUDIT: a grading option that allows you to sit in on a class; results in an AU (audit) or NR (no recognition) grade on your transcript; under no circumstance will an audited course count toward any degree requirement.

C WALL: courses identified as “C wall” must be completed with a C or better.

C- WALL: courses identified as “C minus wall” must be completed with a C- or better.

CENSUS DATE: last day to add a course (requires instructor permission). Last day for tuition refunds due to dropping a course or changing from credit to audit. Last day for undergraduate students to drop below 12 hours or to drop a course without a W grade. This date is the 10th day of classes for fall/spring and 3rd day of classes in summer sessions.

CHANGE OF DEGREE AUDIT (CODA): also known as Change of Degree Application, is the process by which an Engineering First Year student joins an engineering department.

COREQUISITE: a course that must be taken simultaneously (or prior to) another course; for example, E 115 and MA 141 are corequisites of CSC 112 (Fortran), meaning that a student must take E 115 and MA 141 either concurrently or prior to starting CSC 112.

COURSE/SECTION RESTRICTIONS: criteria limiting who can enroll in certain classes/sections of a course; for example, STS 302H in the fall semester is restricted to Benjamin Franklin Scholars. Click on the word “restriction” to see how the course is restricted.

CREDIT HOUR: a measure of the academic “value” of a course; to be full time, a student must be enrolled in 12 credit hours per semester; to be in compliance with the university’s Academic Progress Policy, a student must pass at least 2/3 of all credit hours attempted each academic year.

CREDIT ONLY: a grading option that allows you to earn satisfactory/unsatisfactory (S/U) instead of a letter grade; courses taken as credit only do not affect your NC State GPA. Within engineering curricula, only E 115 and HES (physical education) courses may be taken as credit only and still count toward degree requirements. Consult an advisor before switching to credit-only grading.

DEGREE AUDIT: a personal record of your progress toward graduation; the listing includes courses that are complete (denoted with a green check), in progress (denoted with a yellow diamond), planned (denoted with a blue star) and not yet complete (denoted with a red x).

ENGINEERING AMBASSADOR (EA): upper-class engineering students who support the College of Engineering. Ambassadors may serve as co-presenters at College information sessions or hosts at the College’s Explore Engineering; all sections of E 101 will have Engineering Ambassadors serving as teaching assistants (TA).

ENGINEERING FIRST YEAR (EFY): all incoming freshmen are designated as EFY students until they CODA to join an engineering department; you may only remain an EFY student for a maximum of four semesters before joining a department.

ENROLLMENT DATE: the earliest date and time that you are eligible to register for courses for the upcoming semester(s); plan to meet with your advisor prior to your enrollment date (listed in MyPack Portal).

GENERAL EDUCATION PROGRAM (GEP): courses that fulfill university graduation requirements; categories include math, science, humanities, social sciences, interdisciplinary perspectives, English composition, foreign language, and health/exercise sciences (PE). A summary of GEP options available to engineering students can be found in this booklet and online.

MYPACK PORTAL: the online student information system where you can monitor your classes, grades, progress toward degree, financial aid, parental access, etc. Access MyPack Portal at www.ncsu.edu by clicking on the red “Resources” tab at the top of the page.

PREREQUISITE: a course that must be taken prior to another course; for example, MA 141 is a prerequisite to MA 241, meaning that a student must have already passed or have credit for MA 141 prior to starting MA 241.

WAITLIST: a list of students waiting to gain entrance into a course; there is no guarantee of enrollment in the course.

WITHDRAWAL: withdrawing/dropping a course after census date will result in a “W” reported on transcript.
DEGREES
<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>DEGREE</th>
<th>CONCENTRATION (optional)</th>
<th>SPECIALIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGICAL AND AGRICULTURAL ENGINEERING (BAE)</td>
<td>Biological Engineering (BE)</td>
<td>AgrCultural Bioprocess Ecological Environmental</td>
<td>—</td>
</tr>
<tr>
<td>BIOLOGICAL AND AGRICULTURAL ENGINEERING (BAE)</td>
<td>Biomedical Engineering (BME)</td>
<td>—</td>
<td>Biomaterials Bioinstrumentation Biomechanics</td>
</tr>
<tr>
<td>CHEMICAL AND BIOMOLECULAR ENGINEERING (CBE)</td>
<td>Chemical Engineering (CHE)</td>
<td>Biomanufacturing Science Biomolecular Honors Nanoscience Sustainable Engineering, Energy and Environment</td>
<td>—</td>
</tr>
<tr>
<td>COMPUTER SCIENCE (CSC)</td>
<td>Computer Science (CSC)</td>
<td>Game Development</td>
<td>—</td>
</tr>
<tr>
<td>FOREST BIOMATERIALS (FB)</td>
<td>Paper Science and Engineering (PSE)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>INDUSTRIAL AND SYSTEMS ENGINEERING (ISE)</td>
<td>Industrial Engineering (IE)</td>
<td>—</td>
<td>Health Systems (Certificate Program)</td>
</tr>
<tr>
<td>MATERIALS SCIENCE AND ENGINEERING (MSE)</td>
<td>Materials Science and Engineering (MSE)</td>
<td>Biomaterials Nanomaterials</td>
<td>—</td>
</tr>
<tr>
<td>MECHANICAL AND AEROSPACE ENGINEERING (MAE)</td>
<td>Aerospace Engineering (AE) Mechanical Engineering (ME)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>NUCLEAR ENGINEERING (NE)</td>
<td>Nuclear Engineering (NE)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>TEXTILE ENGINEERING, CHEMISTRY AND SCIENCE (TECS)</td>
<td>Textile Engineering (TE) (concentration required)</td>
<td>Chemical Processing Information Systems Product Engineering</td>
<td>—</td>
</tr>
</tbody>
</table>

www.engr.ncsu.edu/academics/undergrad/curricula
CHANCE OF DEGREE AUDIT (CODA)

All freshmen admitted to the College of Engineering enter as Engineering First Year (EFY) students. This designation allows students time to make an informed decision about which engineering major they would like to pursue in the College.

EFY students are eligible to join an engineering department through the Change of Degree Audit (CODA) process after they have completed the required courses. Students earning the minimum grades listed below and meeting other EFY program and University requirements are guaranteed a seat in one of the engineering departments at NC State. All programs will review academic performance in determining CODA admissions.

OFFICIALLY JOINING A DEPARTMENT

STEP 1: COMPLETE REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 101 + 102</td>
<td>C or better</td>
</tr>
<tr>
<td>MA 141</td>
<td>C or better</td>
</tr>
<tr>
<td>MA 241</td>
<td>C or better</td>
</tr>
<tr>
<td>PY 205 + 206</td>
<td>C or better</td>
</tr>
<tr>
<td>ENG 101</td>
<td>C- or better</td>
</tr>
<tr>
<td>E 101</td>
<td>C- or better</td>
</tr>
<tr>
<td>E 115</td>
<td>S</td>
</tr>
</tbody>
</table>

STEP 2: APPLY FOR A SEAT IN A DEPARTMENT

www.engr.ncsu.edu/academics/undergrad/coda
## FALL SCHEDULE

**GENERALLY SPEAKING, AN EFY STUDENT’S FALL SEMESTER WILL INCLUDE:**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGINEERING (E 101)</td>
<td>1 credit</td>
</tr>
<tr>
<td>MATH (MA _)</td>
<td>4 credits</td>
</tr>
<tr>
<td>CHEMISTRY (CH _) OR PHYSICS (PY _)</td>
<td>4 credits</td>
</tr>
<tr>
<td>ENGLISH (ENG 101) OR [ECONOMICS (EC _) AND E 115]</td>
<td>4 credits</td>
</tr>
<tr>
<td>GENERAL EDUCATION PROGRAM (GEP)</td>
<td>3 credits</td>
</tr>
<tr>
<td>SPECIAL GROUP COURSE (EXAMPLES: USP, HON, MUS, USC, STS)</td>
<td></td>
</tr>
<tr>
<td>SPECIAL INTEREST COURSE (EXAMPLES: FL, HES _)</td>
<td></td>
</tr>
</tbody>
</table>

**GOAL = 15-17 credits**

While the College of Engineering has attempted to select and enroll students in the appropriate courses for the fall, each student is responsible for making his/her own schedule. **Since all engineering degrees require the courses below, this is a great place to start when evaluating your fall schedule.**

- E 101 – Introduction to Engineering and Problem-Solving *(must be taken in the fall)*
- E 115 – Introduction to Computing Environments
- ENG 101 – Academic Writing and Research
- CH 101 – Chemistry: A Molecular Science
- CH 102 – General Chemistry Laboratory
- MA 141 – Calculus I
- MA 241 – Calculus II
- MA 242 – Calculus III
- PY 205 – Physics for Engineers and Scientists I
- PY 206 – Physics for Engineers and Scientists I Laboratory
- PY 208 – Physics for Engineers and Scientists II
- PY 209 – Physics for Engineers and Scientists II Laboratory
- GEP courses *(includes economics)*
ENGINEERING | E 101 AND E 115

E 101 – INTRO TO ENGINEERING AND PROBLEM SOLVING
You must take this course during the fall semester. You should be enrolled in a lab and practicum.

E 115 – INTRO TO COMPUTING ENVIRONMENTS
Taken for “credit only” (pass/fail) grading. Corequisite for computer science courses. Credit-by exam offered early in the semester.

www.engr.ncsu.edu/academics/undergrad/firstyear

FIRST-YEAR WRITING PROGRAM | ENG 101

All NC State students must take ENG 101 – Academic Writing and Research, have transferable credit or have received credit by having sufficient scores via the following exams: SAT Critical Reading, the ACT Reading, ACT English, AP Language and Composition, or higher level IB English A1/A2 exam along with IB diploma. Review the charts below to determine your English Composition placement and credit information.

First-Year Writing Program
Department of English
221 Tompkins Hall
919.515.3866

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Credit Awarded (CR)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT Critical Reading</td>
<td>700-740</td>
<td>—</td>
<td>portfolio eligible*</td>
</tr>
<tr>
<td></td>
<td>750-800</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>ACT Reading &amp; ACT English</td>
<td>≥ 33 Reading</td>
<td>—</td>
<td>portfolio eligible*</td>
</tr>
<tr>
<td></td>
<td>28-32 English</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 33 English</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>AP English Language &amp; Composition</td>
<td>4</td>
<td>—</td>
<td>portfolio eligible*</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>IB Higher Level English (A1/A2)</td>
<td>3-4 (with diploma)</td>
<td>—</td>
<td>portfolio eligible*</td>
</tr>
<tr>
<td></td>
<td>5-7 (with diploma)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>North Carolina Community Colleges</td>
<td>Any two of the following: ENG 111, ENG 112, ENG 113, or ENG 114</td>
<td>ENG 101</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Any one of the following: ENG 111, ENG 112, ENG 113, or ENG 114</td>
<td>—</td>
<td>enroll in ENG 105*</td>
</tr>
</tbody>
</table>

*eligible to submit portfolio for review
*students should complete online self-placement assessment before enrolling in ENG 105

Are you ready? If you are unsure of your readiness to begin in ENG 101, see ENG 100/101 self-assessment questionnaire.

english.chass.ncsu.edu/undergraduate/first_year_writing
CHEMISTRY | CH 101 AND CH 102

The Department of Chemistry requires that all students demonstrate their chemistry background before being allowed to enroll in CH 101 – Chemistry: A Molecular Science. Most students are required to demonstrate their preparation for CH 101 with the NC State Chemistry Placement Exam (CPE). **A student may not enroll in CH 101 without taking the CPE.** Chemistry credit and placement information can be found in the chart below.

Department of Chemistry
Dr. Greg Neyhart
208 Dabney Hall
919.513.2585
gneyhart@ncsu.edu

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Credit Awarded (CR)</th>
<th>Enrollment Option(s)*</th>
<th>CODA Credentials CH 101</th>
<th>CH 102</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC State Chemistry Placement Exam (CPE)</td>
<td>CPE &lt; 15</td>
<td>—</td>
<td>enroll in CH 111</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>15 ≤ CPE ≤ 18</td>
<td>—</td>
<td>enroll in CH 101+102 (reduced load)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>CPE ≥ 19</td>
<td>—</td>
<td>enroll in CH 101+102</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>AP Chemistry</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>CH 101+102</td>
<td>consult advisor</td>
<td>C+</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>CH 101+102 CH 201+202</td>
<td>consult advisor</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>CH 101+102 CH 201+202</td>
<td>consult advisor</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>IB Higher Level Chemistry</td>
<td>5</td>
<td>CH 101+102</td>
<td>consult advisor</td>
<td>C+</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>CH 101+102 CH 201+202</td>
<td>consult advisor</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>CH 101+102 CH 201+202</td>
<td>consult advisor</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>North Carolina Community Colleges</td>
<td>CHM 115</td>
<td>CH 101</td>
<td>consult advisor</td>
<td>CHM 115 grade</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>CHM 131+131A</td>
<td>CH 101+102</td>
<td>consult advisor</td>
<td>CHM 131 grade</td>
<td>CHM 131A grade</td>
</tr>
<tr>
<td></td>
<td>CHM 135</td>
<td>CH 101+102</td>
<td>consult advisor</td>
<td>CHM 135 grade</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>CHM 151</td>
<td>CH 101+102</td>
<td>consult advisor</td>
<td>CHM 151 grade</td>
<td>A</td>
</tr>
</tbody>
</table>

*You may decline higher placement and enroll in a lower level.

www.ncsu.edu/chemistry/classes/cpe.html

Not sure? Students with transferable or AP credit for CH 101 **do not** need to take the exam if they do not intend to enroll in CH 101 at NC State.
The Department of Mathematics requires that all students demonstrate their math proficiency before being allowed to enroll in a math course at NC State. Students may demonstrate proficiency with the following:

- The SAT Math Level Two Subject Test
- A score of 2 or better on the College Board AP Calculus exam
- Transferable math credits that serve as the necessary prerequisites
- The NC State Placement test (available online)

Math credit and placement information can be found in the chart below. If you do not have a math indicator, you will not be allowed to register for a math course, which could result in a math placement not representative of your ability. The delay may also impede the formation of your fall schedule.

Dr. Molly Fenn  
Coordinator of Classroom Instruction  
3230 SAS Hall  
919.513.2288  
mafenn2@ncsu.edu

<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Credit Awarded (CR)</th>
<th>Enrollment Option(s)*</th>
<th>CODA Credentials MA 141</th>
<th>MA 241</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT Math Level II Subject Test or NC State Math Placement Test</td>
<td>450-470</td>
<td>—</td>
<td>enroll in MA 107</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>480-540</td>
<td>—</td>
<td>enroll in MA 111</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>550-800</td>
<td>—</td>
<td>enroll in MA 141</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>AP Calculus AB</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>—</td>
<td>enroll in MA 141</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>conditional MA 141</td>
<td>enroll in MA 241</td>
<td>conditional C+</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>MA 141</td>
<td>enroll in MA 241</td>
<td>B</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>MA 141</td>
<td>enroll in MA 241</td>
<td>A</td>
<td>—</td>
</tr>
<tr>
<td>AP Calculus BC</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>conditional MA 141</td>
<td>enroll in MA 241</td>
<td>conditional C+</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>MA 141</td>
<td>option 1: enroll in MA 241</td>
<td>B (or MA 241 grade, whichever is higher)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MA 141+ conditional MA 241</td>
<td>option 2: enroll in MA 242</td>
<td>conditional B</td>
<td>conditional MA 242 grade</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>MA 141+ MA 241</td>
<td>option 1: enroll in MA 241</td>
<td>A- (or MA 241 grade, whichever is higher)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>option 2: enroll in MA 242</td>
<td>—</td>
<td>—</td>
<td>C+ (or MA 242 grade, whichever is higher)</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>MA 141+ MA 241</td>
<td>enroll in MA 242</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>IB Higher Level Math</td>
<td>5</td>
<td>conditional MA 141</td>
<td>enroll in MA 241</td>
<td>C+</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>conditional MA 141</td>
<td>enroll in MA 241</td>
<td>B</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>conditional MA 141</td>
<td>enroll in MA 241</td>
<td>A</td>
<td>—</td>
</tr>
<tr>
<td>North Carolina Community Colleges</td>
<td>MAT 271</td>
<td>conditional MA 141</td>
<td>enroll in MA 241</td>
<td>MAT 271 grade</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>MAT 272</td>
<td>MA 241</td>
<td>enroll in MA 242</td>
<td>MAT 271 grade (or AP/IB score if applicable)</td>
<td>MAT 272 grade</td>
</tr>
</tbody>
</table>
| | MAT 273 | MA 242 | consult advisor | MAT 271 grade (or AP/IB score if applicable) | MAT 272 grade (or AP/IB score if applicable)

*You may decline higher placement and enroll in a lower level.

Visit [https://www.math.ncsu.edu/courses/](https://www.math.ncsu.edu/courses/) to watch a lecture from MA 141 or MA 241. Example exams are also provided.
<table>
<thead>
<tr>
<th>Exam</th>
<th>Score</th>
<th>Credit Awarded (CR)</th>
<th>Enrollment Option(s)*</th>
<th>CODA Credentials PY 205</th>
<th>CODA Credentials PY 206</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Physics C: Mechanics</td>
<td>1</td>
<td>—</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>—</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>—</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>PY 205 + 206</td>
<td>enroll in PY 208 + 209</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>PY 205 + 206</td>
<td>enroll in PY 208 + 209</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>AP Physics C: Electricity and Magnetism</td>
<td>1</td>
<td>—</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>—</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>—</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>PY 208 + 209</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>PY 208 + 209</td>
<td>enroll in PY 205 + 206</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>IB Higher Level Physics</td>
<td>5</td>
<td>conditional PY 205 + 206</td>
<td>enroll in PY 208 + 209</td>
<td>conditional C+</td>
<td>conditional A</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>conditional PY 205 + 206</td>
<td>enroll in PY 208 + 209</td>
<td>conditional B</td>
<td>conditional A</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>conditional PY 205 + 206</td>
<td>enroll in PY 208 + 209</td>
<td>conditional A</td>
<td>conditional A</td>
</tr>
<tr>
<td>North Carolina Community Colleges</td>
<td>PHY 251</td>
<td>PY 205 + 206</td>
<td>enroll in PY 208 + 209</td>
<td>PHY 251 grade</td>
<td>PHY 251 grade</td>
</tr>
<tr>
<td></td>
<td>PHY 252</td>
<td>PY 208 + 209</td>
<td>enroll in PY 205 + 206 (if still needed)</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*You may decline higher placement and enroll in a lower level.

*MA 141 is a prerequisite for enrollment in PY 205 + 206. MA 241 and PY 205 + 206 are prerequisites for enrollment in PY 208 + 209.

www.physics.ncsu.edu/undergraduate
REQUIREMENTS
GENERAL EDUCATION PROGRAM (GEP)

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 you 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 below ( ).

<table>
<thead>
<tr>
<th>Category</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Mathematical Sciences</td>
<td>MA 141</td>
</tr>
<tr>
<td></td>
<td>MA 241</td>
</tr>
<tr>
<td>2 Natural Sciences</td>
<td>CH 101</td>
</tr>
<tr>
<td></td>
<td>PY 205</td>
</tr>
<tr>
<td>First-Year Writing Program</td>
<td>ENG 101</td>
</tr>
</tbody>
</table>

2 Health and Exercise Studies

1. ________
2. ________

1. ________ (different disciplines)
2. ________

1. Economics (EC 201, EC 205, ARE 201)
2. ________

1. ________
2. ________

1. ________ can be humanities, social science or visual/performing art

COLLEGE OF ENGINEERING GEP REQUIREMENTS

NC STATE GEP REQUIREMENTS

To help you select your GEP courses, the College of Engineering has prepared a form. NC State GEP Course List: oucc.dasa.ncsu.edu/general-education-program-gep/gep-category-requirements College of Engineering GEP Summary: www.engr.ncsu.edu/academics/undergrad/pdf/orientation/gep2016nso.pdf
SPECIAL INTEREST COURSES

Some students may be part of special groups with course requirements. Examples of these groups and their associated courses include the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USP 110</td>
<td>University Scholars Program (U.S.P)</td>
</tr>
<tr>
<td></td>
<td><em>U.S.P. students are strongly encouraged to also enroll in an additional Honors/Scholars course (designated with an “H”)</em></td>
</tr>
<tr>
<td>HON 202</td>
<td>University Honors Program (U.H.P)</td>
</tr>
<tr>
<td></td>
<td><em>U.H.P. students must be enrolled in an HON seminar during their first semester</em></td>
</tr>
<tr>
<td>E 144</td>
<td>Minority Engineering Programs (MEP)</td>
</tr>
<tr>
<td>STS 302H</td>
<td>Benjamin Franklin Scholars Program</td>
</tr>
<tr>
<td>MUS 131</td>
<td>Marching Band</td>
</tr>
<tr>
<td>Q Courses</td>
<td>First Year Inquiry</td>
</tr>
<tr>
<td></td>
<td><em>Courses with a “Q” are inquiry courses that have small class sizes and are designed for easy discussion and active participation. Example: HI 205Q</em></td>
</tr>
</tbody>
</table>

Some students may be considering courses outside their engineering degree requirements, such as a minor. Courses might include a foreign language (FL_) or a music performance class.

Engineering First Year students should use their registration time during orientation to make updates to their schedules including adding additional courses to achieve the recommended number of credit hours. Examples of possible updates might include swapping your current calculus course for a lower level because you want to improve your understanding before moving on, or dropping chemistry (CH 101 and CH 102) because you received your AP Chemistry score of 3 or better. Examples of adding courses might include adding an HESF 100-level course as one of the required physical education courses or enrolling in a history course to satisfy one of the humanities requirements of the General Education Program (GEP).

*Before classes start, you should aim to have 15-17 credit hours of appropriate courses in your fall semester. Review your degree audit after solidifying your schedule to be sure planned courses fulfill your expected requirements.*

MYPACK PORTAL: registrar.ncsu.edu/tutorials
FOREIGN LANGUAGE REQUIREMENT

All students at NC State must demonstrate competency at the Elementary II level in a foreign language (FL* 102) as a requirement for graduation.

Methods of demonstrating proficiency:

- At least 2 years of high school study of the same language with a C (77) or better
- NC State Foreign Language Placement Test
  - Spanish, French, Latin and German — Laundry Building computer lab
  - Other languages — contact Department of Foreign Languages and Literatures
- Transferable foreign language credit from another institution
- Advanced Placement (AP) scores
- Non-native English speakers

NOTE: Students who do not meet the proficiency requirement should take a placement test to determine where they will start at NC State if they do not wish to begin at the introductory level of a language. If a non-native English speaker’s degree audit still does not show Foreign Language Proficiency credit midway through the semester, the student should contact Dr. Dudley Marchi.

Dr. Dudley Marchi
319 Withers Hall
919.515.9283
dmm@ncsu.edu

http://fl.chass.ncsu.edu/undergraduate/placement.php

AP, IB AND TRANSFER CREDIT

Advanced Placement (AP) Credit
admissions.ncsu.edu/apply/credit-opportunities/advanced-placement-ap

International Baccalaureate (IB) Credit
admissions.ncsu.edu/apply/credit-opportunities/international-baccalaureate-ib

North Carolina Community College Equivalencies
admissions.ncsu.edu/wp-content/uploads/2013/08/CCEquiv05112015.pdf

North Carolina School of Science and Mathematics Articulation Agreement
www.acs.ncsu.edu/scripts/ugadmiss/trnsfcrs.pl

Additional Transfer Credits
www.acs.ncsu.edu/scripts/ugadmiss/trnsfcrs.pl
COMMON READING

Engineering First Year (EFY) students are strongly encouraged to read the book prior to the start of classes. Discussions and assignments related to the book may occur in your E 101 class (E 101H – honors level sections – are particularly urged to read the book). The cost of the book has been included in your New Student Orientation fee.

https://newstudents.dasa.ncsu.edu/commonreading

LIVING AND LEARNING VILLAGES
Live, Learn and Achieve

Villages are interest-based communities that engage students both inside and outside the classroom through partnerships. They enhance your learning experience by supporting and integrating students’ academic and personal development. A rich variety of villages allows you to engage in active and collaborative learning with peers, faculty and staff. Formal and informal interactions foster a sense of community, creating an intellectually stimulating environment that sets the stage for your learning and success.

Visit https://housing.dasa.ncsu.edu/villages to get the full list.
STUDENT COMPUTING

Nearly all incoming students are now bringing a wireless laptop. For additional information, see the website below.

Information Technology and Engineering Computer Services (ITECS)
Campus Box 7901
204 Daniels Hall + 1002 Engineering Building I
919.515.2458
soc-support@ncsu.edu
eoshelp@ncsu.edu

HIGH-IMPACT EXPERIENCES

High-Impact Activities are essential to your long term success. Get involved and make the most of your education, always remember: student success — your success — is our number one priority.

WORK • SERVICE • RESEARCH • INTERNATIONAL

WORK
Externships/Internships
Cooperative Education (Co-op)
careers.ncsu.edu
students.engr.ncsu.edu/careerfair

SERVICE
Center for Student Leadership Ethics and Public Service (CSLEPS)
• Service Raleigh
• Alternative Service Break
studentengagement.ncsu.edu/
your-community

INTERNATIONAL
Study abroad (summer, semesters, short-term, year)
Global Perspectives Certificate
oia.ncsu.edu | studyabroad.ncsu.edu

RESEARCH
Research Experiences for Undergraduates
Undergraduate Research Symposium
undergradresearch.dasa.ncsu.edu
SCHEDULE APPROVAL FORM
Current Course Load

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>E 101</td>
<td>Intro to Engineering</td>
<td>1</td>
</tr>
</tbody>
</table>

**My Fall Schedule**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours:**

PLANNED UPDATES/EDITS BEFORE CLASSES START (AUGUST 17)

Example: I’m going to try to SWAP my MA 141 section to section 013.

Example: I’m going to look for a humanities GEP that I like better.

I have asked all questions related to my Fall schedule. I understand that additional questions can be directed to engineering@ncsu.edu or my intended department’s coordinator of advising until my official advisor is assigned within MyPack Portal.

Student Signature __________________________ Date ________________

Initials of College of Engineering Personnel __________________________
SCHEDULING TIPS

You will have an opportunity to make changes to your fall schedule beginning at orientation and continuing until your first day of class. As you adjust your schedule based on the academic advising you have received at orientation, your personal educational background and goals, and preferences regarding times, etc. we hope you will seek out resources when needed.

WHO TO CONTACT:
- When a class requires “Departmental Approval/Permission” to add = Call the department offering the class; contact information can be found on departmental websites.
- When a class requires “Instructor Approval/Permission” to add = Call or email the instructor teaching the course; contact information can be found on NCSU directory.
- When deciding whether to add or drop a class = if you have questions of this nature you should contact your academic advisor or your coordinator of advising or email questions to engr@ncsu.edu.

WHEN ADDING CLASSES:
- Keep in mind you cannot have more than 18 credit hours in your schedule/shopping cart including waitlisted courses.
- Adding CH 101 to your schedule? Make sure you are also adding CH 102 at the same time (both classes must be in your shopping cart).
- Adding PY 205 to your schedule? Make sure you are also adding PY 206 at the same time (both classes must be in your shopping cart).
- Courses without a time listed or with a section number of 601 are distance education courses.
- Use your Degree Audit in MyPack Portal to see how your AP/Transfer/IB credits are counting toward your degree. Learn more about your Degree Audit by watching this tutorial: https://youtu.be/W8J1x1GjIXI
- Hover over the “i” in the blue circle to determine if remaining seats in the class are restricted to a certain major.
- Having trouble finding classes? Try unclicking “Only Courses That Fit My Calendar” to see options that might be possible should you swap lab or recitation sections.

MAKING SCHEDULE ADJUSTMENTS:
- Do not drop a course for a new day/time adjustment; use the SWAP feature to make such changes. Watch the YouTube tutorial here: https://youtu.be/k277rXykP4E
- Use your Degree Audit in MyPack Portal to see how your AP/Transfer/IB credits are counting toward your degree.
- If you know you have credit for a course and you do not intend to retake it, please drop the course to make room on your schedule and to allow another student who needs the course to enroll.

COMMON CONCERNS AND HELPFUL HINTS
- Health Exercise and Studies courses can be taken for pass/fail or credit-only grading.
- 400 level courses and beyond are for juniors and seniors and should not be taken in your first year.
- Trouble getting one or two classes that you want? Don’t panic. Be aware that some reserved seats and sections may open as the first day of classes approaches so stay vigilant throughout the summer for open seats. Also, try checking for open seats the day after tuition is due.
- There is no instructor listed for a course. When will you know who is teaching that course? Departments may not input instructors until classes start, as fall schedules for faculty are finalized. Do not let a lack of instructor within MyPack Portal prevent you from enrolling.
- You can walk anywhere on Main Campus in 15 minutes.