



Nuclear Engineering (NE)

Undergraduate Program Guidelines

Undergraduate Handbook

2020-2021

Effective from 8/15/2020

This Guide contains information that supplements University's Undergraduate Catalog, which is the primary document governing all academic programs. Although every effort has been made to maintain accuracy, the Materials Science and Engineering Department and Nuclear Engineering Program reserve the right to correct errors when found, without further notice to students. The presence of errors will not affect the application of the rules and requirements applicable to all students.

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1. Introduction

The Nuclear Engineering Program is housed within the Department of Materials Science & Engineering (MSE), which is part of the Herbert Wertheim College of Engineering. The Program offers undergraduate students the opportunity of state-of-the-art instruction and laboratory experiences under the supervision of faculty while pursuing a Bachelor of Science degree in the discipline. The UF Undergraduate Catalog is the University of Florida's official record of undergraduate policies, critical dates, deadlines, course descriptions, and faculty members bachelor's degree students. It is the student's responsibility to know and understand these rules. The current academic catalog can be found at <http://catalog.ufl.edu/> and the Undergraduate Student Handbook of the Herbert Wertheim College of Engineering at

<https://www.eng.ufl.edu/students/resources/undergraduate-student-handbook/>.

The NE Undergraduate Handbook is provided to all NE undergraduate students to serve as a companion resource to the University of Florida Catalog. It is the responsibility of the student to be familiar with both publications and to adhere to the stated rules.

1.1. Program Education Mission

The Nuclear Engineering Program at the University of Florida is dedicated to developing innovative nuclear technologies, educating future generations of nuclear engineers, and cultivating leaders, by nurturing the integration of nuclear science and engineering with societal needs in a collaborative and dynamic educational and research environment.

1.2. Nuclear Engineering Undergraduate Program Educational Objectives

- Graduates will have successful careers in Nuclear Engineering or related disciplines.
- Graduates will pursue continuing education or advanced degrees.

1.3. Nuclear Engineering Undergraduate Student Outcomes

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

2. Faculty and Staff

2.1. Department and Program Administration

Prof. Michele V. Manuel
MSE Department Chair
100B Rhines Hall
mmanuel@mse.ufl.edu
(352) 846-3300

Assoc. Prof. Andreas Enqvist
NE Program Director
100A Rhines Hall
enqvist@ufl.edu
(352) 846-3300

Assoc. Eng. DuWayne Schubring
Undergraduate Coordinator
317A MAE Building
dlschubring@ufl.edu
(352) 294-7870

Tanner Nestle and Tahara Franklin
Academic Advisor
Academic Services Office (Rhines 108)
advising@mse.ufl.edu
(352) 846-3312

2.2. NE Faculty

The current faculty of the MSE Department and their contact information are provided on the MSE website: <https://mse.ufl.edu/people/>.

Among these faculty, the following are considered [Core NE Faculty](#)

- Assistant Professor Assel Aitkaliyeva
- Professor James Baciak
- Associate Professor Andreas Enqvist
- Lecturer Ira Harkness (starts Fall 2020)
- Assistant Professor Kyle Hartig
- Associate Professor Chris McDevitt
- Associate Engineer DuWayne Schubring
- Associate Professor Michael Tonks
- Professor of Practice Don Wall
- Professor Natalie Wall
- Associate Professor Justin Watson
- Associate Professor Yong Yang

3. Undergraduate Programs

The University of Florida's Nuclear Engineering (NE) undergraduate program offers students a world-class education in a cutting-edge research environment. We offer a Bachelor's (B.S.) degree, a combination of Bachelor and Master's (B.S./M.S.) degree, and a Minor in Nuclear and Radiological Engineering.

Our NE undergraduate program couples our research strengths, including radiation detection, national security, and nuclear materials, with a more traditional sequence of nuclear power related courses. The more than 10 faculty members teach a range of required and elective courses, conduct multi-disciplinary research with scientists across many departments and institutions, and serve as leaders in the American Nuclear Society and other professional organizations. This diversity of interests and experiences provides our undergraduate students an exposure to a broad spectrum of concepts and skills, access to state-of-the-art research instrumentation, and the experience of a vibrant, collaborative culture.

NE undergraduate students master a set of core concepts and principles critical to a fundamental understanding of the applications of the atom, but also have flexibility in selecting several electives relevant to their individual professional interests.

3.1. B.S. Degree Program and Requirements

3.1.1. Curriculum Overview

Science and Math Core (8 courses). The NE curriculum builds on a solid foundation in mathematics, physics, and chemistry. The mathematical foundation is provided by the four mathematics courses Calculus 1, 2, 3, and Differential Equations. The physics and chemistry foundation is covered by a 2 course sequence of Physics with Calculus and a 2 course sequence of General Chemistry. (Students also have the option to switch one General Chemistry course with a course in Biology.)

Engineering Core (9 courses). The engineering core gives students a thorough understanding of how engineers approach problems. Secondly it serves to introduce the major engineering disciplines to the student so that she or he has background for the wide variety of problems to be encountered over a career.

NE Core (16 courses). The NE core provides the student with basic understanding of prominent problems and methodologies used in the nuclear engineering profession. This set of courses includes two introductory courses (one each in the first and third semester), nuclear engineering mathematics, radiation sciences, reactor engineering, nuclear materials, radiation shielding and protection, risk assessment, and two laboratory experiences. Engineering design is integrated throughout the NE core, with particular emphasis in the Senior Design (also called Capstone Design) sequence, ENU 4191 and ENU 4192.

Technical Electives (3 courses). Technical electives are designed to build upon the materials science and engineering foundation courses and allow students to explore emerging and specialization areas in materials science and engineering.

General Education and Composition (5 courses). The NE program includes standard general education according to UF requirements: technical writing, diversity, humanities, international and social science. These are essential elements of a well-rounded education.

Total UG Credit hours required: 127.

3.1.2. Course Requirements

The NE Program Department offers a Bachelor of Science (B.S.) degree in NE, which requires 127 credit hours of course work.

Critical Tracking Criteria. There are 10 critical tracking courses required by the university that must be successfully completed with a minimum grade of C for each course (based on a maximum of two attempts, including withdrawals, for each course). Students may repeat a maximum of three critical tracking courses. A minimum 2.5 critical-tracking GPA, and an overall GPA of 2.0, is required for students to continue to the upper-division NE program courses. Students are expected to complete the first 8 critical tracking courses (math, physics, and chemistry/biology) by the fifth semester.

International and Diversity Requirement. Students must complete the general education International (GE-N) and Diversity (GE-D) requirements. This is often done concurrently with another general education requirement, typically Humanities or Social and Behavioral Sciences. More information can be found here: <https://catalog.ufl.edu/UGRD/academic-programs/general-education/#text>.

Writing Requirement. The University of Florida requires all students to complete a writing requirement. AICE, AP, CLEP, and IB examination credit as well as dual enrollment or transfer credit may count toward this requirement. To graduate, students must complete courses that involve substantial writing for a total of 24,000 words.

The required senior courses ENU 4505L and ENU 4641C fulfill 4000 and 2000 words, respectively, of the writing requirement.

Civic Literacy Requirement. The University of Florida requires all incoming students for the 2018-2019 academic year and beyond, to meet the Civic Literacy requirement. UF students can meet this State requirement in a number of ways. More information can be found here: <http://undergrad.aa.ufl.edu/for-students/civic-literacy-requirement/>.

3.1.3. Model Semester Plan

The model semester plan below represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

Table 1: Model semester plan is shown below (Critical tracking course marked with *).

Semester 1 – Fall		Credits
Select one of the following two chemistry classes and the corresponding lab:		
CHM 2045*	General Chemistry 1	3
CHM 2045L	General Chemistry 1 Laboratory	1
CHM 2095*	Chemistry for Engineers 1	3
CHM 2095L	Chemistry Laboratory 1 for Engineers	1

ENC 1101 or ENC 1102	Expository and Argumentative Writing or Argument and Persuasion (Fulfills State Core General Education Composition and 6,000 Words)	3
ENU 1000	Introduction to Nuclear Engineering	1
MAC 2311*	Analytic Geometry and Calculus 1	4
State Core General Education Social and Behavioral Sciences (select one course)		3
Total credits		15
Semester 2 – Spring		
ENC 3246	Professional Communication for Engineers (Fulfills State Core General Education Composition and 6,000 words)	3
MAC 2312*	Analytic Geometry and Calculus 2	4
PHY 2048*	Physics with Calculus 1	3
PHY 2048L	Laboratory for Physics with Calculus 1	1
State Core General Education Humanities (select one course)		3
Total credits		14
Semester 3 – Fall		
ENU 4934	Fundamentals of Nuclear and Radiological Engineering	1
MAC 2313*	Analytic Geometry and Calculus 3	4
PHY 2049*	Physics with Calculus 2	3
PHY 2049L	Laboratory for Physics with Calculus 2	1
STA 3032	Engineering Statistics	3
Select one of the following two classes (General Education Humanities and Diversity):		
ARH 2000	Art Appreciation: American Diversity and Global Arts	3
THE 2000	Theatre Appreciation	3
Total credits		15
Semester 4 – Spring		
Select one of the following three classes:		
CHM 2046*	General Chemistry 2	3
CHM 2096*	Chemistry for Engineers 2	3
BSC 2010*	Integrated Principles of Biology 1	3
COP 2271	Computer Programming for Engineers (MATLAB or C++ sections only)	2
EGM 2511	Engineering Mechanics: Statics	3
EML 3100	Thermodynamics	3
MAP 2302*	Elementary Differential Equations	3
Total credits		14
Semester 5 – Summer		
EGM 3520	Mechanics of Materials	3
EMA 3010	Materials	3
State Core General Education Social and Behavioral Sciences (select one course, to also fulfill 6,000 word and International requirements)		3
Total credits		9

Semester 6 – Fall		
EEL 3003	Elements of Electrical Engineering	3
EGN 3353C	Fluid Mechanics	3
EGS 4034	Engineering Ethics and Professionalism	3
ENU 4001*	Nuclear Engineering Analysis 1	4
ENU 4605*	Radiation Interaction and Sources 1	4
Total credits		15
Semester 7 – Spring		
EML 4140	Heat Transfer	3
ENU 4103	Reactor Analysis and Computation 1: Statics	4
ENU 4144	Nuclear Power Plant Reactor Systems 1	4
ENU 4800	Introduction to Nuclear Reactor Materials	4
Select One Technical Elective Course		3
Total credits		16
Semester 8 – Fall		
ENU 4134	Reactor Thermal Hydraulics	4
ENU 4191	Elements of Nuclear and Radiological Engineering Design	1
ENU 4612	Nuclear Radiation Detection and Instrumentation	3
ENU 4612L	Nuclear Radiation Detection and Instrumentation Laboratory	1
ENU 4630	Fundamental Aspects of Radiation Shielding	3
Select One Technical Elective Course		3
Total credits		15
Semester 9 – Spring		
ENU 4145	Risk Assessment for Radiation Systems	3
ENU 4192	Nuclear and Radiological Engineering Design	3
ENU 4505L	Nuclear and Radiological Engineering Laboratory 1 (Writing Requirement: 4,000 words)	3
ENU 4641C	Applied Radiation Protection (Writing Requirement: 2,000 words)	2
Select One Technical Elective Course		3
Total credits		14
NE Program Total credits		127

3.1.4. Elective Policy

1. In-program technical electives. The total number of technical elective credits, less 3 shall be from the nuclear program. (For 2012-2014: 3 credits out of 6 total must be nuclear. For 2015-present: 6 credits out of 9 total must be nuclear.) For the purposes of this rule, all ENU courses 3000 or higher and ENV 4212 shall be taken as nuclear courses.

2. Breadth technical electives. Students are encouraged to complete the remaining 3 credits from courses, numbered 3000 and above, offered by the College of Engineering (including nuclear courses) or the Departments of Chemistry (CHM 2210 is allowed), Mathematics, Physics, or Statistics. In particular, students planning to pursue a career in the nuclear power industry immediately following their bachelor's degree are encouraged to complete EIN 3354/4354 (Engineering Economy) to fulfill these 3 credits.

Students may also obtain these 3 credits via courses numbered 3000 and above offered by the following STEM departments:

Astronomy

Behavioral Science & Community Health

Biology-Biological Sciences (BSC 2011 is allowed)

Biology-Botany

Biology-Zoology

Design Construction and Planning

Economics

Entomology & Nematology

Food Science & Human Nutrition (FOS prefixes, only)

Geological Sciences

Geomatics

Horticultural Sciences

Information Systems & Operations Management

Medicine-Radiation Oncology

Medicine-Radiology

Microbiology & Cell Science

Natural Resources & Environment

Public Health

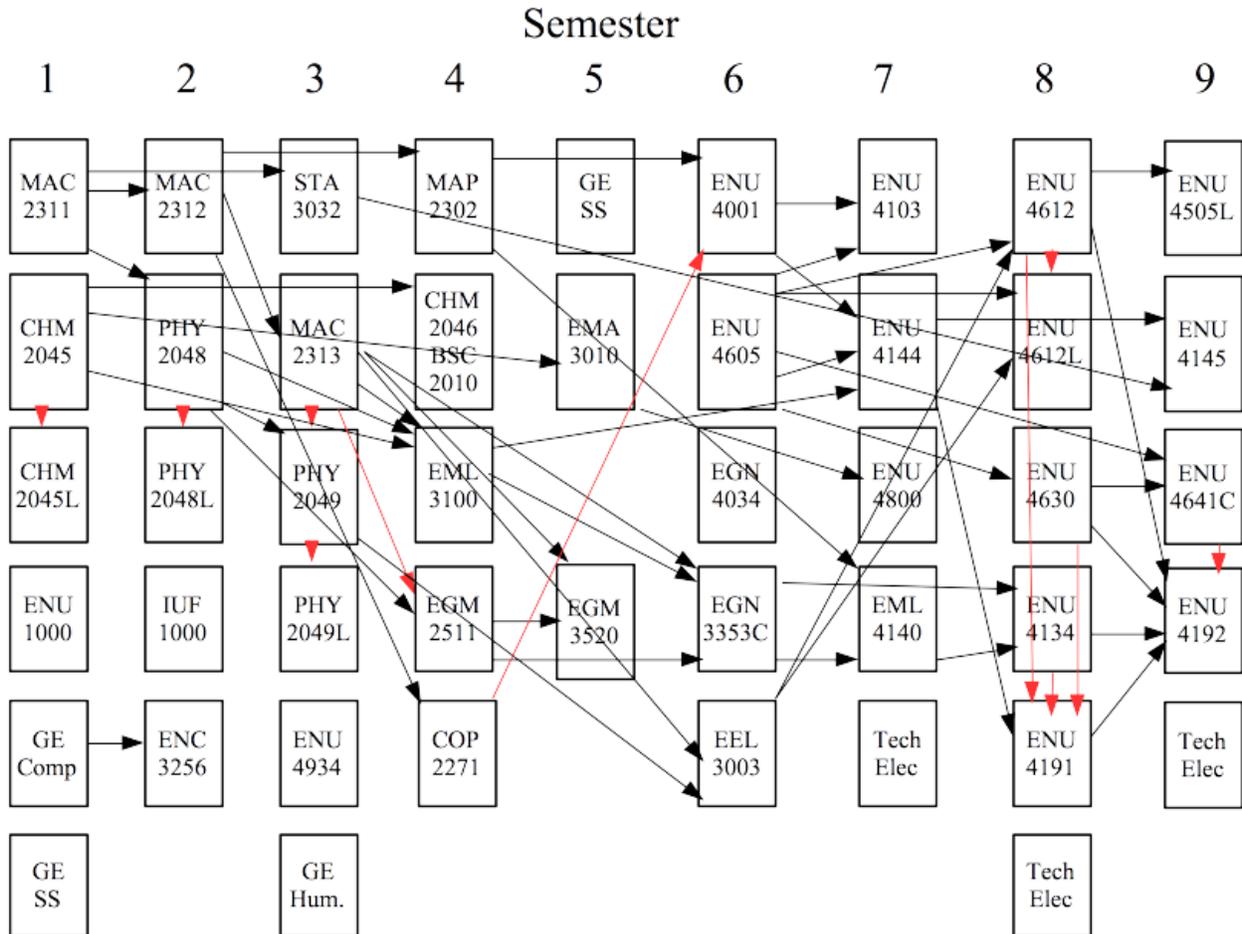
Soil and Water Science

Wildlife Ecology & Conservation

3. Individual work. A maximum of 3 credits, combined, may come from individual work and co-op credits: ENU 4905 and ENU 4949.

3.1.5. Pre-requisite Flowchart

In this figure, black lines indicate pre-requisites and red lines co-requisites.



3.1.6. Recommendations

The following are *recommendations* based on the experiences of students in the NE program in the last 5-10 years. They are not programmatic requirements but may be useful as you launch your professional career.

- In semester four, students have the choice among three courses: CHM 2046, CHM 2096, and BSC 2010. Students who are not intending to pursue a career in nuclear medicine, medical physics, or another health sciences field are *strongly* encouraged to take one of the two chemistry courses.
- It can be easier to obtain a job or place in graduate school immediately following a Spring or Summer graduation. If you find yourself off-cycle (tracking for a December graduation),

you are encouraged to consider a minor or certificate program. The appropriate program depends on your career goals and area(s) of technical interest; the academic services office and undergraduate coordinator (in addition to other NE program faculty) are available to discuss options.

- ENU 4191 (Fall) and ENU 4192 (Spring) form the senior design sequence and projects are carried over between the terms. To the extent possible, students are assigned a project and technical area relevant to their interests. Separating the two courses by a calendar year is strongly discouraged and usually results in students being assigned to fill out a group's roster rather than based on their individual interests.
- Students who intend to work in the civilian nuclear power industry immediately following graduation with their B.S. degree are encouraged to take EIN 3354 (Engineering Economy) as an elective.

3.1.7. Approved Blanket Petitions

- Students may take EML 4140 (Heat Transfer) concurrently with ENU 4134 (Reactor Thermal Hydraulics) if and only if it allows them to graduate earlier than taking the courses sequentially.
- Students may substitute ENU 1000 and/or ENU 4934 according to the following criteria. These are particularly useful for transfer students and those students who move into the NE major later than their first semester at UF.
 1. All students may substitute EGS 1006 for ENU 1000.
 2. ENU 4905 (Special Problems in Nuclear and Radiological Engineering) or ENU 4949 (Co-op Work Experience) may also be used to fulfill this requirement. Use of 1 ENU 4905 or ENU 4949 in lieu of ENU 1000 does not count against the 3-credit individual work limit for technical electives.
 3. Transfer students may also complete 1 additional credit of technical elective to replace ENU 1000. This may come from courses, numbered 1000 and above, offered by the College of Engineering (including nuclear courses) or any of the following departments. For courses that are accepted for UF transfer credit that have no direct UF equivalent (i.e.; no UF course has the same prefix and final three digits of the course number), determination of their applicability under this rule will be made by the NE Program's Undergraduate Coordinator.

Astronomy

Behavioral Science & Community Health

Biology-Biological Sciences

Biology-Botany

Biology-Zoology

Chemistry

Design Construction and Planning

Economics

Entomology & Nematology
 Food Science & Human Nutrition (FOS prefixes, only)
 Geological Sciences
 Geomatics
 Horticultural Sciences
 Information Systems & Operations Management
 Mathematics
 Medicine-Radiation Oncology
 Medicine-Radiology
 Microbiology & Cell Science
 Natural Resources & Environment
 Physics
 Public Health
 Soil and Water Science
 Statistics
 Wildlife Ecology & Conservation

4. Student may also substitute any Introduction to Engineering course for ENU 1000 or (for Catalog Years 2012-2019 only) ENU 4934, subject to advisor approval of the specific course as representing an introduction to engineering.

3.2. Combination B.S./M.S. Degree Program and Requirements

The NE Program offers a combination B.S. (Nuclear Engineering)/M.S. (Nuclear Engineering Sciences) degree program. The combination B.S./M.S. degree program allows qualified students to apply for graduate admissions to pursue both degrees concurrently.

3.2.1. Admission Requirements for the Combination B.S./M.S. Program

Students need to satisfy both [MSE/NE admission requirements](#) and [Graduate School admissions requirements](#) for admission to the combination M.S./B.S. degree program. Applicants to the graduate program must have completed a minimum of 18 credit hours of ENU courses and have an overall GPA of at least 3.0.

3.2.2. Course Requirements

Admitted students begin M.S. degree course work while working towards their B.S. degree and double count up to 12 credit hours of specific graduate courses for both their undergraduate and graduate degree requirements. The course substitutions should include the following two senior-year classes.

Undergraduate Requirement	Graduate Course
----------------------------------	------------------------

ENU 4134	Reactor Thermal Hydraulics	ENU 6135	Nuclear Thermal Hydraulics
ENU 4145	Risk Assessment for Radiation Systems	ENU 5142	Reliability and Risk Analysis for Nuclear Facilities

These courses total 7 credits. The additional 5 credits may come from ENU electives. Students should meet with the undergraduate coordinator in spring of their junior year to discuss the elective options that will be available in their senior year.

3.3. Minors

The NE Program offers a minor in Nuclear and Radiological Engineering. Students from other B.S. programs can apply for this minor. They must have at least 45 credit hours completed and cannot be on college probation. The Nuclear and Radiological Engineering Minor has two pre-requisites:

Pre-Requisites for NRE Minor		
ENU 4001	Nuclear Engineering Analysis I	4
Select one of the following two courses		
EML 3007	Elements of Thermodynamics and Heat Transfer	3
EML 3100	Thermodynamics	3
Total credits		7

There are five required courses in the NRE minor. All required courses must be completed with a C or better; students must also have a minimum overall GPA of 2.0.

Requirements for NRE Minor		
EGN 3353C	Fluid Mechanics	3
ENU 4103	Reactor Analysis and Computation 1: Statics	4
ENU 4144	Nuclear Power Plant Systems 1	3
ENU 4605	Radiation Interactions and Sources 1	4
ENU 4612	Nuclear Radiation Detection and Instrumentation	3
Total credits		17

Students majoring in nuclear engineering are eligible to complete a minor in a range of other subjects; consult the undergraduate catalog or the department/program offering the minor for details.

3.4. Internships

As part of the undergraduate NE program, students can take an internship, e.g. in industry or national laboratories over the summer, and receive course credit for ENU 4949. To receive this credit, the student needs to notify the Academic Services Office (advising@mse.ufl.edu). If the student is being funded, they need to inform Human Resources (mse-hr@eng.ufl.edu) about any internship they plan to accept. Students may register for internship credits by completing and submitting the internship form at <http://www.mse.ufl.edu/onpremforms/>. The offer letter from the company should be attached. The student needs to have permission from the Undergraduate Coordinator (dlschubring@ufl.edu). The Academic Services Office will review the form and

notify the student via email if the registration is approved or not. If approved the Academic Services Office will register the student for ENU 4949.

Once registered for ENU 4949, the following two forms need to be submitted to the Academic Services Office electronically no later than a week before classes end for the term registered to receive a grade:

- ENU 4949 Employer's Student Evaluation Form,
- ENU 4949 Student's Evaluation of Employer.

These forms are available at <http://www.mse.ufl.edu/onpremforms/> and are common between ENU 4949 and EMA 4949 (the equivalent course in the MSE curriculum).

3.5. Graduating with Honors

Students can graduate *cum laude* (with honors) if they have a major GPA of 3.30.

Students can graduate *magna cum laude* (with high honors) or *summa cum laude* (with highest honors) if they fulfill the following two requirements: (1) They must have an exceptional upper division GPA of 3.50 or higher for magna cum laude and 3.80 or higher for summa cum. (2) They need to complete and defend a thesis, research project, or other approved body of original work, which is submitted for evaluation according to the rules of the UF Honors Office, the Herbert Wertheim College of Engineering, and the student's major department. The upper division GPA is calculating from the grades in the semesters after which you have earned 60 college credits from any mechanism, including AP, IB, etc. Thus, grades count that are earned from the first semester shown as "3EG" on the transcript.

For more detail, please see: <https://www.eng.ufl.edu/students/resources/undergraduate-student-handbook/graduating-with-honors/>

4. Courses and Registration

4.1. Registration Requirements

When deciding on courses, students should follow the model semester plan described in Sec. 3.1.3 and the flowchart in Sec. 3.1.4 to ensure all pre-requisites are met and the degree is obtained in four years.

Full-time registration is a minimum of 12 credits. The recommended number of credits varies between 14 and 15 during Fall and Spring and 9 during the summer. However, individual students may have semesters between 12 and 18, depending on AP/IB courses, getting off-sequence, changing majors or transferring, as well as additional electives, minors and certificate programs the student may pursue.

Students can register for courses on registrar's website, <https://one.ufl.edu>. Students are required to see advisors to remove registration holds prior to being able to register and should seek advice from academic advising or the Undergraduate Coordinator before registration. Guidance will be provided for the registration in the form of the required courses and suggested electives. Students need to register on time to avoid unnecessary late registration fees. Registration and payment deadlines for each semester can be found at <https://catalog.ufl.edu/UGRD/dates-deadlines/>. Students need to pay any fees by the fee payment deadline. Registration may be restricted. To

check for record holds, registration holds, and late registration fees, go to Student Self Service (<https://www.student.ufl.edu>).

To review the anticipated schedule of courses for an upcoming semester, students should go to <https://one.ufl.edu/soc/>. Students have access to their degree audit online at www.student.ufl.edu. *Students are ultimately responsible* for ensuring they are on track to finish their degrees.

A Tuition and Fee Calculator is provided by UF <https://npc.collegeboard.org/app/ufl>.

4.2. Grades

The passing grades for students are A, A-, B+, B, B-, C+, C, C-, D+, D, D-, and S. Grades of E and U are not passing grades. All letter graded courses are used in calculating the cumulative grade point average. Grade points are not designated for S and U grades and are not used in calculating the grade point average. A grade of I (incomplete) will convert to a grade of E and 0.0 grade point if not changed within 1 semester. There is an overall GPA, an NE major GPA, an upper division GPA (see Sec. 3.6), and (if elected) a minor GPA.

A student is considered in good academic standing if a student's overall, major, and minor GPA is above 2.0 (truncated). If any of these GPA's drops below these limits the student is in academic probation, which triggers limitations in course selection for registration and students cannot graduate.

4.3. Transfer Credit

It is the department's policy to admit the best-qualified transfer applicants as demonstrated by academic achievement. Transfer students can apply once six of the first eight Critical Tracking (excluding ENU 4001 and ENU 4605) courses have been completed. Application must include up-to-date transcripts that show "in progress" for the final two of these Critical Tracking courses. All eight of these Critical Tracking courses must be completed prior to enrollment at UF, and students applying from State of Florida Universities must have earned AA degree prior to enrolling at UF or the conditional terms of admission will not be considered met.

A detailed description of the transfer process and requirements can be found at:

- <https://mse.ufl.edu/admissions/undergraduate/transfer-students/>
- <https://registrar.ufl.edu/registration/transferecredit>.

4.4. Add/Drop

Courses may be dropped or added during the drop/add period without penalty. This period typically lasts five UF calendar days, or two days for summer sessions, beginning with the first day of the semester (exact dates available on <https://student.ufl.edu>). Classes that meet for the first time after the drop/add period may be dropped without academic penalty or fee liability by the end of the next business day after the first meeting of the class. Note, this does not apply to laboratory sections. If a course is dropped after the add/drop period, and a W will appear on the transcript and the student remains financially liable for the course tuition and an additional fee may apply. If a course is added after the add/drop period, an additional fee applies. For details, see <https://catalog.ufl.edu/UGRD/academic-regulations/dropping-courses-withdrawals/>.

4.5. Retaking Courses

Students may only repeat a course once in which they earn a failing grade. Grade points from both the initial failed attempt and the second attempt are included in computing the grade point average. The student receives credit for the satisfactory attempt only.

4.6. ABET Accreditation

The NE program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>. ABET Accreditation supports your entry to a technical profession through licensure, registration and certification — all of which often require graduation from an ABET-accredited program as a minimum qualification. Details about the ABET Accreditation of the NE program can be found at <https://mse.ufl.edu/academics/accreditation/ne-program-accreditation/>

5. Research

All students conducting research in a laboratory must be registered for EGN 4912, which allows for 0 credit registration, or on a paid appointment. All researchers must follow appropriate department-specific policies for laboratory access (see your Research Mentor for guidance). Policies for the MSE Department are contained in this section; students conducting research with a faculty member in another department are subject to the policies of that department, which may differ. Undergraduates interested in research are encouraged to explore options with other faculty; the NE Undergraduate Coordinator is available to suggest faculty relevant to specific research interests.

Safety and Responsible Conduct in Research training is required *prior* to enrollment in research credit (see Sections 6.1 and 6.2 for details). This is *enforced* for students supported by NSF, NIH, and USDA awards.

5.1. Safety

The Materials Science & Engineering Department, in collaboration with the Herbert Wertheim College of Engineering, is committed to providing a safe and healthy working and learning environment for all of its students (<https://www.eng.ufl.edu/labsafety/>). Sustaining a culture of excellent laboratory safety starts with rigorous training. To facilitate appropriate training of safety concerns, all MSE department students are required to complete a laboratory checklist prior to gaining access to the laboratory:

<https://www.eng.ufl.edu/labsafety/resources/engineering-laboratory-safety-guidelines-and-training-checklist/>.

This checklist outlines required general safety training needed for general work in the building. Additional training will be needed, given the specific research conducted and risk encountered in your work. Guidance on the lab-specific training needed will be provided by your Supervisory Chair, as all Chairs are required to provide a safe working environment, ensure adequate safety training of their personnel, and maintain appropriate safety records for their own labs. Remember that most training is annual, so it must be updated. To further promote a culture of safety, our MSE department has a Student Safety Council (SSC), which is comprised of graduate and undergraduate students, faculty, and the MSE Director of Undergraduate Laboratories; an Engineering Safety Steering Committee serves at the college level. Students are strongly encouraged to join these

councils. Any concerns regarding safety or training should be directed to your Supervisory Chair, the SSC, the HWCOE Director of Laboratory Safety, or UF Environmental Health and Safety (<http://www.ehs.ufl.edu/>).

5.2. Responsible Conduct in Research (RCR)

Responsible conduct in research (RCR) is expected for all University of Florida students. Students conducting research will be expected to follow ethical standards when conducting research, from identification of potential conflicts of interest to responsible authorship and publication. To assist in supporting this endeavor, all students enrolled in research credits and students funded by NSF, NIH, or USDA awards must complete the general RCR training:

<http://research.ufl.edu/faculty-and-staff/research-compliance/responsible-conduct-in-research-rcr-training/navigation-to-citi-for-rcr-responsible-conduct-of-research-training.html>.

6. General Information

6.1. Undergraduate Coordinator

The [Undergraduate Coordinator](#) is the advisor to all admitted and present UF NE undergraduate students in the NE Program. The Undergraduate Coordinator helps in planning the courses, advises on certificates, minors, and majors and guides the students in addition to the rules provided by the university and the department. Furthermore, transfer credits are processed. The Undergraduate Coordinator is not able to assist applicants or non-admitted students, nor are they involved in financial aid. The Undergraduate Coordinator is assisted by the Academic Services Office.

6.2. Academic Services Office

The [Academic Services Office](#) serves as the advising and administration unit and is administered by the Associate Chair of MSE, in collaboration with the NE Program Director. The Academic Services Office assists students in admission, deadlines, course requirements, registration, and routine administrative issues. Inquiries on these matters regarding the undergraduate program should first be made to the Academic Services Office (advising@mse.ufl.edu), which can then be forwarded to the NE Program Director and/or NE Undergraduate Coordinator, if needed. The staff of the Academic Services Office is available to meet with any student during office hours or by appointment, which can be scheduled by email to advising@mse.ufl.edu.

6.3. NE Program Committees

The NE Program Director oversees the operation of the NE Academic Program, is responsible for academic program administration and policy directions, ensuring policy compliance with policies of the NE Program, MSE Department, Herbert Wertheim College of Engineering, and the University. The Curriculum Committee suggests academic policy changes. The Petitions Committee reviews student petitions. A student may petition with academic issues by submitting a formal request via the [MSE website](#) with the Academic Services Office. Petitions must be formally approved or disapproved by the petitions committee.

6.4. Department Student Council

The purpose of Department Student Council (DSC) is to 1) provide an agency for the coordination of MSE and NE student activities to promote common goals and interests of the MSE and NE student body, 2) advance and enrich the academic and educational experience of students in the UF MSE Department, and 3) seek the improvement of MSE and NE student education through active communication and representation between department students and faculty, and other governing bodies at the University of Florida such as the UF Student Government. All MSE and NE students are welcome to attend DSC meetings and are encouraged to become involved in this organization. See the website for more information: <http://www.mse.ufl.edu/about/societies/>.

6.5. Graduation Guidelines and Catalog Year

The catalog year determines the set of academic requirements that must be fulfilled for graduation from the program. Students graduate under the catalog in effect when they begin enrollment for that degree at UF, provided they maintain continuous enrollment. A catalog year runs from Summer B of one year to Summer A of the next year. Students who are unregistered for 2 or more consecutive semesters must reapply for admission and may be assigned the catalog in effect when enrollment is resumed. If a catalog change occurs during the program of a student, the student has the choice to select the current catalog year requirements or remain under the original catalog requirements. However, a student may not mix-and-match between two catalog years, except by formal petition to the NE program.

6.6. Assistantships, Fellowships, Awards, and On-campus Jobs

The NE Program offers a number of awards for students in good academic standing. Interested students should follow up with the Academic Services Office regarding the availability of awards and the procedure for applying. The application form for awards can be obtained from the MSE website: <https://mse.ufl.edu/onpreforms/>.

Students can find on-campus jobs through www.jobs.ufl.edu. Students cannot volunteer to work in the department, they must either be compensated for their work in a laboratory or be registered for research under the faculty member's supervision.

7. Academic Honesty

All enrolled UF students have signed a statement of academic honesty upon enrollment, which commits the student to holding themselves and their peers accountable for maintaining the highest standard of honor (see <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>). This standard is essential to maintain the integrity of the program. Students are expected to work independently on coursework and program examinations, unless specifically authorized by the instructor or supervisor. It is always better to clarify permitted degrees of collaboration than to assume and be incorrect. Plagiarism of any form, from course assignments to doctoral dissertations, is a serious offense and will never be tolerated. Students are responsible for seeking and utilizing resources to understand the definition of plagiarism, see for example:

<https://mediasite.video.ufl.edu/Mediasite/Play/adaa44500eaf460a84f238e6b9a558f9>,
<http://usingsources.fas.harvard.edu/icb/icb.do?keyword=k70847&pageid=icb.page342057>.

Further, students can register for iThenticate, TurnItIn, or other plagiarism detection software to help screen their documents to avoid inadvertent plagiarism. Failure to comply with the honor code will result in disciplinary action that can span from grade penalties up to dismissal from the

program.

8. Satisfactory Progress and Scholarship

Every student is expected to make satisfactory progress toward graduation each semester. This includes maintaining a grade point average (GPA) of C (2.0) or greater both cumulatively and in their major (and in the minor, if a minor is declared), the timely meeting of academic milestones, e.g. obeying the Honor Code. Students with a GPA of less than 2.0 GPA may not hold an assistantship or fellowship.

Students who fail to make satisfactory progress may be required to seek advisement and fulfill specific conditions in order to continue in the major, or may be denied further registration in the program. Students who fail to maintain the minimum 2.0 GPA in either the cumulative or departmental courses are placed on Academic Probation.

9. Correspondence and Forms

Students must correspond and comply with outlined policies via electronic or hardcopy means. For electronic communications, all students are provided with a University of Florida email account (ufl.edu) upon entrance to the program. The [Academic Services Office](#) will use this UF account for all official communications. *Students are responsible for promptly and thoroughly reading emails from their UF account, are expected to use this email account for all academic correspondence, and should communicate in a professional manner.* For hardcopy correspondence, all documents, including forms, should be fully completed and submitted directly to the Academic Services Office. To minimize paperwork burden, the Academic Services Office encourages electronic submissions (email to advising@mse.ufl.edu) and accepts electronic signatures, unless specifically stated otherwise. Submission of forms may require the student to comply with deadlines. Otherwise financial penalties may occur, e.g. for late registration.

10. Preparation for Final Semester

It is a student's responsibility to ascertain that all requirements have been met and that every deadline is observed. Deadline dates are set forth by the registrar's office (<https://one.ufl.edu>) and the MSE department.

Prior to the semester of graduation, students should meet with Academic Services Office staff to conduct a graduation check. Students must notify the Academic Services Office of graduation plans no later than the University registration deadline for their program. At the beginning of the final semester, students must also file a degree application online through Student Self Service (<https://student.ufl.edu>) and must meet minimum registration requirements. Students must register for the appropriate credits for their degree.

If this is a terminal degree, then student must complete the Departmental Employment Questionnaire and Exit Interview Checklist and return them to Academic Services Office no later than the last day of classes for the term. These forms can be found on the Student-Forms page of the MSE website <https://mse.ufl.edu/forms>.

It is solely the student's responsibility to ensure that all required forms are submitted in accordance with the Department and University deadlines.

11. Student Responsibility

The student is responsible for becoming informed and observing all program regulations and procedures. The student must be familiar with the general Undergraduate Catalog regulations and requirements, specific degree program requirements, and offerings and requirements of the major academic unit. *Rules are not waived for ignorance.* Student's must check their UF email on a regular basis. Failure to do so will not be a valid excuse for missing deadlines.