

Master of Nuclear Engineering



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Program Overview

The Master of Nuclear Engineering (MNE) is designed for students with an undergraduate degree in an engineering discipline or the applied sciences who wish to pursue a graduate degree in nuclear engineering. It is a 30 credit hour degree program that does not require a thesis, final oral exam or on-campus residency. The strengths of the NC State program include its first-in-the-nation university nuclear reactor program along with research in fission, fusion, radiation physics and applications.

Admission Requirements

The minimum requirements for admission to the graduate degree program in Nuclear Engineering are as follows:

- A bachelor's degree from an accredited college or university in an engineering discipline. The discipline does not have to be nuclear engineering, but it must have a strong engineering/mathematical curriculum.
- An overall grade point average of 3.0.
- Three letters of recommendation from persons able to comment on the applicant's qualification for graduate study.
- The Graduate School requires that all international applicants take the TOEFL or IELTS examination unless they have completed one year of study at a university in the United States. The TOEFL or IELTS must have been taken within two years of receipt of application.
- You can find out more about the admission requirements at <https://www.ne.ncsu.edu/admission/>.

Degree Requirements

- Completion of 30 credit hours with an overall GPA of 3.0.
- Coursework must include 21 graduate credit hours in nuclear engineering (including project course).
- A minimum of nine credit hours are required outside of nuclear engineering to develop interdisciplinary breadth. Common fields include computer engineering, physics, statistics and mechanical engineering.
- Completion of a 3 credit hour nuclear engineering project usually taken during the final semester with the report to be approved and graded by the faculty adviser along with one other NE faculty member.
- At least one nuclear engineering course must be at the 7XX level.
- Students without an undergraduate degree in nuclear engineering are required to enroll in NE 520, Radiation and Reactor Fundamentals.
- After a student has been admitted and enrolls for the first time, he/she is required to maintain continuous enrollment in each fall and spring semester until completion of the degree program. A student in good academic standing may request a leave of absence for good reasons from the Director of Graduate Programs in Nuclear Engineering. The leave absolutely may not exceed two semesters.

Course Registration

It is preferable to seek admission to the MNE program as soon as possible to assure integration into the advising process. However, a person does not have to be admitted to a degree program to enroll in an online credit course. Prior to applying to Graduate School, a qualified individual may enroll in Engineering Online courses as a Non-Degree Studies (NDS) student. The NDS classification is designed for individuals who wish to undertake academic work but who are not currently admitted to a degree program. If the student is admitted to the MNE program, a maximum of twelve hours taken as a NDS student or from another institution may apply toward the 30 credit hour requirement. Students register for online courses through Engineering Online. Those who wish to take only a few courses and not pursue a degree do not need to apply for formal program admission to NC State University. However, students who wish to earn the MNE degree must apply for admission to the Graduate School at <https://applygrad.ncsu.edu/apply/>. When completing the online application, please be sure to select the "Distance Track" version of the degree.

To register for an Engineering Online course log into <https://www.webtools.ncsu.edu/engronline/> and submit the registration form. Students cannot register through the University MyPack Portal system for Engineering Online courses.

Course Offerings

A list of distance education courses available for each semester can be found on the Engineering Online website. Full-time employed individuals can only enroll in two online courses per semester. It is highly recommended that new students enroll in only one online course during their first semester.

Examples of courses that will be available through the Engineering Online program in various semesters include:

NE 502 Reactor Engineering
NE 504 Radiation Safety and Shielding
NE 509 Nuclear Materials
NE 512 Nuclear Physics for Engineers
NE 520 Radiation and Reactor Fundamentals
NE 693 NE Project

For a list of distance education courses approved for the fall, spring or summer semester, visit the Engineering Online web site at <https://www.engineeringonline.ncsu.edu/apply-and-enroll/online-courses/>.

Course Logistics

Online courses are the same as on campus courses in terms of content, requirements and academic rigor. On-campus class lectures are captured, digitized and placed on the Internet for distance students to access at any time and from any location. Students must, however, follow the on-campus class schedule in terms of submitting homework and taking exams. Course assignments, lecture notes, and handouts are made available to distance students on the course website. All in-class exams must be proctored.

Contact Information

- For more information about the MNE program available online, contact:

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Email: murty@ncsu.edu
Department website: <https://www.ne.ncsu.edu>

- For more information about the registration process, course offerings and course logistics, contact:

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