Nuclear Engineering Catalog 2025
Radiological Concentration

Fall 14-15 hours	**Math 132 or 141 or 147 (3-4) (QR) FA,SP,SU** Math 132 Prereq- Math 131 Math 141 Prereq- ACT Math 28 or SAT Math 660	**Chem 122(3) and 123(1) or 128 (4) (NS) FA, SP, SU** Prereq-Math 119; recommended background in Math 131	**EF 142 or 151 or 157 (4) (EI) FA, SP** EF 142 Prereq- EF 141 with C- or better and Math 131 EF 142 Coreq- Math 132 EF 151 Coreq- 141/147 or higher and EECS majors COSC 101/102	**English 101 or 131 (3) FA, SP, SU** 101 Standard; 131 English as Second Language		
Spring 16 hours	**Math 142 or 148 (4) (QR) FA, SP, SU** Prereq- Math 132 or 141 or 147	**COSC 111 (3) (QR) FA, SP**	**EF 152 or 158 (4) (NS and EI) FA, SP, SU** Prereq-EF 142/151/157 with C or higher Coreq- Math 142 or 148 and EF 105 or COSC 101 or 102	**EF 105 (1) FA, SP** Coreq- EF 152 or 158	**English 102 or 112 or 298 or 132 (3) FA, SP, SU** 102 Prereq 101; 112 Prereq is AP 101 and Test Scores; 298 Prereq University Honors only; 132 Prereq 131 ESL	**NE 101 (1) SP**
Fall 16 hours	**Math 231 or 237 (3) FA, SP, SU** Prereq- Math 142 or 148	**NE 200 (2) FA**	**NE 215 (3) FA** Prereq- Chem 122/123 or 128 Coreq- NE 200 and Math 231/237	**ME 202 (2) FA, SP, SU** Coreq- EF 152 or 158 and Math 142 or 148	**Physics 231 (3) FA, SP, SU** Prereq- Phys 135 or EF 151 and 152 Coreq- Math 142 or 148	**IE 200 or Stats 251 (3) FA, SP** IE 200 Prereq Math 142/148 or (AET 200??) Stats 251 Prerq Math 142/148
Spring 17 hours	**Math 241 or 247 (4) FA, SP, SU** Prereq- Math 142 or 148	**NE 233 (3) SP** Prereq-NE 200	**NE 250 (3) SP** Prereq- NE 200, Math 231 or 237 Coreq- Math 241 or 247	**ME 331 (3) FA, SP, SU** Coreq- Math 241 or 247	**Physics 250 or 252 (4) FA, SP** Prereq 250- PHYS 136 or 138 or 231 Prereq 252- PHYS 251 & Math 142/148 both C or better	
Fall 16 hours	**NE 362 or 367 (3) FA** Prereq- Math 231/237, 241/247, NE 250	**NE 403 (4) SP (WC???)** Prereqs-ENGL 102, ENGL 112, ENGL 132, OR ENGL 298; and NE 233; NE 250 Coreq- NE 414 or NE 470; MATH 241 or MATH 247	**NE 414 (3) FA** Coreq- Physics 341, Math 231/237, and Math 241/247 Credit restriction- students cannot receive credit for NE 414 and 517	**Physics 341 (3) FA** Prereq- Physics 232 or 250	**Vol Core (3) FA, SP, SU** Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS	
Spring 16 hours	**NE 415 (3) SP** Prereq- Chem 122/123 or 128; Chem 132/133 or 138 or NE 215	**Technical Elective *(3) FA, SP, SU** Petition required in advance	**Technical Elective *(3) FA, SP, SU** Petition required in advance	**ECON 201 or 207 (4) FA, SP, SU** Vol Core Social Science (SS)	**Vol Core (3) FA, SP, SU** Global Citizenship United States (GCUS)	
Fall 15 hours	**NE 400 (1) FA, SP** Minimum student level — senior	**NE 471 (2) (OC) FA** Prereq- NE 414 or 470	**NE 490 (3) FA** Prereq- NE 233 or 433	**Nuclear Department Elective** (3) FA**	**Technical Elective *(3) FA, SP, SU** Petition required in advance	**Vol Core (3) FA, SP, SU** Arts and Humanities (AH)
Spring 14 hours	**NE 406 or 467 (3) SP** Prereq- NE 233 or 433, Physics 252, or consent of instructor	**NE 472 (2) (AOC and EI) SP** Prereq- NE 471	**Technical Elective *(3) FA, SP, SU** Petition required in advance	**Vol Core (3) FA, SP, SU** Global Citizenship International (GCI)	**Vol Core (3) FA, SP, SU** Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS	

***Technical Electives** are selected from upper division mathematics, chemistry, physics and engineering courses and must be pre-approved by the department. Courses in Nuclear Engineering other than 500, 502 or 598 may also be used as technical electives.

**** Nuclear Department Electives-** choose from Nuclear 3XX or 4XX courses not otherwise required for the major. Nuclear 500 level courses other than 500, 502, 598 may also be used for department electives.

Full Status Progression

A lower-division student may apply for progression to upper division after completing CHEM 122/123 or 128*, CHEM 132/133 or 138*, MATH 132/141/147*, MATH 142/148*, MATH 231/237, EF 151/157*, EF 152/158*, and PHYS 231*, with a grade of C or better in each, and an overall GPA of at least 2.5.

Provisional Status Progression

Students who have completed CHEM 122/123 or 128*, CHEM 132/133 or 138*, MATH 132/141/147*, MATH 142/148*, MATH 231/237, EF 151/157*, EF 152/158*, and PHYS 231* with a grade of C or better and have an overall GPA between 2.0 and 2.5 may apply for provisional status. The granting of provisional status is based on the availability of space in departmental programs after full status students have been accommodated. Provisional status students are required to demonstrate their ability to perform satisfactorily in upper-division by attaining a minimum GPA of 2.5 in the first 9 hours of 300-level required nuclear engineering courses. Award of upper-division full status is dependent upon this performance. Students who have not progressed to upper-division will be dropped from departmental courses.

Nuclear Graduation Requirements

Students are required to maintain a cumulative grade point average of at least 2.0 in all nuclear engineering courses taken at the Unversity of Tennessee, Knoxville used to satisfy the graduation requirement. No more than four (4) credit hours of required nuclear engineering courses in which a C- or lower is the highest grade earned may be counted toward graduation. This is in addition to the university's graduation requirements.
Students are strongly recommended to meet with their faculty advisor every semester.

Students also have opportunities for an Honors Concentration and/or a five year BS/MS program. See the Undergraduate Catalog for details and requirements.

Volunteer Core courses highlighted in light orange.