

# Bachelor of Science in Nuclear Engineering (BSNE)

## 2025 Catalog Year

Credit hours required for graduation:120<sup>(6)</sup>

# **FRESHMAN YEAR**

### SPRING SEMESTER

SPRING SEMESTER

SPRING SEMESTER

SPRING SEMESTER

Total Semester Hours:

16

#### Calculus Based Physics I<sup>(2)</sup> PHYS 1310 1 3 3 CHEM 1225 General Chemistry II for STEM Majors (2) 3 (or Principles of Chemistry II) (or 132) General Chemistry II Laboratory for STEM **CHEM 1225L** 1 1 Majors<sup>(2)</sup> Calculus II<sup>(2)</sup> 3 MATH 1522 4 4 GEN ED: Arts & Design<sup>(1)</sup> 3 GEN ED: Communication<sup>(1)</sup> 3 3 **Total Semester Hours: Total Semester Hours:** 15 17

\*First Year Learning Workshop

## SOPHOMORE YEAR

#### NUCF 2220 Principles of Radiation Protection 3 Laboratory Electronics for Nuclear, **NUCE 2213** 3 PHYS 1320 Calculus Based Physics II Chemical and Biological Engineers 3 MATH 2531 Calculus III 4 **NUCE 2230** Principles of Nuclear Engineering 3 Thermodynamics and Nuclear Systems ECON 2110 Macroeconomic Principles 3 NE 314 3 ENG 130L 3 NF 371 Nuclear Materials Engineering 3 Introduction to Engineering Computing<sup>(2)</sup> Total Semester Hours: 16 **MATH 316** Applied Ordinary Differential Equations 3 15 Total Semester Hours:

\*Department Orientation

# JUNIOR YEAR

NE 311	Introduction to Transport Phenomena	3	NE 312	Unit Operations	3
NE 315	Nuclear Engineering Analysis & Calculation	3	NE 313L	Introduction to Laboratory Techniques for Nuclear Engineering	4
NE 323L	Radiation Detection and Measurement	4		0 0	
STAT 345	Elements of Mathematical Statistics and Probability Theory	3	NE 330	Nuclear Engineering Science	3
	GEN ED: Second Language <sup>(1)</sup>	3	NE 410	Nuclear Reactor Theory	3
	Total Semester Hours:	16		Technical Elective <sup>(5)</sup>	3

\*Graduation Planning Workshop

### SENIOR YEAR(3)(4)

### FALL SEMESTER

Monte Carlo Techniques for Nuclear NE 462 3 **NE 413L** Nuclear Engineering Laboratory I 3 Systems NE 452 Thermal-Hydraulics of Nuclear Systems Senior Seminar NE 464 3 1 Nuclear Engineering Computational NE 497L 3 NF 498I Nuclear Engineering Design 3 Methods Nuclear Engineering Technical Elective<sup>(4)</sup> 3 NE 470 Nuclear Fuel Cycle and Materials 3 Nuclear Engineering Technical Elective<sup>(4)</sup> 3 12 Total Semester Hours: 13

**Total Semester Hours:** 

(1) Students should consult the online UNM catalog (http://catalog.unm.edu/), the online LoboTrax Degree Audit, or an academic advisor to obtain a list of acceptable courses to fulfill the general education requirements. These courses may be taken whenever convenient.

Admissions to the BSNE degree program requires completion of 19 hours of math, science, and engineering courses listed in the freshman year with a grade of (2) "C" or better, and a minimum UNM cumlative GPA of a 2.3.

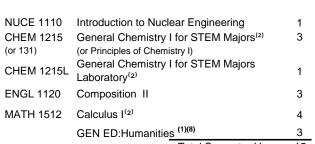
Students are encouraged to take the Fundamentals of Engineering (FE) Examination during their senior year. This is the first formal step toward professional (3) registration. See Website: www.ncees.org/fe/.

(4)The NE Technical Electives are chosen from a list of approved upper division nuclear engineering courses, and the Technial Electives are chosen from a list of approved STEM-related technical courses. See department website or ask an academic advisor for complete list.

Each course counted towards graduation must be completed with a grade of C- or better. Courses used to fulfill the General Education curriculum or pre-(5) requisites outside of the major require a grade of C or better.

Students must file a graduation application for the B.S.N.E. prior to the completion of the courses listed in the junior year fall of the NE curriclum (i.e. NE 311). (6)

For the UNM General Education Humanities requirement, we recommend picking a course that also satisfies the U.S. & Global Diversity and Inclusion (7) requirement. Constult the catalog or an academic advisor for more details.



FALL SEMESTER

FALL SEMESTER<sup>(7)</sup>

FALL SEMESTER