

Bachelor of Science in Nuclear Engineering (B.S.N.E.)
2019-2020 Catalog Year

 Credit hours required for graduation: 120⁽⁶⁾

120

FRESHMAN YEAR
FALL SEMESTER

| | | |
|-----------------------|--|----|
| NE 101 | Introduction to Nuclear Engineering | 1 |
| CHEM 1215 (or 131) | General Chemistry I for STEM Majors ⁽²⁾ (or Principles of Chemistry I) | 3 |
| CHEM 1215L | General Chemistry I for STEM Majors Laboratory ⁽²⁾ | 1 |
| ENGL 1120 | Composition II | 3 |
| MATH 1512 | Calculus I ⁽²⁾ | 4 |
| | GEN ED: Humanities ⁽¹⁾⁽⁸⁾ | 3 |
| Total Semester Hours: | | 15 |

SPRING SEMESTER

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

SOPHOMORE YEAR
FALL SEMESTER

| | | |
|-----------------------|--|----|
| NE 230 | Principles of Radiation Protection | 3 |
| PHYS 1320 | Calculus Based Physics II | 3 |
| MATH 2530 | Calculus III | 4 |
| ECON 2110 | Macroeconomic Principles | 3 |
| CS 151L | Computer Programming Fundamentals For Non-Majors ⁽²⁾ | 3 |
| Total Semester Hours: | | 16 |

SPRING SEMESTER

| | | |
|-----------------------|--|----|
| NE 213 | Laboratory Electronics for Nuclear, Chemical and Biological Engineers | 3 |
| NE 231 | Principles of Nuclear Engineering | 3 |
| NE 314 | Thermodynamics and Nuclear Systems | 3 |
| NE 371 | Nuclear Materials Engineering | 3 |
| MATH 316 | Applied Ordinary Differential Equations | 3 |
| Total Semester Hours: | | 15 |

JUNIOR YEAR
FALL SEMESTER⁽⁷⁾

| | | |
|-----------------------|---|----|
| NE 311 | Introduction to Transport Phenomena | 3 |
| NE 315 | Nuclear Engineering Analysis & Calculation | 3 |
| NE 323L | Radiation Detection and Measurement | 4 |
| STAT 345 | Elements of Mathematical Statistics and Probability Theory | 3 |
| | GEN ED: Second Language ⁽¹⁾ | 3 |
| Total Semester Hours: | | 16 |

SPRING SEMESTER

| | | |
|-----------------------|--|----|
| NE 312 | Unit Operations | 3 |
| NE 313L | Introduction to Laboratory Techniques for Nuclear Engineering | 4 |
| NE 330 | Nuclear Engineering Science | 3 |
| NE 410 | Nuclear Reactor Theory | 3 |
| | Technical Elective ⁽⁵⁾ | 3 |
| Total Semester Hours: | | 16 |

SENIOR YEAR⁽³⁾
FALL SEMESTER

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|-----------------------|--|----|
| NE 462 | Monte Carlo Techniques for Nuclear Systems | 3 |
| NE 464 | Thermal-Hydraulics of Nuclear Systems | 3 |
| NE 497L | Nuclear Engineering Computational Nuclear Engineering Technical Elective ⁽⁴⁾ | 3 |
| Total Semester Hours: | | 12 |

SPRING SEMESTER

| | | |
|-----------------------|---|----|
| NE 413L | Nuclear Engineering Laboratory I | 3 |
| NE 452 | Senior Seminar | 1 |
| NE 498L | Nuclear Engineering Design | 3 |
| NE 470 | Nuclear Fuel Cycle and Materials | 3 |
| | Nuclear Engineering Technical Elective ⁽⁴⁾ | 3 |
| Total Semester Hours: | | 13 |

- (1) Students should consult the online UNM catalog (<http://unmcore.unm.edu/>), the online LoboTrax, or an advisor to obtain a list of acceptable courses to fulfill the core curriculum requirements. These courses may be taken whenever convenient.
- (2) 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 "C" or better, and a minimum UNM cumulative GPA of a 2.3.
- (3) Students are encouraged to take the Fundamentals of Engineering (FE) Examination during their senior year. This is the first formal step toward professional registration. See Website: www.ncees.org/fe/.
- (4) The NE Technical Electives are chosen from a list of approved upper division nuclear engineering courses with the approval of the student's advisor. See website: <http://ne.unm.edu/students/ne-tech-electives-as-of-2018-2019.pdf>
- (5) The Technical Electives are chosen from a list of approved upper division technical courses with the approval of the student's advisor. See website: <http://ne.unm.edu/students/ne-tech-electives-as-of-2018-2019.pdf>
- (6) Each course counted towards graduation must be completed with a grade of C- or better. Courses used to fulfill the General Education curriculum or Prerequisite outside of the major require a grade of C or better.
- (7) Students must file a graduation application for the B.S.N.E. prior to the completion of the courses listed in the Junior year of the NE curriculum (i.e. NE 315).
- (8) The Department recommends that for your UNM General Education Humanities elective that you choose one course with a # next to it from the General Education sheet so that it not only satisfies your UNM General Education Requirement but also satisfies your mandatory U.S. Global Diversity & Inclusion Requirement.

CONTACT INFORMATION

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Department of Nuclear Engineering - ne.unm.edu