

Nuclear Engineering

123 credit hours total

YEAR 1		YEAR 2		YEAR 3		YEAR 4	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
*MATH 220 (4) Analytic Geometry and Calculus I KSC-3	*MATH 221 (4) Analytic Geometry and Calculus II PR: MATH 220 ≥ C	MATH 222 (4) Analytic Geometry and Calculus III PR: MATH 221 ≥ C	MATH 340 (4) Elementary Differential Equations PR: MATH 221 ≥ C	CE 533 (3) Mechanics of Materials PR: MATH 221, CE 333 ≥ C	ME 571 (3) Fluid Mechanics PR: ME 512, MATH 222 PR/CO: ME 513	ME 574 (3) Applied Engineering Design PR: ME 212, NE 612, NE 690, ME 571 PR/CO: ENGL 200	•NE 585 (3) Nuclear Engineering Design Projects PR: ME 574, NE 690, NE 612, NE 630, NE 650
CHM 210 (4) Chemistry I	*PHYS 213 (5) Engineering Physics I KSC-4 PR/CO: MATH 220	PHYS 214 (5) Engineering Physics II PR: PHYS 213 PR/CO: MATH 221	CE 333 (3) Statics PR: MATH 221, PHYS 213	ECE 519 (3) Electric Circuits for Engineers PR: PHYS 214	•NE 650 (3) Nuclear Fuel Cycles PR: MATH 340, NE 415	ME 573 (3) Heat Transfer PR: MATH 340, (ME 400 or NE 415), ME 571	•NE 648 (3) Nuclear Reactor Laboratory PR: NE 630, NE 612
ME 212 (2) Engineering Graphics PR/CO: MATH 220	CHE 354 (1) Basic Concepts in Materials Science and Engineering (5-week class) PR: CHM 210, PR/CO: PHYS 213	CIS 209 (3) Python Programming for Engineers PR: MATH 100 ≥ C	ME 513 (3) Thermodynamics I PR: MATH 221, PHYS 213, CHM 210	ME 512 (3) Dynamics PR: CE 333; PR/CO: MATH 340	•NE 612 (3) Principles of Radiation Detection PR: NE 495	•NE 630 (3) Nuclear Reactor Theory PR: NE 495, MATH 340	*Elective (3) Arts and Humanities KSC-6
DEN 160 (1) College of Engineering Orientation	CHE 355 (1) Fundamentals of Mechanical Properties (5-week class) PR/CO: CHE 354	NE 495 (3) Elements of Nuclear Engineering PR: MATH 221, PHYS 213	•NE 415 (3) Introduction to Engineering Analysis PR: NE 495, CIS 209 PR/CO: MATH 340	•NE 690 (3) Radiation Protection and Shielding PR: NE 495, PHYS 214, MATH 340	▲ Elective (3) Restricted	•NE 640 (3) Nuclear Reactor Thermal Hydraulics PR: NE 495; PR/CO: ME 573	▲ Elective (3) NE
DEN 161 (1) Engineering Problem Solving	*COMM 106 (3) Public Speaking KSC-2		*Elective (3) Social and Behavioral Sciences KSC-5	*Elective (3) Social and Behavioral Sciences KSC-5	*Elective (3) Arts and Humanities KSC-6	*Elective (3) Institutional KSC-7	*Elective (3) Institutional KSC-7
*ENGL 100 (3) Expository Writing I KSC-1	*ENGL 200 (3) Expository Writing II KSC-1 PR: ENGL 100						

(15 credit hours)

(17 credit hours)

(15 credit hours)

(16 credit hours)

(15 credit hours)

(15 credit hours)

(15 credit hours)

(15 credit hours)

KEY

- = Prerequisite for another course
- = Prerequisite requirement
- = Prerequisite or concurrent requirement
- = K-State Core (KSC) course
- = See department approved electives
- = Only offered in the semester shown

Nuclear Engineering Curriculum Notes

To graduate with a Bachelor of Science in nuclear engineering, students must have a ≥ 2.200 GPA in all ME/NE classes ≥ 400 level taken for undergraduate credit at Kansas State University. Course grades that have been removed by the K-State Retake policy will not apply to this GPA calculation.

Before taking classes at another college/university, students should confirm that the courses they wish to take will be accepted in transfer.

Technical Electives

Technical Elective Lists can be found at mne.k-state.edu/student-success/advising.

To pursue a minor, please contact your advisor for more information.

K-State Core

The K-State Core (KSC) is the university's version of the systemwide general education framework established by the Kansas Board of Regents.

KSC requirement 1 – English (6 hours)

KSC requirement 2 – Communications (3 hours)

KSC requirement 3 – Math and Statistics (3 hours)

KSC requirement 4 – Natural and Physical Sciences (4-5 hours)

KSC requirement 5* – Social and Behavioral Sciences (6 hours)

KSC requirement 6* – Arts and Humanities (6 hours)

KSC requirement 7 – Institutional Electives (6 hours)

To view course lists for each requirement, visit k-state.edu/general-education.

**Requires two courses from two different subject areas.*