PURDUE UNIVERSITY

Nuclear Engineering

College of Engineering

code-BS-Nucl
Code-XXX
131 Credits for Graduation
Students must have a graduation index of 2.0

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Nuclear Engineering Major Courses (53 credits) (https://engineering.purdue.edu/NE/Academics/Ugradman2010.pdf)

Required NUCL Courses (41 credits)

_____ (3) NUCL 20000- Introduction to Nuclear Engineering
_____ (2) NUCL 20500- Nuclear Engineering Lab
_____ (3) NUCL 27300- Mechanics of Materials
_____ (0) NUCL 29800- Nuclear Engineering Sophomore seminar
_____ (3) NUCL 30000- Nuclear Structure and Radiation interaction
_____ (3) NUCL 30500- Nuclear Engineering Lab II
_____ (3) NUCL 31000- Introduction to neutron Physics
_____ (1) NUCL 44900 – Senior Design Proposal
_____ (0) NUCL 49800 - Senior Seminar
_____ (3) ME 20000 – Thermodynamics
_____ (3) ME 274 – Basic Mechanics II

(3) NUCL 40200 - Nuclear Power Systems
(3) NUCL 32000 – Materials for Nuclear Application
(3) NUCL 32500 – Nuclear Materials Lab I
(3) NUCL 35000 – Nuclear Thermal Hydraulics I
(3) NUCL 35100 – Nuclear Thermal Hydraulics II
(3) NUCL 35500 – Nuclear Thermal Hydraulics –Lab
(0) NUCL 39800 – Nuclear Engineering Junior seminar
(3) NUCL 45000 – Senior Design
(3) NUCL 51000/42000 – Reactor theory/ Materials
(3) ME 27000- Basic Mechanics I
(3) ECE 20100 – Linear Circuit analysis

NE technical Electives - (15 credits) (https://engineering.purdue.edu/NE/Academics/Undergrad/tech_electives.html)

_____ (3) Technical Elective I
_____ (3) Technical Elective II
_____ (3) Technical Elective III
_____ (3) Technical Elective IV
_____ (3) Technical Elective V

Other Departmental /Program Course Requirements (48 credits)

_____ (4/5) *MA 16500/16100 – Calculus I (Satisfies FYE requirement)*
_____ (4/5) MA 16600/16200 – Calculus II*(Satisfies FYE requirement)*
_____ (4) *CHM 11500 – General Chemistry I*
_____ (4) *CHM 11600 – General Chemistry II*
_____ (2) *ENGR 13100-* Transforming Ideas to Innovation I*(Satisfies FYE requirement)*
_____ (2) *ENGR 13200* - Transforming Ideas to Innovation II*(Satisfies FYE requirement)*
_____ (4) ENGL 10600 – English Composition*(Satisfies FYE requirement)*
_____ (3) *COM 11400-* First-Year General Education Elective((Satisfies FYE requirement)
_____ (4) *PHYS 17200- Physics I(Satisfies FYE requirement)*
_____ (3) CS 15900- Science Elective*(Satisfies FYE requirement)*
_____ (4) MA 26100 – (satisfies Math and physics requirement)
_____ (3) MA 26500- (satisfies Math and physics requirement)
_____ (3) MA 26600 - (satisfies Math and physics requirement)
_____ (4) PHYS 24100 - (satisfies Math and physics requirement)

NOTE: COM 114 is counted separately from the 18 credits of Gen Ed requirement. Therefore the Gen Ed requirement can be considered to be 18 + 3 credits = 21 when including COM 114

General Electives (18 credits) (https://engineering.purdue.edu/NE/Academics/Ugradman2010.pdf)(9 in Social sciences and 9 In Humanities)

_____	(3)	G.E.-I	(3)	G.E.-IV	( )	_____	( ) _____
_____	(3)	G.E.-II	(3)	G.E.-V	( )	_____	( ) _____
_____	(3)	G.E.-III	(3)	G.E.- VI	( )	_____	( ) _____

University Core Requirements

Human Cultures Humanities	☐	*Science, Technology & Society Selective*	☐ _____
Human Cultures Behavioral/Social Science	☐	*Written Communication*	☐ _____
Information Literacy	☐	*Oral Communication*	☐ _____
Science Selective	☐	*Quantitative Reasoning*	☐ _____
Science Selective	☐		

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The student is ultimately responsible for knowing and completing all degree requirements.

Degree Works is knowledge source for specific requirements and completion

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Revised 2/2013 (effective Fall 2015)

Nuclear Engineering (Fusion)

https://engineering.purdue.edu/NE/Academics/Ugradman2010.pdf

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	MA 16500		4	MA 16600	MA 16500
4	CHM 11500		4	CHM 11600	CHM 11500
4	ENGL 10600		3	CS 15900	
2	ENGR 13100		2	ENGR 13200	ENGR 13100
4	PHYS 17200		3	COM 11400	
18			**16**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
0	NUCL 29800		0	NUCL 29800	
3	General Elective I		3	MA 26500	MA 16200/16600
4	MA 26100	MA 16600/ 16200	3	NUCL 27300	ME 270
3	NUCL 20000	MA 16200, PHYS 17200	4	PHYS 24100	
3	ME 27000	PHYS 17200, ENGR 13200, MA 16200/16600	3	General Elective II	
3	ME 20000	MA 26100, ENGR 13200	3	ME 274	
			2	NUCL 205	NUCL 200
16			**18**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
0	NUCL 39800		0	NUCL 39800	
3	NUCL 32500		3	NUCL 31000	MA 26600, NUCL 30000
3	NUCL 30000	MA 26100	3	NUCL 35100	NUCL 35000
3	NUCL 32000	NUCL 273	3	NUCL 35500	NUCL 35000, NUCL 35100
3	MA 26600		3	Math Elective (MA 300+)	
3	General Elective III		3	Technical Elective	
3	NUCL 35000	ME 20000, ME 27400	3	Technical Elective	
18			**18**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	Technical Elective		3	ECE 20100	
2	NUCL 30500	NUCL 20500	3	NUCL 45000	NUCL 31000, NUCL 40200, NUCL 44900
3	NUCL 40200	NUCL 35100	0	NUCL 49800	
1	NUCL 44900		3	Technical Elective	
3	General Elective IV		3	General Elective V	
0	NUCL 49800		3	General Elective VI	
3	NUCL 51000	NO FRESHMEN/ SOPHOMORE			
3	Technical Elective	NO FRESHMEN/ SOPHOMORE			
18			**15**		

131 semester credits required for Bachelor of Engineering degree.
Students must have a graduation index of 2.0

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