B.S. Nuclear Engineering

Nuclear engineering is a field with exciting and expanding opportunities. Careers range from operating nuclear power plants to research for the future of nuclear reactor design, nuclear fuels, reprocessing and waste disposal. Other areas include space propulsion, medical treatment and homeland security applications. Job prospects in nuclear engineering are good, with opportunities as close as the Idaho National Laboratory (INL) and spanning across the U.S. and the world. Salaries for nuclear engineers are among the highest for all engineering professions. Graduates with a B.S. may start at an annual income greater than $60,000.

Students earning this degree must complete 8 of the 9 University General Education Objectives (a minimum of 36 credits - see the General Education Requirements (http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/) described in the Academic Information section of this catalog). The program of study for the Bachelor of Science in Nuclear Engineering degree totals 122 credits (minimum) as follows. Some of the required courses also satisfy or partially satisfy General Education Objectives, as noted.

General Education

Code	Title	Credits
Objective 1- ENGL 1102		6
Objective 2- COMM 1101		3
Objective 3- MATH 1170		3
Objective 4		6
Objective 5- CHEM 1111 & CHEM 1111L, PHYS 2211		7
Objective 6		6
Students must fulfill Objective 7 or Objective 8		3
Objective 7- CS 1181		
Objective 8		
Objective 9		3
Total Credits		**37**

Major Requirements

Code	Title	Credits
CE 1105	Engineering Graphics	2
CE/ME 2210	Engineering Statics	3
CE/ME 2220	Engineering Dynamics	3
CE/ME 3350	Mechanics of Materials	3
CE/ME 3341	Fluid Mechanics	3
CE 3361	Engineering Economics and Management	3
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab (Partially satisfies General Education Objective 5)	5
COMM 1101	Fundamentals of Oral Communication (Satisfies General Education Objective 2)	3
CS 1181	Computer Science and Programming I (Satisfies General Education Objective 7)	3
ECE 2205	Principles of Electrical Circuits	3
NE 4478	Reliability and Risk Assessment	3
ENGL 1102	Writing and Rhetoric II (Partially satisfies General Education Objective 1)	3
HPHY 4416	Introduction to Nuclear Measurements	3
MATH 1170	Calculus I (Satisfies General Education Objective 3)	4
MATH 1175	Calculus II	4
MATH 2240	Linear Algebra	3
MATH 2275	Calculus III	4
MATH 3360	Differential Equations	3
MATH 4421	Advanced Engineering Mathematics I	3
ME 3307	Thermodynamics	3
ME 3322	Mechanical Engineering Materials	3
ME 4443	Thermal Fluids Laboratory	1
ME 4476	Heat Transfer	3
NE 1120	Introduction to Nuclear Engineering	1
NE 3301	Nuclear Engineering I	3
NE 3302	Nuclear Engineering II	3
NE 4419	Energy Systems and Nuclear Power	3
NE 4445	Reactor Physics	3
NE 4446	Nuclear Fuel Cycle Systems	3
NE 4447	Nuclear Systems Laboratory	1
NE 4451	Nuclear Seminar	1
NE 4496A	Project Design I	1
NE 4496B	Project Design II	3
PHYS 2211	Engineering Physics I (Partially satisfies General Education Objective 5)	4
PHYS 2212	Engineering Physics II	4
Nuclear Engineering Elective		3
Engineering Elective		3

Degree Totals

Code	Title	Credits
Program Admission Requirements		0
General Education		37
Major Requirements (w/o General Education)		85
Free Electives		0
Total Credits		**122**

ISU Degree Requirements (http://coursecat.isu.edu/undergraduate/degreerequirements/)

ISU General Education (http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/)

Major Academic Plan (MAP) (https://www.isu.edu/advising/maps/)