

BACHELOR OF SCIENCE IN ENGINEERING PHYSICS

Required Courses

Code	Title	Credit Hours
Physics Requirements		(41)
PHYS 100	Intro to the Profession	2
PHYS 123	General Physics I: Mechanics	4
PHYS 221	General Physics II: Electricity and Magnetism	4
PHYS 223	General Physics III	4
PHYS 240	Computational Science	3
PHYS 300	Instrumentation Laboratory	4
PHYS 301	Mathematical Methods of Physics	3
PHYS 304	Thermodynamics and Statistical Physics	3
PHYS 308	Classical Mechanics I	3
PHYS 405	Fundamentals of Quantum Theory I	3
PHYS 413	Electromagnetism I	3
PHYS 427	Advanced Physics Laboratory I	3
PHYS 485	Physics Colloquium	1
PHYS 485	Physics Colloquium	1
Engineering Core Requirements		(18)
MS 201	Materials Science	3
MMAE 202	Mechanics of Solids	3
MMAE 232	Design for Innovation	3
MMAE 313	Fluid Mechanics	3
ECE 308	Signals and Systems	3
ECE 438	Control Systems	3
Mathematics Requirements		(18)
MATH 151	Calculus I	5
MATH 152	Calculus II	5
MATH 251	Multivariate and Vector Calculus	4
MATH 252	Introduction to Differential Equations	4
Engineering Electives		(9)
Select 9 credits from the approved list of Engineering electives ¹		9
Technical Electives		(6)
Select six credit hours, approved by the advisor, from Engineering or 400-level Physics courses		6
Chemistry Requirement		(4)
CHEM 124	Principles of Chemistry I with Laboratory	4
Computer Science Requirement		(2)
Select one of the following:		2
CS 104	Introduction to Computer Programming for Engineers	2
CS 105	Introduction to Computer Programming	2
CS 115	Object-Oriented Programming I	2
Interprofessional Projects (IPRO)		(6)
See Illinois Tech Core Curriculum, section E		6
Humanities and Social Science Requirements		(21)
See Illinois Tech Core Curriculum, sections B and C		21
Total Credit Hours		125

¹ BME 309, BME 422, BME 433, BME 438, CAE 286, CAE 287, CAE 312, CAE 419, CAE 470, ECE 403, ECE 408, ECE 437, ECE 447, MMAE 302, MMAE 320, MMAE 323, MMAE 485

Bachelor of Science in Engineering Physics Curriculum

				Year 1
Semester 1	Credit Hours	Semester 2	Credit Hours	
PHYS 100	2	PHYS 221	4	
PHYS 123	4	MS 201	3	
CHEM 124	4	MATH 152	5	
MATH 151	5	Humanities 200-level Course	3	
	15		15	
				Year 2
Semester 1	Credit Hours	Semester 2	Credit Hours	
PHYS 223	4	PHYS 304	3	
CS 105	2	MATH 252	4	
MATH 251	4	MMAE 232	3	
MMAE 202	3	Social Sciences Elective	3	
Humanities or Social Sciences Elective	3	Humanities Elective (300+)	3	
	16		16	
				Year 3
Semester 1	Credit Hours	Semester 2	Credit Hours	
PHYS 300	4	PHYS 240	3	
PHYS 301	3	ECE 308	3	
PHYS 308	3	Engineering Elective	3	
MMAE 313	3	I PRO 497 or 397	3	
Engineering Elective	3	Social Sciences Elective (300+)	3	
	16		15	
				Year 4
Semester 1	Credit Hours	Semester 2	Credit Hours	
PHYS 405	3	PHYS 485	1	
PHYS 413	3	Engineering Elective	3	
PHYS 427	3	Technical Elective	3	
PHYS 485	1	I PRO 497	3	
ECE 438	3	Social Sciences Elective (300+)	3	
Technical Elective	3	Humanities Elective (300+)	3	
	16		16	
Total Credit Hours: 125				