

B.S. DEGREE in PHYSICS+
with Mechanical Engineering Emphasis - Option A
Iowa State University

Semester 1	Freshman Year	Semester 2	
Critical Thinking and Comm. - Engl 150	3	Intro to Class. Physics II – Phys 242	5
Introductory Seminar - Phys 199	R	Calculus III - Math 265	4
Intro to Classical Physics I – Phys 241	5	Social Science Choice	3
Calculus II – Math 166	4	General Chemistry I Chem 177+177L ²	5
Humanities Choice	3		17
Library Instruction – Lib 160	1		
	<u>16</u>		

Semester 1	Sophomore Year	Semester 2	
WOVE Composition - Engl 250	3	Mech. Eng. Problem Solving with Computer Applications - ME160	3
Intro to Modern Physics I - Phys 321	3	Classical Mechanics - Phys 361	3
Intro Lab in Mod Phys I - Phys 321L	1	Introduction to Partial Differential Equations - Math 385	3
Elementary Differential Equations and Laplace Transforms – Math 267	4	Engineering Statics - E M 274	3
Foreign Language (or Elective)	4(3)	Social Science Choice	3
Humanities choice	3	Foreign Language (or Elective)	4(3)
	<u>18(17)</u>		<u>19(18)</u>

Semester 1	Junior Year	Semester 2	
Engineering Graphics and Introductory Design - ME 170	3	Thermal Physics – Phys 304	3
Electricity and Magnet. I - Phys 364	3	Introduction to Mechanical Engineering Design - M E 270	3
Engineering Statistics - Stat 305	3	Introduction to Circuits and Instruments - E E 442	2
Matrix/Lin. Algebra – Math 207/317	3(4)	Mechanics of Materials - E M 324	3
English Proficiency Requirement - Engl 302, 305, 309 or 314	3	Seminar – Phys 389	R
	<u>15(16)</u>	Social Science Choice	3
		Humanities choice	3
			<u>17</u>

Semester 1	Senior Year	Semester 2	
Quantum Mechanics – Phys 480	3	Intermediate Laboratory – Phys 311 ¹	2
Elective	3	System Dynamics and Control M E 421	4
Engineering Measurements - M E 370	3	Principles of Materials Science and Engineering - MAT E 273	3
Introduction to AC Circuits and Motors - E E 448	2	Humanities Choice	3
Engineering Dynamics - E M 345	3	Electives	6
	<u>14</u>		<u>18</u>

¹ Students must earn a minimum of two laboratory credits from Phys 310, 311, 311T, 450L, 470L, Astro 344L or 450L.

² Chem 177 + Chem 177L can be used as Natural Science Electives

Students in all ISU majors must complete a three-credit course in U.S. diversity and a three-credit course in international perspectives. Check (<http://www.iastate.edu/~registrar/courses/div-list.html>) for a list of approved courses. Discuss with your adviser how the two courses that you select can be applied to your graduation plan.

LAS majors require a minimum of 120 credits, including a minimum of 45 credits at the 300/400 level. You must also complete the LAS foreign language requirement.