

**B.S. DEGREE in PHYSICS+**  
**with Chemistry Emphasis - Option B**  
**Iowa State University**

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

Semester 1	Sophomore Year	Semester 2	
WOVE Composition - Engl 250	3	<b>Intro to Modern Physics II – Phys 322</b>	3
<b>Intro to Modern Physics I – Phys 321</b>	3	<b>Intro Lab in Mod Phys II – Phys 322L</b>	1
<b>Intro Lab in Mod Phys I - Phys 321L</b>	1	<b>Classical Mechanics - Phys 361</b>	3
<b>Elementary Differential Equations and Laplace Transforms – Math 267</b>	4	<b>Introduction to Partial Differential Equations - Math 385</b>	3
General Chemistry II Chem 178+178L <sup>2</sup>	5	Social Science Choice	3
	16	Humanities Choice	3
			<u>16</u>

Semester 1	Junior Year	Semester 2	
Humanities choice	3	<b>Thermal Physics – Phys 304</b>	3
<b>Electricity and Magnet. I - Phys 364</b>	3	<b>Quantitative and Environmental Analysis Chem 211+211L</b>	4
English Proficiency Requirement - Engl 302, 305, 309 or 314	3	<b>Introductory Quantum Mechanics - Chem 324</b>	3
<b>Matrix/Lin. Algebra – Math 207/317</b>	3(4)	Social Science Choice	3
Foreign Language (or Elective)	4(3)	Foreign Language (or Elective)	4(3)
	<u>16</u>		<u>17(16)</u>

Semester 1	Senior Year	Semester 2	
<b>Electronics - Phys 310</b>	4	<b>Inorganic Chemistry - Chem 301</b>	2
<b>Quantum Mechanics – Phys 480</b>	3	<b>Laboratory in Physical Chemistry Chem 321L</b>	2
<b>Instrumental Methods of Chemical Analysis - CHEM 316</b>	2	Humanities Choice	3
<b>Instrumental Analysis Lab. - Chem 316L</b>	2	Electives	9
Humanities Choice	3		<u>16</u>
	<u>14</u>		

\* Students should choose a course that satisfy both Arts& Humanities and International Prospective requirements

<sup>1</sup> Chem 177 and Chem 178 can be used as Natural Science Electives

Students in all ISU majors must complete a three-credit course in U.S. diversity, a three-credit course in international perspectives, 9 credits in Social Science, 8 credits in Natural Science and 12 credits in Arts and Humanities courses. 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.