

B.S. DEGREE in PHYSICS+

with Biological Physics Emphasis

Iowa State University - 2016

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 ³	5
Humanities Choice	3		17
Library Instruction – Lib 160	1		
	<u>16</u>		

Semester 1	Sophomore Year	Semester 2	
WOVE Composition - Engl 250	3	Classical Mechanics - Phys 361	3
Intro to Modern Physics I – Phys 321	3	Introduction to Partial Differential	
Intro Lab in Mod Phys I - Phys 321L	1	Equations - Math 385	3
Elementary Differential Equations and		Principles of Biology II - BIOL 212	3
Laplace Transforms – Math 267	4	Principles of Biology Lab II - BIOL 212L	1
General Chemistry II Chem 178+178L ³	5	Social Science Choice	3
	<u>16</u>	Humanities Choice	3
			<u>16</u>

Semester 1	Junior Year	Semester 2	
Organic Chemistry I Chem 331+331L	4	Thermal Physics – Phys 304	3
Electricity and Magnet. I - Phys 364	3	Organic Chemistry II Chem 332 + 332L	4
English Proficiency Requirement - Engl 302, 305, 309 or 314	3	Seminar – Phys 389	R
Matrix/Lin. Algebra – Math 207/317	3(4)	Social Science Choice	3
Foreign Language (or Elective)	4(3)	Foreign Language (or Elective)	4(3)
	<u>18</u>		<u>14(13)</u>

Semester 1	Senior Year	Semester 2	
Principles of Molecular Cell		Intermediate Laboratory – Phys 311 ¹	2
Biology - BIOL 314	3	Molecular and Cell	
Humanities Choice	3	Biophysics - PHYS 432²	3
Quantum Mechanics – Phys 480	3	Biochemistry I - BBMB 404²	3
Elective	3	Humanities choice	3
Physics of Biomolecules - PHYS 461²	3	Electives	6
	<u>15</u>		<u>17</u>

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

² Students must earn a minimum of 6 credits in a 400 level course such as Phys 432, Phys461 or BBMB404

³ Chem 177, Chem 117L, Chem 178 and Chem 178L 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.