

B.S. DEGREE in PHYSICS+
with Electrical 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	<u>5</u>
Humanities Choice	3		17
Library Instruction – Lib 160	<u>1</u>		
	16		

Semester 1	Sophomore Year	Semester 2	
WOVE Composition - Engl 250	3	Electric Circuits - E E 201	4
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	
Elementary Differential Equations and		Equations - Math 385	3
Laplace Transforms – Math 267	4	Social Science Choice	3
Foreign Language (or Elective)	4(3)	Foreign Language (or Elective)	<u>4(3)</u>
Humanities choice	<u>3</u>		17(16)
	18(17)		

Semester 1	Junior Year	Semester 2	
Signals and Systems I - E E 224	4	Thermal Physics – Phys 304	3
Electricity and Magnet. I - Phys 364	3	Digital Logic - CPR E 281	4
Electronic Circuits and Systems - E E 230	4	Electricity and Magnet. II - Phys 365	3
Matrix/Lin. Algebra – Math 207/317	3(4)	Seminar – Phys 389	R
English Proficiency Requirement -		Social Science Choice	3
Engl 302, 305, 309 or 314	<u>3</u>	Humanities choice	<u>3</u>
	17(18)		16

Semester 1	Senior Year	Semester 2	
E E 330: Integrated Electronics	4	Intermediate Laboratory – Phys 311 ¹	2
Signals and Systems II - E E 324	4	Digital VLSI Design - E E 465	4
Quantum Mechanics – Phys 480	3	Humanities Choice	3
Elective	<u>6</u>	Electives	<u>6</u>
	17		15

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.