

B.S. DEGREE in PHYSICS+
with Aerospace Engineering Emphasis
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	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	Aerospace Engineering Problems with	
Intro to Modern Physics I - Phys 321	3	Computer Applications Lab - AER E 160	3
Intro Lab in Mod Phys I - Phys 321L	1	Classical Mechanics - Phys 361	3
Elementary Differential Equations and		Introduction to Partial Differential	
Laplace Transforms – Math 267	4	Equations - Math 385	3
Humanities Choice	3	Engineering Statics - C E 274	3
Foreign Language (or Elective)	4(3)	Foreign Language (or Elective)	4(3)
	<u>18(17)</u>		<u>16(15)</u>

Semester 1	Junior Year	Semester 2	
Numerical, Graphical and Lab Techniques		Engineering Thermodynamics I - M E 231	3
for Aerospace Engineering - AER E 161	3	Introduction to Performance and Design -	
Intro to Solar Astronomy - ASTRO 342 ¹	3	AER E 261	3
Electricity and Magnet. I - Phys 364	3	Intro to Astrophysics - ASTRO 346 ¹	3
Engineering Dynamics - M E 345	3	Social Science Choice	3
Matrix/Lin. Algebra – Math 207/317	3(4)	Humanities Choice	3
English Proficiency Requirement -			<u>15</u>
Engl 302, 305, 309 or 314	3		
	<u>18(19)</u>		

Semester 1	Senior Year	Semester 2	
Aerodynamics I: Incompressible		Astrodynamics I -AER E 351	3
Flow - AER E 310	3	Aerodynamics II: Compressible	
Social Science Choice	3	Flow - AER E 311	3
Quantum Mechanics – Phys 480	3	Natural Science Elective	3
Selected Plan Elective ²	3	Humanities Choice	3
Astronomy Laboratory - ASTRO 344L or			
AER E 344	3	Selected Plan Elective ²	3
	<u>15</u>		<u>15</u>

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

¹ Students should choose one between Astro 342 or Astro 346

² Students should choose two courses from Phys 362, Astro 405, Aer E 422, Aer E 446, Aer E 451, Aer E 480

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.

