

**DEGREE MAP**

The following sequence is an example of how this degree can be completed in two years. This sequence is based on satisfaction of all Basic Skills requirements and prerequisites, and presumes a fall start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your counselor for other options and to monitor your progress.

**Program Name:** Physics (Astronomy Emphasis)-Associate of Science Degree

**Location(s) Offered:**

Sierra Vista Campus (The first two semesters of this degree can be completed on the Douglas Campus.)

**Learning Outcomes:** *Students who successfully complete this program will be able to do the following:*

1. Identify, formulate, and solve basic physics problems in classical mechanics related to the motion of objects.
2. Identify, formulate, and solve basic physics problems in electromagnetism related to electricity, magnetism, and electromagnetic fields.
3. Integrate natural sciences to build a solid foundation in physics applications using appropriate mathematical skills.
4. Design simple physics experiments based on the scientific method. Acquire the results of these experiments by analyzing and collecting data.

**Course or program prerequisite(s) not included in the degree:**

CHM 151 General Chemistry I requires CHM 130 Fundamental Chemistry, CHM 138 Chemistry for Allied Health, or one year of high school chemistry; and MAT 123 Developmental Mathematics Level III or higher.  
ENG 101 Composition requires appropriate English placement score (or see advisor).  
MAT 220 Calculus I requires appropriate mathematics placement score (or see advisor), MAT 187 Precalculus, or both MAT 151 Precalculus Algebra and MAT 182 Precalculus Trigonometry.  
PHY 230 Physics with Calculus I requires PHY 111 General Physics I or one year of high school physics.  
This program requires RDG 122 Reading Critically or exemption.

**Program Reviewed:** Feb 22, 2016

**Key:**

*IW=Intensive Writing*  
*F2F=Face-to-Face Instruction*  
*ITV=Instructional Television*  
*VC=Virtual Campus/Online*

<i>Requirements</i>	<i>Course(s) Recommended</i>	<i>Delivery Method</i>	<i>Credits</i>
<b>First Semester (Fall):</b>			
General Education-Composition	ENG 101 Composition	F2F,VC	3
General Education-Lab Sciences	CHM 151 General Chemistry I	F2F	4
General Education-Mathematics	MAT 220 Calculus I or higher	F2F,VC	3-5
General Education-Social & Beh Sciences		F2F,VC	3
<b>Second Semester (Spring):</b>			
General Education-Add Math/Lab Science	MAT 231 Calculus II	F2F	4
General Education-Composition	ENG 102 English Composition	F2F,VC	3
General Education-Lab Sciences	CHM 152 General Chemistry II	F2F	4
Elective*		F2F,VC	3
Elective*		F2F,VC	3
<b>Third Semester (Fall):</b>			
Core Curriculum	PHY 230 Physics with Calculus I	F2F	4
General Education-Add Math/Lab Science	MAT 241 Calculus III	F2F	4
General Education-Arts		F2F,VC	3
General Education-Social & Beh Sciences		F2F,VC	3
Elective*		F2F,VC	3
<b>Fourth Semester (Spring):</b>			
Core Curriculum	AST 180 Introduction to Astronomy	F2F,VC	4
Core Curriculum	PHY 231 Physics with Calculus II	F2F	4
General Education-Humanities		F2F,VC	3
Elective*		F2F,VC	3
Elective*		F2F,VC	1-3

**Total credits required:** 64

**Notes:**

Six credits of arts, humanities, or social behavioral sciences must be chosen from the current listing of intensive writing courses. See [www.cochise.edu/AGEC](http://www.cochise.edu/AGEC).

\*Elective courses must be transferable to the university or universities to which the student plans to transfer. See [www.aztransfer.com](http://www.aztransfer.com).