NORTHERN ARIZONA UNIVERSITY
College of Engineering, Forestry & Natural Sciences

Bachelor of Science
Physics & Mathematics (Merged Major)
2009-2010 Undergraduate Catalog

Degree Progression Plan

Freshman Year							
1st term				**2nd term**			
PHY 161	University Physics I	4		PHY 262	University Physics II	3	
MAT 136	Calculus I	4		PHY 262L	University Physics II Lab	1	
LS	Liberal Studies	3		MAT 137	Calculus II	4	
LS/DIV	Liberal Studies/Diversity ***	3		ENG 105	Critical Reading and Writing (FNRQ)	4	
PHY 103	First Year Seminar	1		*LS*	Liberal Studies	3	
	Total units	15			Total units	15	

Sophomore Year							
3rd term				**4th term**			
MAT 238	Calculus III	4		MAT 320W	Foundations of Mathematics	3	
MAT 239	Differential Equations +	3		PHY 265	Introduction to Computation Physics	3	
PHY 263	University Physics III	3		PHY 264	Electronics For Science Students	3	
LS	Liberal Studies *	4		PHY 361	Modern Physics	3	
GE	General Elective	1		*LS*	Liberal Studies	3	
	Total units	15			Total units	15	

Junior Year							
5th term				**6th term**			
PHY 321	Mechanics I	3		MAT 316	Introduction to Linear Algebra	3	
PHY 301	Methods of Analytical Physics	3		PHY 331	Electricity & Magnetics I	3	
MAT 411C or MAT 431C	Intro to Abstract Algebra or Intro to Analysis I	3		*PHY 441*	Thermal & Statistical Physics	3	
STA 473C	Introduction to Mathematics Statistics I	3		*ME*	Major Elective **	3	
LS/DIV	Liberal Studies/Diversity ***	3		*LS*	Liberal Studies	3	
	Total units	15			Total units	15	

Senior Year							
7th term				**8th term**			
CAP	Capstone Course ****	3		PHY 333W	Advanced Lab	3	
PHY 471	Quantum Physics	3		*ME*	Major Elective **	3	
PHY 332	Electricity & Magnetics II	3		*ME*	Major Elective **	3	
MAT 411C or MAT 431C	Intro to Abstract Algebra or Intro to Analysis I	3		*LS*	Liberal Studies	3	
ME	Major Elective **	3		*LS*	Liberal Studies	3	
	Total units	15			Total units	15	

Liberal Studies Distribution blocks

AHI (6 units)	SPW (6 units)	CU (6 units)	Science (7 units)	Additional 3 units to reach 35 total

PROGRAM INFORMATION

A minimum of 120 units are required for this degree.

The math foundation requirement is waived for this degree.

*Chemistry is the recommended course for the SCI: LAB Block

** Major electives include 12 units from the following:

- 3 units from MAT 412C, MAT 441C or STA 474C
- 9 units from upper-division courses in physics, astronomy, mathematics (including MAT 226) and statistics (except MAT 301, 401, & 402) with at least one course from mathematics and statistics.

*** Take a Liberal Studies course that also satisfies a diversity requirement.

**** Capstone Course includes one of the following:

- 3 units of PHY 498C or
- 1 unit of PHY 498C and 2 units of PHY 485C.

+ MAT 239 is not required for the degree, but is a pre/co requisite for PHY 321.

Advanced Physics and Astronomy courses are usually offered only once per year; 300 level astronomy courses are usually offered once every other year. Typical sequencing is as follows:

Every fall semester: AST 280, PHY 301, PHY 321, PHY 332, PHY 471, PHY 498C, plus electives.
Every spring semester: PHY 264, PHY 265, PHY 331, PHY 361, PHY 333W, and PHY 441.
Fall of even-numbered years: AST 301/301L
Fall of odd-numbered years: AST 391
Spring of even-numbered years: AST 392
Spring of odd-numbered years: AST 390

You may not count more than one grade below a C in a physics or astronomy course toward the major requirements for this degree.

GENERAL INFORMATION

- This degree progression plan is to be used in conjunction with the academic catalog and degree progress report.
- Students should see an academic advisor regularly to confirm their academic progress.
- Students must see an academic advisor before enrollment for the 7th term in preparation for graduation.
- Many courses have pre-requisites. Please check the academic catalog for pre-requisite and placement information.
- Submit graduation application during 7th term.
- Honors students complete different requirements to meet NAU's liberal studies program. Students should consult an Honors Program advisor for complete information on fulfilling Honors Liberal Studies requirements.
- All students are required to complete at least 120 total units which includes:
  - 35 units of liberal studies courses: http://www4.nau.edu/aio/Articulation/LScourselist.htm
  - 6 units of diversity courses (3 units in Global & 3 units in Ethnic). The diversity requirement may be fulfilled in any part of the program of study: http://www4.nau.edu/aio/Articulation/DiversityCourseList.htm
  - 30 units of upper division courses (300-400 level), 18 of these units must be taken at NAU
- English placement: http://www.nau.edu/comp/placement.html
- Math placement: http://www.cefns.nau.edu/Academic/Math/studentInformation/Placement/Placement.shtml

CONTACT INFORMATION

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