

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester One:</b>					
PHYS 1310 & 1310L (General Physics, 160 & 160L)	4	4	4		C
PHYS 1311* (Prob in Gen Physics, 167)					CR
MATH 1512 (Calculus I, 162)	4	4	3		C
CHEM 1215 & 1215L (Gen Chem I, 121 & 123L)	4	4	3		C
Gen Ed Second Language	3		3		C
<b>Total:</b>	<b>15</b>	<b>12</b>	<b>13</b>	<b>0</b>	
<i>Advisement: Try a Freshman Learning Community - 2 core classes combined</i>					
<i>At time of registration</i>					

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Three:</b>					
PHYS 2310 & 2310L (General Physics, 262 & 262L)	4	4			C
PHYS 2311* (Prob in Gen Physics, 267)					CR
MATH 2530 (Calculus III, 264)	4	4			C
EPS 436 (Climate Dynamics), Climate Focus - FALL ONLY	3-4	3-4		0-3	C
GEOL 1110/1110L (Physical Geol.) Solid Earth Focus - Conc. Gateway**					
Gen Ed Communication (COMM 1130, ENGL 2210 or 2120, PHIL 1120)	3		3		C
<b>Total</b>	<b>14</b>	<b>12</b>	<b>3</b>	<b>0</b>	
<i>Transition to Major Status (once semester grades are in)</i>					

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Five:</b>					
PHYC 303 (Analytical Mechanics I)	3	3		3	C
PHYC 313* (Prob in Analytical Mechanics I)					CR
PHYC 366 (Mathematical Methods of Physics)	4	4		4	C
EPS Elective 1	3	3		3	C
Gen Ed Humanities	3		3		C
Gen Ed Arts and Design	3		3		C
<b>Total</b>	<b>16</b>	<b>10</b>	<b>6</b>	<b>10</b>	
<i>Visit Career Services</i>					

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Seven:</b>					
PHYC 301 (Thermodynamics & Stat Mech)	3	3		3	C
PHYC 311* (Prob Thermo & Stat Mechanics)					CR
EPS Elective 3	3	3		3	C
Elective Any Level	3				D-
Elective Any Level (if recitations not taken)	2				D-
Upper Division Elective	3			3	D-
<b>Total</b>	<b>14</b>	<b>6</b>	<b>0</b>	<b>9</b>	
<i>Advisement: Departmental Check-In / Senior Visit</i>					

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Two:</b>					
PHYS 1320 & 1320L (General Physics, 161 & 161L)	4	4			C
PHYS 1321* (Problems in Gen Physics, 168)					CR
MATH 1522 (Calculus II, 163)	4	4			C
CHEM 1225 & 1225L (Gen Chem II, 122 & 123L)	4	4			C
Gen Ed Communication (2nd English Composition, ENGL 1120)	3		3		C
<b>Total:</b>	<b>15</b>	<b>12</b>	<b>3</b>	<b>0</b>	
<i>Advisement: Enhanced Degree Audit skills</i>					

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Four:</b>					
PHYS 2415 (Computational Physics, 290)	3	3			C
PHYC 330 (Intro Modern Physics)	3	3		3	C
PHYC 331* (Prob in Modern Physics)					CR
MATH 316 (Applied Ordinary Diff. Equations)	3	3		3	C
ENVS 1130/1130L (Environmental Geol. ) Climate Focus	4-3	4-3		0-3	C
PHYC 327 (Geophysics) Solid Earth Focus - Concentration Gateway**					
Gen Ed Social and Behavioral Sciences	3		3		C
<b>Total</b>	<b>16</b>	<b>13</b>	<b>3</b>	<b>9</b>	

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Six:</b>					
PHYC 304 (Analytical Mechanics II)	3	3		3	C
PHYC 314* (Prob in Analytical Mechanics II)					CR
PHYC 405 (Electricity and Magnetism I)	3	3		3	C
PHYC 415* (Problems in Electricity and Magnetism I)					CR
MATH 314 (Linear Algebra with Applications)	3	3		3	C
EPS Elective 2	3	3		3	C
Gen Ed Choice	3		3		C
<b>Total</b>	<b>15</b>	<b>12</b>	<b>3</b>	<b>12</b>	
<i>Complete Graduation Workshop &amp; Apply for degree (after 4th week)</i>					
<i>Advisement: Departmental Check-In</i>					

Course Subject and Title	Credit Hrs.	Major	Gen Ed	Upper Div.	Min. Grade
<b>Semester Eight:</b>					
PHYC 307L (Junior Lab)	3	3		3	C
EPS Elective 4	3	3		3	C
Elective Any Level (if recitations not taken)	3				D-
Elective Any Level (if recitations not taken)	3				D-
Upper Division Elective	3			3	D-
<b>Total</b>	<b>15</b>	<b>6</b>	<b>0</b>	<b>9</b>	
<i>Advisement: Senior Visit</i>					
<i>Visit Graduation Fair</i>					

<b>Degree Total</b>	<b>120</b>	<b>83</b>	<b>31</b>	<b>49</b>
---------------------	------------	-----------	-----------	-----------

## The New Mexico General Education Curriculum (31 units)

Communication: (6 credit hours)

Mathematics and Statistics: (3 credit hours)

Physical and Natural Sciences: (4 credit hours)

Social and Behavioral Sciences: (3 credit hours)

Humanities: (3 units)

Second Language: (3 credit hours)

Arts and Design: (3 credit hours)

Student Choice: (6 credit hours)

## Arts and Sciences College Minimum Requirements

Total credit hours = 120

300/400 level credit hours = 48

Minimum credit hours taught in A&S = 90

## University Residence Requirements

a. Minimum hours = 30

b. Senior standing = 15 past 92

c. In major= One half

d. In minor = One quarter

## Minimum graduation GPA = 2.00

Keep in mind that minimum grades on road map are for individual

## Minor options

No minor is required for the B.S. in Physics with Earth and Planetary Concentration, although an optional minor or second major may be selected.

**For more information see the catalogue at [www.unm.edu](http://www.unm.edu)**

## Contact Information

Major Advisor:

Email:

Website: [physics.unm.edu](http://physics.unm.edu)

Minor Advisor:

Email:

Website:

College Advisor:

Email:

Website: [artsci.unm.edu/advisement/index.html](http://artsci.unm.edu/advisement/index.html)

\*Physics 1311, 1321, 2311, 331, 311, 313, 311, 415, 416, 496, and 497 are all one credit hour Recitation Sections associated with Physics 1310, 1320, 2310, 330, 301, 303, 304, 405, 406, 491, and 492, respectively. These recitation sessions are practice in solving problems from the associated lecture courses. They are very useful and strongly recommended for the major.

## Notes

**\*\*Concentration Gateway Electives:** The EPS concentration requires a minimum of 6 electives, including GEOL 1110/1110L or ENV5 1130/1130L and PHYC 327 or EPS 436 as gateway classes. Four additional electives may be chosen from the lists below (a student can mix classes across these subject areas, depending on interest, but should work closely with their advisor to determine the best set of classes). These electives are generally chosen because they require the PHYC 1310 series as pre-reqs, but students are encouraged to contact the instructors of the classes to identify themselves as Physics majors with an EPS concentration.

**"Solid Earth" Focus:** includes GEOL 1110/1110L and PHYC 327 as the gateway classes.

GEOL 1110 and 1110L are recommended, but a motivated student could opt to gain this background on their own by reading. This should be determined in advising. Such a student may add another EPS elective instead in an appropriate semester.

**"Climate" Focus:** includes ENV5 1130/1130L and EPS 436 as the gateway classes.

ENV5 1130/1130L or GEOL 1110/1110L are recommended, but a motivated student could opt to gain this background on their own by reading. This should be determined in advising. Such a student may add another EPS elective instead.

### Additional electives grouped in subject areas:

**Climate/Atmosphere:** EPS 436 Climate Dynamics, EPS 437 Applied Meteorology, EPS 439 Paleoclimatology

**Solid Earth Geophysics:** PHYC 327 Introduction to Solid Earth Geophysics; EPS 488 Scanning Electron Microscopy; PHYC 4XX/EPS 5XX - Geodynamics or geological fluid mechanics (taught by Prof Roy - course nr TBD); EPS 457L Mathematical Modeling in the Geosciences; Introduction to Seismology, Applied Seismology, Signal Processing, Inverse Theory -- course nrs TBD; EPS 450 Volcanology (with permission of instructor).

**Hydrology:** EPS 476 Physical Hydrology, EPS 462 Hydrogeology, or with permission of instructor, EPS 443 Aquifers and Reservoirs.