

# GEOSCIENCES, B.S.

**Begin Campus:** Any Penn State Campus

**End Campus:** University Park

## Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2024-25 academic year. To access previous years' suggested academic plans, please visit the archive (<https://bulletins.psu.edu/undergraduate/archive/>) to view the appropriate Undergraduate Bulletin edition.

### General Option: Geosciences, B.S. at University Park Campus

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#### First Year

Fall	Credits Spring	Credits
MATH 140 or 140G (GQ) <sup>*†##</sup>	4 MATH 141 or 141G (GQ) <sup>††</sup>	4
CHEM 110 (GN) <sup>†</sup>	3 CHEM 112	3
CHEM 111 (GN) <sup>†</sup>	1 CHEM 113	1
GEOSC 1	3 GEOSC 201 <sup>*</sup>	4
EMSC 100S (GWS) <sup>††1</sup>	3 ENGL 15, 30H, or ESL 15 (GWS) <sup>††</sup>	3
	<b>14</b>	<b>15</b>

#### Second Year

Fall	Credits Spring	Credits
PHYS 211 (GN) <sup>†</sup>	4 PHYS 212	4
GEOSC 202 <sup>*</sup>	4 General Education knowledge domain	3
BIOL 110 (GN) <sup>†</sup>	4 Advanced GEOSC Elective <sup>3</sup>	3
General Education knowledge domain	3 General Education Health and Wellness (GHW)	1.5
General Education Health and Wellness (GHW)	1.5 Advanced MATH/STAT/ CMPSC/GEOSC 210 <sup>2</sup>	3
	<b>16.5</b>	<b>14.5</b>

#### Third Year

Fall	Credits Spring	Credits Summer	Credits
GEOSC 203 <sup>*</sup>	4 GEOSC 465 <sup>*</sup>	4 GEOSC 472A	3
GEOSC 310 <sup>*</sup>	4 GEOSC 204	4 GEOSC 472B	3
Supporting Course <sup>4</sup>	3 Advanced GEOSC elective <sup>3</sup>	3	
General Education knowledge domain	3 General Education knowledge domain <sup>3</sup>	3	
	<b>14</b>	<b>14</b>	<b>6</b>

#### Fourth Year

Fall	Credits Spring	Credits
GEOSC 496	1 GEOSC 494W	3
Advanced GEOSC elective <sup>3</sup>	3 Advanced GEOSC elective <sup>3</sup>	2
Advanced GEOSC elective <sup>3</sup>	3 Supporting Course <sup>4</sup>	3
Supporting Course <sup>4</sup>	3 General Education knowledge domain	3
General Education Foundation selection (GWS) <sup>†</sup>	3 General Education knowledge domain	3
	<b>13</b>	<b>14</b>

#### Total Credits 121

\* Course requires a grade of C or better for the major

‡ Course requires a grade of C or better for General Education

# Course is an Entrance to Major requirement

† Course satisfies General Education and degree requirement

#### University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

<sup>1</sup> Students who begin their studies at non-UP locations and/or join the college after their first year should substitute CAS 100 (GWS), CAS 100A, CAS 100B, or CAS 100C; or ENGL 202C (GWS) for EMSC 100S (GWS). EMSC 100S Earth and Mineral Sciences First year Seminar (3) is a required course only for students who begin their studies at UP in the College of Earth and Mineral Sciences.

<sup>2</sup> Select 3 credits in Math (beyond the MATH 141 level), CMPSC, or STAT.

<sup>3</sup> Select 14 credits from 300- and 400-level GEOSC courses from GEOSC 303(3), GEOSC 340(3), GEOSC 402Y(3), GEOSC 416(3), GEOSC 421(3), GEOSC 422(3), GEOSC 423(4), GEOSC 424(3), GEOSC 426(3), GEOSC 434(3), GEOSC 439(3), GEOSC 440(3), GEOSC 451(3), GEOSC 452(3), GEOSC 454(3), GEOSC 461(3), GEOSC 470W(3), GEOSC 471(3), GEOSC 489(4).

<sup>4</sup> Select 9 credits supportive of student's interest, in consultation with an adviser (students may apply 6 credits of ROTC).

## General Option: Geosciences, B.S. at Commonwealth Campuses

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### First Year

Fall	Credits Spring	Credits
MATH 140 (GQ) <sup>*‡#†</sup>	4 MATH 141 (GQ) <sup>†‡</sup>	4
CHEM 110 (GN) <sup>†</sup>	3 CHEM 112	3
CHEM 111 (GN) <sup>†</sup>	1 CHEM 113	1
ENGL 15, 30H, or ESL 15 (GWS) <sup>††1</sup>	3 General Education Foundation selection (GWS) <sup>†1</sup>	3
General Education knowledge domain	3 General Education knowledge domain	3
<b>14</b>		<b>14</b>

### Second Year

Fall	Credits Spring	Credits
PHYS 211 (GN) <sup>†</sup>	4 PHYS 212	4
BIOL 110 (GN) <sup>†</sup>	4 GEOSC 1 or 20	3
General Education knowledge domain	3 General Education Foundation selection (GWS) <sup>†1</sup>	3
General Education knowledge domain	3 General Education knowledge domain	3
General Education Health and Wellness (GHW)	1.5 General Education Health and Wellness (GHW)	1.5
<b>15.5</b>		<b>14.5</b>

### Third Year

Fall	Credits Spring	Credits Summer	Credits
GEOSC 201 <sup>*</sup>	4 GEOSC 203 <sup>*</sup>	4 GEOSC 472A	3
Supporting Course <sup>4</sup>	3 GEOSC 204	4 GEOSC 472B	3
Advanced MATH/STAT/ CMPSC/GEOSC 210 <sup>2</sup>	3 GEOSC 465 <sup>*</sup>	4	

General Education knowledge domain	3 Advanced GEOSC Elective <sup>3</sup>	3	
<b>13</b>		<b>15</b>	<b>6</b>
<b>Fourth Year</b>			
<b>Fall</b>	<b>Credits Spring</b>	<b>Credits</b>	
GEOSC 202 <sup>*</sup>	4 GEOSC 494W	3	
GEOSC 310 <sup>*</sup>	4 Advanced GEOSC elective <sup>3</sup>	2	
GEOSC 496	1 Advanced GEOSC elective <sup>3</sup>	3	
Advanced GEOSC elective <sup>3</sup>	3 Advanced GEOSC elective <sup>3</sup>	3	
Supporting Course <sup>4</sup>	3 Supporting Course <sup>4</sup>	3	
<b>15</b>		<b>14</b>	

### Total Credits 121

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# Course is an Entrance to Major requirement

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<sup>2</sup> Select 3 credits in Math (beyond the MATH 141 level), CMPSC, or STAT.

<sup>3</sup> Select 14 credits from 300- and 400-level GEOSC courses from GEOSC 303(3), GEOSC 340(3), GEOSC 402Y(3), GEOSC 416(3), GEOSC 421(3), GEOSC 422(3), GEOSC 423(4), GEOSC 424(3), GEOSC 426(3), GEOSC 434(3), GEOSC 439(3), GEOSC 440(3), GEOSC 451(3), GEOSC 452(3), GEOSC 454(3), GEOSC 461(3), GEOSC 470W(3), GEOSC 471(3), GEOSC 489(4).

<sup>4</sup> Select 9 credits supportive of student's interest, in consultation with an adviser (students may apply 6 credits of ROTC).

## Hydrogeology Option: Geosciences, B.S. at University Park Campus

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### First Year

Fall	Credits	Spring	Credits
MATH 140 or 140G (GQ) <sup>*†#††</sup>	4	MATH 141 or 141G (GQ) <sup>††</sup>	4
CHEM 110 (GN) <sup>†</sup>	3	CHEM 112	3
CHEM 111 (GN) <sup>†</sup>	1	CHEM 113	1
GEO SC 1	3	GEO SC 201 <sup>*</sup>	4
EMSC 100S (GWS) <sup>††1</sup>	3	ENGL 15, 30H, or ESL 15 (GWS) <sup>††</sup>	3
<b>14</b>		<b>15</b>	

### Second Year

Fall	Credits	Spring	Credits
PHYS 211 (GN) <sup>†</sup>	4	PHYS 212	4
BIOL 110 (GN) <sup>†</sup>	4	GEO SC 202 <sup>*</sup>	4
General Education knowledge domain	3	General Education knowledge domain	3
General Education Health and Wellness (GHW)	1.5	General Education Health and Wellness (GHW)	1.5
General Education knowledge domain	3	HYDRO Option Elective <sup>2</sup>	3
<b>15.5</b>		<b>15.5</b>	

### Third Year

Fall	Credits	Spring	Credits	Summer	Credits
GEO SC 203 <sup>*</sup>	4	GEO SC 465 <sup>*</sup>	4	GEO SC 472A	3
GEO SC 310 <sup>*</sup>	4	HYDRO Option elective <sup>2</sup>	3	GEO SC 472B	3
GEO SC 452	3	CMPSC 201, 202, CMPSC 203, STAT 250, or STAT 200	3-4		
Supporting Course <sup>4</sup>	3	General Education knowledge domain <sup>3</sup>	3		
<b>14</b>		<b>13-14</b>		<b>6</b>	

### Fourth Year

Fall	Credits	Spring	Credits
GEO SC 496	1	GEO SC 494W	3

SOILS 101, 327, or ERM 450	3	GEO SC 204	4
HYDRO Option elective <sup>2</sup>	3	Supporting Course <sup>3</sup>	2
Supporting Course <sup>3</sup>	3	General Education knowledge domain	3
General Education Foundation selection (GWS) <sup>†</sup>	3	General Education knowledge domain	3
<b>13</b>		<b>15</b>	

### Total Credits 121-122

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- <sup>2</sup> Select 9 credits from A and B. Students must select at least 3 credits from A and 3 credits from B.
  - A. CHEM 202(3), CHEM 450(3), ERM 433(3), GEO SC 413W(3), GEO SC 419(3) (Sem: 3-8)
  - B. ENVSE 408(3), GEOG 362(3), GEO SC 340(3), GEO SC 439(3), GEO SC 454(3), GEO SC 483(3)
- <sup>3</sup> Select 8 credits supportive of student's interest, in consultation with an adviser (students may apply 6 credits of ROTC).



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CHEM 110 (GN) <sup>†</sup>	3	CHEM 112	3
CHEM 111 (GN) <sup>†</sup>	1	CHEM 113	1
ENGL 15, 30H, or ESL 15 (GWS) <sup>††1</sup>	3	General Education knowledge domain	3
General Education knowledge domain	3	General Education Foundation selection (GWS) <sup>†1</sup>	3
<b>14</b>		<b>14</b>	

### Second Year

Fall	Credits	Spring	Credits
PHYS 211 (GN) <sup>†</sup>	4	PHYS 212	4
BIOL 110 (GN) <sup>†</sup>	4	General Education Foundation selection (GWS) <sup>†1</sup>	3
General Education knowledge domain	3	General Education knowledge domain	3
General Education knowledge domain	3	GEOSC 1 or 20	3
General Education Health and Wellness (GHW)	1.5	General Education Health and Wellness (GHW)	1.5
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### Third Year

Fall	Credits	Spring	Credits	Summer	Credits
GEOSC 201 <sup>*</sup>	4	GEOSC 465 <sup>*</sup>	4	GEOSC 472A	3
CMPSC 201, 201, 202, CMPSC 203, STAT 250, or STAT 200	3-4	GEOSC 203 <sup>*</sup>	4	GEOSC 472B	3

Supporting Course <sup>3</sup>	3	HYDRO Option elective <sup>2</sup>	3
General Education knowledge domain	3	HYDRO Option elective <sup>2</sup>	3
<b>13-14</b>		<b>14</b>	
<b>6</b>			
<b>Fourth Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
GEOSC 452	3	GEOSC 494W	3
GEOSC 496	1	GEOSC 204	4
GEOSC 202 <sup>*</sup>	4	Supporting Course <sup>3</sup>	2
GEOSC 310 <sup>*</sup>	4	Supporting Course <sup>3</sup>	3
SOILS 101, 327, or ERM 450	3	HYDRO Option elective <sup>2</sup>	3
<b>15</b>		<b>15</b>	

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B. ENVSE 408(3), GEOG 362(3), GEOSC 340(3), GEOSC 439(3), GEOSC 454(3), GEOSC 483(3)

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