

MATHEMATICS, B.S. (SCIENCE)

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 2025-26 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.

Actuarial Mathematics Option: Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†##}	4 MATH 141 ^{*†##}	4
STAT 200 [*]	4 MATH 220 [*]	3
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3
ECON 102 (or General Education Course)	3 ECON 104 (or General Education Course)	3
PSU 16	1 Supporting Course (ACCTG 211 is recommended)	4
	15	17

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH/STAT 414 [*]	3
MATH 311W [*]	3 MATH 312 [*]	3
CMPSC 101, 121, 131, 200, or 201 [*]	3 General Education Course	3
General Education Course	3 Supporting Course (FIN 301 is recommended)	3
General Education Course	3 Supporting Course (RM 214 is recommended)	1.5-3
	16	13.5-15

Third Year

Fall	Credits Spring	Credits
MATH 250 or 251 [*]	3-4 MATH 484 [*]	3
MATH/STAT 415 [*]	3 MATH 451 or 486 [*]	3
RM 410 [*]	3 RM 421 [*]	3
RM 302 [*]	3 ENGL 202C, 202A, 202B, or 202D [†]	3
CAS 100A, 100B, or 100C [†]	3 Supporting Course (Chosen in consultation with an academic adviser)	3

General Education Course (GHW)		1.5
15-16		16.5
Fourth Year		
Fall	Credits Spring	Credits
RM 411 [*]	3 MATH/STAT 416 [*]	3
STAT, RM, or IE ^{*1}	3 STAT, RM, or IE ^{*1}	3
STAT, RM, or IE ^{*1}	3 General Education Course	3
General Education Course	3 General Education Course	3
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	0-1.5
	13.5	12-13.5

Total Credits 118.5-122.5

- * 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

¹ Select from STAT 380, STAT 462, STAT 463, RM 412, RM 422, IE 425 or IE 468. Students should not take both IE 425 and IE 468.

To enroll in IE 425, use the Request Prerequisite Override feature in LionPATH and indicate that you took MATH 414/STAT 414 in place of the IE 322 prerequisite.

To enroll in IE 468, use the Request Prerequisite Override feature in LionPATH and indicate that you took MATH 484 in place of the IE 405 prerequisite.

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.

Actuarial Mathematics Option (ALEKS Placement in MATH 21): Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 21	3 MATH 41	4 MATH 140 ^{*†#†}	4
STAT 200 [*]	4 General Education Course	3	
ENGL 15, 30H, or ESL 15 [‡]	3 General Education Course	3	
ECON 102 (or General Education Course)	3 ECON 104 (or General Education Course)	3	
PSU 16	1 Supporting Course (ACCTG 211 is recommended)	4	
	14	17	4

Second Year

Fall	Credits Spring	Credits Summer	Credits
MATH 141 ^{*†#†}	4 MATH 230 [*]	4 MATH/STAT 414 [*]	3
MATH 220 [*]	2 MATH 311W [*]	3	
General Education Course	3 CMPSC 101, 121, 131, 200, or 201 [*]	3	
General Education Course	3 General Education Course	3	
General Education Course	3 General Education Course	3	
	15	16	3

Third Year

Fall	Credits Spring	Credits
MATH 250 or 251 [*]	3-4 MATH 312 [*]	3
MATH 484 [*]	3 MATH/STAT 415 [*]	3
RM 410 [*]	3 RM 411 [*]	3
RM 302 [*]	3 FIN 301	3
CAS 100A, 100B, or 100C [‡]	3	
	15-16	12

Fourth Year

Fall	Credits Spring	Credits
RM 421 [*]	3 MATH/STAT 416 [*]	3
STAT, RM, or IE ^{*1}	3 MATH 451 or 486 [*]	3
STAT, RM, or IE ^{*1}	3 STAT, RM, or IE ^{*1}	3
ENGL 202C, 202A, 202B, or 202D [‡]	3 Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	3-4
	General Education Course (GHW)	1.5
	13.5	16.5-17.5

Total Credits 126-128

* 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

¹ Select from STAT 380, STAT 462, STAT 463, RM 412, RM 422, IE 425 or IE 468. Students should not take both IE 425 and IE 468.

To enroll in IE 425, use the Request Prerequisite Override feature in LionPATH and indicate that you took MATH 414/STAT 414 in place of the IE 322 prerequisite.

To enroll in IE 468, use the Request Prerequisite Override feature in LionPATH and indicate that you took MATH 484 in place of the IE 405 prerequisite.

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.

Actuarial Mathematics Option: Mathematics, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†##}	4 MATH 141 ^{*†##}	4
STAT 200 [*]	4 MATH 220 (or General Education Course) ^{*1}	3
ENGL 15 [‡]	3 General Education Course	3
ECON 102 (or General Education Course)	3 ECON 104 (or General Education Course)	3
PSU 16	1 ACCTG 211	4
	15	17

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 414 [*]	3
MATH 220, 250, or 251 ^{*1}	3-4 MATH 311W [*]	3
General Education Course	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3 General Education Course	3
CAS 100A, 100B, or 100C [‡]	3 FIN 301	3
	RM 214	1.5
	16-17	16.5

Third Year

Fall	Credits Spring	Credits
MATH 312 [*]	3 MATH 415 [*]	3
MATH 250 or 251 (or General Education Course) ^{*1}	3 MATH 451 or 486 [*]	3
RM 410 [*]	3 RM 411 [*]	3
RM 302 [*]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
MATH 484 [*]	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	General Education Course (GHW)	1.5
	15	16.5

Fourth Year

Fall	Credits Spring	Credits
RM 421 [*]	3 MATH 416 [*]	3
STAT, RM, or IE ^{*2}	3 STAT, RM, or IE ^{*2}	3
STAT, RM, or IE ^{*2}	3 General Education Course	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3

General Education Course (GHW)	1.5	
	13.5	12

Total Credits 121.5-122.5

- * 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

¹ Semester will vary based on campus MATH 220 and MATH 250/MATH 251 offerings.

² Select from STAT 380, STAT 462, STAT 463, RM 412, RM 422, IE 425 or IE 468. Students should not take both IE 425 and IE 468.

To enroll in IE 425, use the Request Prerequisite Override feature in LionPATH and indicate that you took MATH 414/STAT 414 in place of the IE 322 prerequisite.

To enroll in IE 468, use the Request Prerequisite Override feature in LionPATH and indicate that you took MATH 484 in place of the IE 405 prerequisite.

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.

Applied and Industrial Option: Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If report**). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year		
Fall	Credits Spring	Credits
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
STAT 200 [*]	4 MATH 220 [*]	3
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16
Second Year		
Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 311W [*]	3 MATH 312 [*]	3
CMPSC 121, 131, or 201 ^{*1}	3 MATH/STAT 414 [*]	3
General Education Course	3 General Education Course	3
	General Education Course	3
	13	15-16
Third Year		
Fall	Credits Spring	Credits
MATH/STAT 415 [*]	3 MATH 412 [*]	3
MATH 436 [*]	3 MATH 403 [*]	3
CAS 100A, 100B, or 100C [†]	3 MATH 400-Level ^{*2}	3
General Education Course	3 ENGL 202C, 202A, 202B, or 202D [†]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
	16.5	16.5
Fourth Year		
Fall	Credits Spring	Credits
MATH/CMPSC 455 [*]	3 MATH 450 [*]	3
MATH 400-Level ^{*2}	3 MATH 400-Level ^{*2}	3
MATH 400-Level ^{*2}	3 Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3-4
Supporting Course (Chosen in consultation with an academic adviser)	3	
	15	12-13
Total Credits 119-121		

- * 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

- ¹ Applied & Industrial option students should not take CMPSC 101 or CMPSC 200 since MATH 455/CMPSC 455 requires CMPSC 121, CMPSC 131 or CMPSC 201.
- ² Select from MATH 411, MATH 416, MATH 417, MATH 419, MATH 421, MATH 456, MATH 467, MATH 468, MATH 479, MATH 484, MATH 485, MATH 486.

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.

Applied and Industrial Option (ALEKS Placement in MATH 21): Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 21	3 MATH 41	4 MATH 140 ^{*†#†}	4
STAT 200 [*]	4 General Education Course	3	
ENGL 15, 30H, or ESL 15 [‡]	3 General Education Course	3	
General Education Course	3 General Education Course	3	
PSU 16	1 General Education Course	3	
	14	16	4

Second Year

Fall	Credits Spring	Credits
MATH 141 ^{*†#†}	4 MATH 250 or 251 [*]	3-4
MATH 220 [*]	3 MATH 311W [*]	3
CMPSC 121, 131, or 201 ^{*1}	3 MATH 230 [*]	4
General Education Course	3 General Education Course	3
	General Education Course	3
	13	16-17

Third Year

Fall	Credits Spring	Credits
MATH/STAT 414 [*]	3 MATH 412 [*]	3
MATH 436 [*]	3 MATH/STAT 415 [*]	3
MATH 312 [*]	3 MATH 403 [*]	3
CAS 100A, 100B, or 100C [‡]	3 ENGL 202C, 202A, 202B, or 202D [†]	3
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	3-4
	13.5	15-16

Fourth Year

Fall	Credits Spring	Credits
MATH/CMPSC 455 [*]	3 MATH 450	3
MATH 400-Level ^{*2}	3 MATH 400-Level ^{*2}	3
MATH 400-Level ^{*2}	3 MATH 400-Level ^{*2}	3
General Education Course (GHW)	1.5 General Education Course	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	13.5	15

Total Credits 120-122

- * 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

¹ Applied & Industrial option students should not take CMPSC 101 or CMPSC 200 since MATH 455/CMPSC 455 requires CMPSC 121, CMPSC 131 or CMPSC 201.

² Select from MATH 411, MATH 416, MATH 417, MATH 419, MATH 421, MATH 456, MATH 467, MATH 468, MATH 479, MATH 484, MATH 485, MATH 486.

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.

Applied and Industrial Option: Mathematics, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If report**). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
STAT 200 [*]	4 MATH 220 (or General Education Course) ^{*1}	3
ENGL 15 [‡]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
15		16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 220 (or General Education Course) ^{*1}	3 CMPSC 121, 131, or 201 ^{*2}	3
General Education Course	3 General Education Course	3
CAS 100A, 100B, or 100C [‡]	3 General Education Course	3
	Supporting Course (Chosen in consultation with an academic adviser)	3
13		15-16

Third Year

Fall	Credits Spring	Credits Summer	Credits
MATH 311W [*]	3 MATH 312 [*]	3 MATH 400-Level ^{*3}	3
MATH 414 [*]	3 MATH 412 [*]	3	
MATH 455 [*]	3 MATH 415 [*]	3	
General Education Course	3 ENGL 202C, 202A, 202B, or 202D [‡]	3	

Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
15		15
3		
Fourth Year		
Fall	Credits Spring	Credits
MATH 403 [*]	3 MATH 450 [*]	3
MATH 436 [*]	3 MATH 400-Level ^{*3}	3
MATH 400-Level ^{*3}	3 MATH 400-Level ^{*3}	3
General Education Course	3 General Education Course	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	1-2
15		13-14
Total Credits 120-122		

- * 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

- 1 Semester will vary based on campus MATH 220 offerings.
- 2 Applied & Industrial option students should not take CMPSC 101 or CMPSC 200 since MATH 455/CMPSC 455 requires CMPSC 121, CMPSC 131 or CMPSC 201.
- 3 Select from MATH 411, MATH 416, MATH 417, MATH 419, MATH 421, MATH 456, MATH 467, MATH 468, MATH 479, MATH 484, MATH 485, MATH 486.

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.

Computational Mathematics Option: Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
STAT 200 [*]	4 MATH 220 [*]	3
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 311W [*]	3 MATH 312 [*]	3
CMPSC 121 or 131 ^{*1}	3 CMPSC 122 or 132 ^{*1}	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	General Education Course	3
	13	15-16

Third Year

Fall	Credits Spring	Credits
MATH/STAT 414 [*]	3 MATH/STAT 415 [*]	3
MATH/CMPSC 467 [*]	3 Computational Course ^{*2}	3
CAS 100A, 100B, or 100C [†]	3 Computational Course ^{*2}	3
General Education Course	3 ENGL 202C, 202A, 202B, or 202D [†]	3
Supporting Course (CMPSC 221 is recommended)	3 General Education Course	3
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
	16.5	16.5

Fourth Year

Fall	Credits Spring	Credits
MATH/CMPSC 455 [*]	3 MATH/CMPSC 456 [*]	3
Computational Course ^{*2}	3 CMPSC 465 [*]	3
MATH 411, 412, or 417 ^{*3}	3 Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3-4

Supporting Course (Chosen in consultation with an academic adviser)	3	
	15	12-13

Total Credits 119-121

- * 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

- ¹ Computational option students should not take CMPSC 101, CMPSC 200 or CMPSC 201 since CMPSC 122 and CMPSC 132 require CMPSC 121 or CMPSC 131.
- ² Select from MATH 310, MATH 452, MATH 457, MATH 468, MATH 484, MATH 485, CMPSC 442.
- ³ MATH 411 is offered during the Fall and Summer and MATH 412 and MATH 417 are both only offered during the Spring semesters. In order to take MATH 412 or MATH 417 in the Spring semester, swap it with a Computational Course in Third Year Spring or with CMPSC 465 in Fourth Year Spring.

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.

Computational Mathematics Option (ALEKS Placement in MATH 21): Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 21	3 MATH 41	4 MATH 140 ^{*†‡††}	4
STAT 200 [*]	4 General Education Course	3	
ENGL 15, 30H, or ESL 15 [‡]	3 General Education Course	3	
General Education Course	3 General Education Course	3	
PSU 16	1 General Education Course	3	
14		16	4

Second Year

Fall	Credits Spring	Credits
MATH 141 ^{*†‡††}	4 MATH 230 [*]	4
MATH 220 [*]	2 MATH 311W [*]	3
General Education Course	3 CMPSC 122 or 132 ^{*1}	3
CMPSC 121 or 131 ^{*1}	3 General Education Course	3
Supporting Course (Chosen in consultation with an academic adviser)	3	
15		13

Third Year

Fall	Credits Spring	Credits
MATH 250 or 251 [*]	3-4 MATH/STAT 414 [*]	3
MATH 467 [*]	3 Computational Course ^{*2}	3
MATH 312 [*]	3 MATH 411, 412, or 417 [*]	3
CAS 100A, 100B, or 100C [‡]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3

Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	2-3
		1.5
		General Education Course (GHW)

15-16

15.5-16.5

Fourth Year

Fall	Credits Spring	Credits
MATH/CMPSC 455 [*]	3 MATH/CMPSC 456 [*]	3
MATH/STAT 415 [*]	3 CMPSC 465 [*]	3
Computational Course ^{*2}	3 Computational Course ^{*2}	3
General Education Course	3 General Education Course	3
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	3
13.5		15

Total Credits 121-123

- * 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

¹ Computational option students should not take CMPSC 101, CMPSC 200 or CMPSC 201 since CMPSC 122 and CMPSC 132 require CMPSC 121 or CMPSC 131.

² Select from MATH 310, MATH 452, MATH 457, MATH 468, MATH 484, MATH 485, CMPSC 442.

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.

Computational Mathematics Option: Mathematics, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†##}	4 MATH 141 ^{*†##}	4
STAT 200 [*]	4 MATH 220 (or General Education Course) ^{*1}	3
ENGL 15 [‡]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 220 (or General Education Course) ^{*1}	2-3 CMPSC 122 or 132 ^{*2}	3
CMPSC 121 or 131 ^{*2}	3 Supporting Course (Chosen in consultation with an academic adviser)	3
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course	3
General Education Course	3 General Education Course	3
	15-16	15-16

Third Year

Fall	Credits Spring	Credits
MATH 311W [*]	3 MATH 312 [*]	3
MATH 414 [*]	3 MATH 415 [*]	3
Computational Course ^{*3}	3 Computational Course ^{*3}	3
CAS 100A, 100B, or 100C [‡]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	15	15

Fourth Year

Fall	Credits Spring	Credits
MATH 455 [*]	3 MATH 456 [*]	3
Computational Course ^{*3}	3 MATH 411, 412, or 417 [*]	3
MATH 467 [*]	3 CMPSC 465 [*]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course (GHW)	1.5
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	3

Supporting Course (Chosen in consultation with an academic adviser)	1-2
---	-----

13.5

14.5-15.5

Total Credits 119-122

* 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

¹ Semester will vary based on campus MATH 220 offerings.

² Computational option students should not take CMPSC 101, CMPSC 200 or CMPSC 201 since CMPSC 122 and CMPSC 132 require CMPSC 121 or CMPSC 131.

³ Select from MATH 310, MATH 452, MATH 457, MATH 468, MATH 484, MATH 485, CMPSC 442.

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.

General Mathematics Option: Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits	Spring	Credits
MATH 140 ^{*†#}	4	MATH 141 ^{*†#}	4
STAT 200 [*]	4	MATH 220 [*]	3
ENGL 15, 30H, or ESL 15 [†]	3	General Education Course	3
General Education Course	3	General Education Course	3
PSU 16	1	General Education Course	3
	15		16

Second Year

Fall	Credits	Spring	Credits
MATH 230 [*]	4	MATH 250 or 251 [*]	3-4
MATH 311W [*]	3	MATH 312 [*]	3
General Education Course	3	CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3	Supporting Course (Chosen in consultation with an academic adviser)	3
		Supporting Course (consult with an academic adviser for options)	3
	13		15-16

Third Year

Fall	Credits	Spring	Credits
MATH/STAT 414 [*]	3	MATH/STAT 415 [*]	3
MATH 411, 412, 417, 419, or 421 ^{*1}	3	MATH 435 or 436 [*]	3
CAS 100A, 100B, or 100C [†]	3	Application Area Course [*]	3
Application Area Course [*]	3	ENGL 202C, 202A, 202B, or 202D [†]	3
Supporting Course (Chosen in consultation with an academic adviser)	3	General Education Course	3
General Education Course (GHW)	1.5	General Education Course (GHW)	1.5
	16.5		16.5

Fourth Year

Fall	Credits	Spring	Credits
MATH 403 [*]	3	MATH 400-Level ^{*2}	3
MATH 400-Level ^{*2}	3	Application Area Course [*]	3
Application Area Course [*]	3	Supporting Course (Chosen in consultation with an academic adviser)	3-4
Supporting course (Chosen in consultation with an academic adviser)	3	General Education Course	3

General Education Course	3	
	15	12-13

Total Credits 119-121

- * 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

- ¹ To take MATH 412 or MATH 417 in a Spring semester, swap it with MATH 435 or MATH 436 in Third Year Spring or with a MATH 400-level in Fourth Year Spring. To take MATH 421, swap it with MATH 403 in Fourth Year Fall.
- ² Excluding MATH 401, MATH 405, MATH 406, MATH 410, MATH 418, MATH 441, MATH 470, MATH 471. At most 2 credits of MATH 400 or MATH 497 Learning Assistant Experience may be used.

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.

General Mathematics Option (ALEKS Placement in MATH 21): Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 21	3 MATH 41	4 MATH 140 ^{*†#†}	4
ENGL 15, 30H, or ESL 15 [‡]	3 General Education Course	3	
STAT 200 [*]	4 General Education Course	3	
General Education Course	3 General Education Course	3	
PSU 16	1 General Education Course	3	
	14	16	4

Second Year

Fall	Credits Spring	Credits
MATH 141 ^{*†#†}	4 MATH 230 [*]	4
MATH 220 [*]	3 MATH 311W [*]	3
General Education Course	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course	3
	16	16

Third Year

Fall	Credits Spring	Credits
MATH 250 or 251 [*]	3-4 MATH 312 [*]	3
MATH/STAT 414 [*]	3 MATH/STAT 415 [*]	3
CAS 100A, 100B, or 100C [‡]	3 MATH 435 or 436 [*]	3
Application Area Course [*]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3

Application Area Course^{*} 3

12-13 **15**

Fourth Year

Fall	Credits Spring	Credits
MATH 403 [*]	3 MATH Elective	3
MATH Elective	3 MATH 411, 412, 417, 419, or 421 [*]	3
Application Area Course [*]	3 Application Area Course [*]	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3-4
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
	13.5	13.5-14.5

Total Credits 120-122

* 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.

General Mathematics Option: Mathematics, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†##}	4 MATH 141 ^{*†##}	4
ENGL 15 [‡]	3 MATH 220 (or General Education Course) ^{*1}	3
STAT 200 [*]	4 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 220 (or General Education Course) ^{*1}	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3 General Education Course	3
CAS 100A, 100B, or 100C [‡]	3 General Education Course	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (consult with an academic adviser for options)	3
	16	15-16

Third Year

Fall	Credits Spring	Credits
MATH 311W [*]	3 MATH 312 [*]	3
MATH 414 [*]	3 MATH 415 [*]	3
Application Area Course [*]	3 MATH 435 or 436 [*]	3
General Education Course	3 Application Area Course [*]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
	15	15

Fourth Year

Fall	Credits Spring	Credits
MATH 403 [*]	3 MATH 400-Level ^{*2}	3
MATH 400-Level ^{*2}	3 MATH 411, 412, 417, 419, or 421	3
Application Area Course [*]	3 Application Area Course [*]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	1-2

General Education Course (GHW)	1.5
	13.5
	14.5-15.5

Total Credits 120-122

- * 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

¹ Semester will vary based on campus MATH 220 offerings.
² Excluding MATH 401, MATH 405, MATH 406, MATH 410, MATH 418, MATH 441, MATH 470, MATH 471. At most 2 credits of MATH 400 or MATH 497 Learning Assistant Experience may be used.

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.

Graduate Study Option: Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits	Spring	Credits
MATH 140 ^{*†##}	4	MATH 141 ^{*†##}	4
STAT 200 [*]	4	MATH 220 [*]	3
ENGL 15, 30H, or ESL 15 [†]	3	General Education Course	3
General Education Course	3	General Education Course	3
PSU 16	1	General Education Course	3
	15		16

Second Year

Fall	Credits	Spring	Credits
MATH 230 [*]	4	MATH 250 or 251 [*]	3-4
MATH 311W [*]	3	MATH 312 [*]	3
General Education Course	3	CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3	Supporting Course (Chosen in consultation with an academic adviser)	3
		Supporting Course (Chosen in consultation with an academic adviser)	3
	13		15-16

Third Year

Fall	Credits	Spring	Credits
MATH 403 [*]	3	MATH 404 [*]	3
MATH/STAT 414 [*]	3	MATH/STAT 415 [*]	3
MATH 400-Level ^{*1}	3	MATH 436 [*]	3
CAS 100A, 100B, or 100C [†]	3	ENGL 202C, 202A, 202B, or 202D [†]	3
General Education Course	3	Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course (GHW)	1.5	General Education Course (GHW)	1.5
	16.5		16.5

Fourth Year

Fall	Credits	Spring	Credits
MATH 435 [*]	3	MATH 429 [*]	3
MATH 421 [*]	3	MATH 400-Level ^{*1}	3
MATH 400-Level ^{*1}	3	General Education Course	3
General Education Course	3	Supporting Course (Chosen in consultation with an academic adviser)	3-4

Supporting Course (Chosen in consultation with an academic adviser) 3

15

12-13

Total Credits 119-121

* 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

¹ Excluding MATH 401, MATH 405, MATH 406, MATH 418, MATH 441, MATH 470, MATH 471. At most 2 credits of MATH 400 or MATH 497 Learning Assistant Experience may be used.

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.

Graduate Study Option (ALEKS Placement in MATH 21): Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year			
Fall	Credits Spring	Credits Summer	Credits
MATH 21	3 MATH 41	4 MATH 140 ^{*†#†}	4
STAT 200 [*]	4 General Education Course	3	
ENGL 15, 30H, or ESL 15 [‡]	3 General Education Course	3	
General Education Course	3 General Education Course	3	
PSU 16	1 General Education Course	3	
14		16	
			4

Second Year			
Fall	Credits Spring	Credits	
MATH 141 ^{*†#†}	4 MATH 230 [*]	4	
MATH 220 [*]	3 MATH 250 or 251 [*]	3-4	
General Education Course	3 MATH 311W [*]	3	
General Education Course	3 CMPSC 101, 121, 131, 200, or 201 [*]	3	
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course	3	
16		16-17	

Third Year			
Fall	Credits Spring	Credits	
MATH 400-Level ^{*1}	3 MATH 415 or STAT 415 [*]	3	
MATH/STAT 414 [*]	3 MATH 436 [*]	3	
MATH 312 [*]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3	
CAS 100A, 100B, or 100C [‡]	3 MATH 400-Level ^{*1}	3	

Supporting Course (Chosen in consultation with an academic adviser)	3	
15		12
Fourth Year		
Fall	Credits Spring	Credits
MATH 403 [*]	3 MATH 404 [*]	3
MATH 421 [*]	3 MATH 429 [*]	3
MATH 435 [*]	3 MATH 400-Level ^{*1}	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3-4
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
13.5		13.5-14.5

Total Credits 120-122

- * 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

¹ Excluding MATH 401, MATH 405, MATH 406, MATH 418, MATH 441, MATH 470, MATH 471. At most 2 credits of MATH 400 or MATH 497 Learning Assistant Experience may be used.

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.

Graduate Study Option: Mathematics, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
STAT 200 [*]	4 MATH 220 (or General Education Course) ^{*1}	3
ENGL 15 [‡]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 220 (or General Education Course) ^{*1}	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3 MATH 311W [*]	3
CAS 100A, 100B, or 100C [‡]	3 General Education Course	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	16	15-16

Third Year

Fall	Credits Spring	Credits
MATH 312 [*]	3 MATH 403 [*]	3
MATH 414 [*]	3 MATH 415 [*]	3
MATH 400-Level ^{*2}	3 MATH 400-Level ^{*2}	3
General Education Course	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course	3
	15	15

Fourth Year

Fall	Credits Spring	Credits
MATH 421 [*]	3 MATH 404 [*]	3
MATH 435 [*]	3 MATH 429 [*]	3
MATH 436 [*]	3 MATH 400-Level ^{*2}	3
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3

Supporting Course (Chosen in consultation with an academic adviser) 1-2

13.5

14.5-15.5

Total Credits 120-122

* 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

¹ Semester will vary based on campus MATH 220 offerings.

² Excluding MATH 401, MATH 405, MATH 406, MATH 418, MATH 441, MATH 470, MATH 471. At most 2 credits of MATH 400 or MATH 497 Learning Assistant Experience may be used.

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.

Systems Analysis Option: Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
STAT 200 [*]	4 MATH 220 [*]	3
ENGL 15, 30H, or ESL 15 [†]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 311W [*]	3 MATH 312 [*]	3
General Education Course	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	Supporting Course (Chosen in consultation with an academic adviser)	3
	13	15-16

Third Year

Fall	Credits Spring	Credits
MATH/STAT 414 [*]	3 MATH/STAT 415 [*]	3
MATH 484 [*]	3 Advanced Mathematics Course ^{*1}	3
CAS 100A, 100B, or 100C [†]	3 Application Area Course [*]	3
Application Area Course [*]	3 ENGL 202C, 202A, 202B, or 202D [†]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course	3
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
	16.5	16.5

Fourth Year

Fall	Credits Spring	Credits
MATH 436 [*]	3 Advanced Mathematics Course ^{*1}	3
Advanced Mathematics Course ^{*1}	3 Application Area Course [*]	3
Application Area Course [*]	3 General Education Course	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3-4

Supporting Course (Chosen in consultation with an academic adviser)	3	
	15	12-13

Total Credits 119-121

- * 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

¹ Select from MATH 310, MATH 412, MATH 448, (MATH 451 or MATH 455), MATH 485, MATH 486.

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.

Systems Analysis Option (ALEKS Placement in MATH 21): Mathematics, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits Summer	Credits
MATH 21	3 MATH 41	4 MATH 140 ^{*†‡}	4
STAT 200 [*]	4 General Education Course	3	
ENGL 15, 30H, or ESL 15 [‡]	3 General Education Course	3	
General Education Course	3 General Education Course	3	
PSU 16	1 General Education Course	3	
	14	16	4

Second Year

Fall	Credits Spring	Credits
MATH 141 ^{*†‡}	4 MATH 230 [*]	4
MATH 220 [*]	3 MATH 311W [*]	3
General Education Course	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
General Education Course	3 General Education Course	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
	16	16

Third Year

Fall	Credits Spring	Credits
MATH 250 or 251 [*]	3-4 MATH 312 [*]	3
MATH/STAT 414 [*]	3 MATH/STAT 415 [*]	3
CAS 100A, 100B, or 100C [‡]	3 MATH 484 [*]	3
Application Area Course [*]	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
	Application Area Course [*]	3
	12-13	15

Fourth Year

Fall	Credits Spring	Credits
MATH 436 [*]	3 Advanced Mathematics Course ^{*1}	3
Advanced Mathematics Course [*]	3 Advanced Mathematics Course ^{*1}	3
Application Area Course	3 Application Area Course [*]	3
General Education Course	3 Supporting Course (Chosen in consultation with an academic adviser)	3-4
General Education Course (GHW)	1.5 General Education Course (GHW)	1.5
	13.5	13.5-14.5

Total Credits 120-122

- * 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

¹ Select from MATH 310, MATH 412, MATH 448, (MATH 451 or MATH 455), MATH 485, MATH 486.

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.

Systems Analysis Option: Mathematics, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 ^{*†#†}	4 MATH 141 ^{*†#†}	4
STAT 200 [*]	4 MATH 220 (or General Education Course) ^{*1}	3
ENGL 15 [‡]	3 General Education Course	3
General Education Course	3 General Education Course	3
PSU 16	1 General Education Course	3
	15	16

Second Year

Fall	Credits Spring	Credits
MATH 230 [*]	4 MATH 250 or 251 [*]	3-4
MATH 220 (or General Education Course) ^{*1}	3 CMPSC 101, 121, 131, 200, or 201 [*]	3
CAS 100A, 100B, or 100C [‡]	3 Supporting Course (Chosen in consultation with an academic adviser)	3
Supporting Course (Chosen in consultation with an academic adviser)	3 General Education Course	3
General Education Course	3 General Education Course	3
	16	15-16

Third Year

Fall	Credits Spring	Credits
MATH 311W [*]	3 MATH 312 [*]	3
MATH 414 [*]	3 MATH 415 [*]	3
Application Area Course [*]	3 MATH 484 [*]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 ENGL 202C, 202A, 202B, or 202D [‡]	3
General Education Course	3 Application Area Course [*]	3
	15	15

Fourth Year

Fall	Credits Spring	Credits
MATH 436 [*]	3 Advanced Mathematics Course ^{*2}	3
Advanced Mathematics Course ^{*2}	3 Advanced Mathematics Course ^{*2}	3
Application Area Course [*]	3 Application Area Course [*]	3
Supporting Course (Chosen in consultation with an academic adviser)	3 Supporting Course (Chosen in consultation with an academic adviser)	3
General Education Course (GHW)	1.5 Supporting Course (Chosen in consultation with an academic adviser)	1-2

General Education Course (GHW)	1.5
	13.5
	14.5-15.5

Total Credits 120-122

- * 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

- ¹ Semester will vary based on campus MATH 220 offerings.
- ² Select from MATH 310, MATH 412, MATH 448, (MATH 451 or MATH 455), MATH 485, MATH 486.

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.