

Academic Requirements

Career/Program(Gen Ed)/ Major/Option	Req Term
Undergraduate Career	Fall 2020
Engineering Program	Fall 2020
Comp Sci - Univ Park (BS) Major	Fall 2020
Science Program	Fall 2020
Mathematics (BS) Major	Fall 2020
Systems Analysis Option	Fall 2020

*****DEGREE AUDIT NOTES*****

TUTORIAL: To review the "Interpreting a Degree Audit" tutorial, visit the student Help page: <http://lionpathsupport.psu.edu/student-help/>

**HAVE QUESTIONS/FOUND AN ISSUE? The following reporting lines of communication should be followed:

- Students should contact their academic adviser;
- Academic adviser or other faculty/staff member should contact their college's degree audit contact. This contact is often a campus registrar or college records coordinator,; and
- College degree audit contact should address the question/report the issue to their designated contact in the Office of the University Registrar who will work towards a resolution.**

This report is an unofficial working copy of a student's progress.

Graduation certification of degree requirements is subject to the approval of the student's college dean. Questions about the report should be directed to the student's academic adviser or college dean.

College of Engineering Majors

This report includes requirements for the following majors:

Computer Science Major (CMPSC_BS)
 Computer Science Major (CMPSC_BS)

Eberly College of Science Majors

This report includes requirements for the following majors:

Mathematics Major, Systems Analysis Option (MTHBS_BS-SYANL)
 Mathematics Major, Systems Analysis Option (MTHBS_BS-SYANL)

Entrance Requirements for the College of Engineering

Courses enrolled in a future term will not display in this entrance requirements section until the start of the future term.

Courses must be satisfactorily completed by the end of the semester during which the admission to major process is carried out.

Computer Science Major

Must apply within the window of 29-55 Units Taken Toward GPA
Satisfied

· **Units:** 29.00 required, 35.00 used

3.10 cumulative GPA minimum

GPA must be met when application is submitted, and maintained through the term the entrance courses are completed.

· **GPA:** 3.100 required, 3.900 completed

MATH 140-C or higher required

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-

MATH 141-C or higher required

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A

PHYS 211-C or higher required

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	PHYS	211	Mechanics	4.00	SAT

CMPSC 121 or CMPSC 131-C or higher required

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	CMPSC	121	Intro Prgmg Tech	3.00	SAT

CMPSC 122 or CMPSC 132-C or higher required

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	CMPSC	122	Intermed Prgmg	3.00	A

Entrance Requirements for the Eberly College of Science

Courses enrolled in a future term will not display in this entrance requirements section until the start of the future term.

29.1 units minimum

Satisfied

· **Units:** 29.10 required, 52.00 used

2.0 cumulative GPA minimum

· **GPA:** 2.000 required, 3.900 completed

MATH 140-C or higher required

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-

High School Science Courses or Substitution

Complete 3 high school science courses, or complete an approved substitution. Courses with the Natural Science (GN) attribute fulfill this substitution.

Satisfied:

Additional Entrance Requirements for MTHBS_BS

MATH 141-C or higher required

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A

Schreyer Honors College Requirements

Schreyer Honors College Requirements

Honors Requirements for Junior admits

Schreyer Honors College Requirements for students admitted in Junior Year

C or higher required

Upper Division Requirements

Not Satisfied: Complete 14 units in courses with the Honors Attribute or 500-level courses to meet upper division honors requirement (may include 6 units of honors thesis work)

· **Units:** 14.00 required, 4.00 used, 10.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	MATH	230H	Hnr Calc/Vect Anly	4.00	IP

Schreyer Honors Thesis Requirement

All Schreyer Scholars are required to complete an undergraduate honors thesis.

Potential Courses Eligible for Schreyer Requirements

Courses taken with the Honors attribute, 400-level courses, and 500-level courses that may meet Schreyer Honors College academic requirements

Honors attribute courses

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	MATH	230H	Hnr Calc/Vect Anly	4.00	IP

400-level and 500-level courses

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	CMPSC	465	Data Struc and Algor	3.00	IP

In Progress Courses

Degrees are not complete until all requirements are satisfied.

In Progress Courses

In Progress Courses

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	ARTH	100	Intro to Art	3.00	IP
SU 2023	ARTH	111Z	Anc to Med Art Z	3.00	IP
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
SU 2023	CMPEN	270	Digital Design	4.00	IP
SU 2023	CMPSC	311	Intro Sys Progmg	3.00	IP
SU 2023	CMPSC	465	Data Struc and Algor	3.00	IP
SP 2023	ENGL	202C	Technical Writing	3.00	IP
SP 2023	MATH	230H	Hnr Calc/Vect Anly	4.00	IP
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP
SU 2023	STAT	200	Elem Statistics	4.00	IP

Withdrawn, Unsatisfactory, Repeated, & Excluded Academic Renewal Courses

Withdrawn and Unsatisfactorily Completed Courses

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	CAS	100B	Effective Speech	3.00	LD
FA 2022	CMPEN	270	Digital Design	4.00	W
FA 2022	CMPSC	311	Intro Sys Progmg	3.00	W
FA 2022	CMPSC	465	Data Struc and Algor	3.00	W
SP 2023	GLIS	102N	Global Pathways	3.00	LD
SP 2022	MATH	230	Calc/Vector Anly	4.00	LD
FA 2022	STAT	200	Elem Statistics	4.00	W

World Language Admission Requirement

NOTE: Additional Language Proficiency Required by some Majors

Admissions Foreign Language Satisfied

First-Year Seminar

First-Year Seminar

First-Year Seminar Course

Not Satisfied: Complete 1 unit minimum in First-Year Seminar

· **Units:** 1.00 required, 0.00 used, 1.00 needed

Writing Across the Curriculum

Students are required to complete 3 units of writing-intensive coursework offered within their major(s) or college(s) of enrollment

Writing Across the Curriculum - College of Engineering

Not Satisfied: Courses with the Writing Across the Curriculum attribute offered by the college satisfy this requirement

· **Units:** 3.00 required, 0.00 used, 3.00 needed

Writing Across the Curriculum - College of Science

Not Satisfied: Courses with the Writing Across the Curriculum attribute offered by the college satisfy this requirement

· **Units:** 3.00 required, 0.00 used, 3.00 needed

United States and International Cultures (US/IL)

Courses with US or IL attributes satisfy these requirements

United States and International Cultures (US/IL)

Courses with US and/or IL attributes satisfy these requirements

United States Cultures (US)

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP

International Cultures (IL)

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	ARTH	112	Ren to Modern Art	3.00	A

Minimum 2.00 Cumulative Grade Point Average Required for Graduation

Senate Policy 82-40

Cumulative Grade Point Average

Satisfied

· **GPA:** 2.000 required, 3.900 completed

Residency Requirements

Senate Policy 83-80

At least 36 of the last 60 units must be earned at Penn State

Satisfied

· **Units:** 36.00 required, 60.00 used

At least 60 units must be earned in the last five years

Satisfied

· **Units:** 60.00 required, 71.00 used

General Education- Computer Science Major (CMPSC_BS)

45 units required

Writing/Speaking (GWS)

Complete 9 GWS units, as shown below

Units also apply to major requirements.

C or higher required

ENGL 15 (or equivalent)

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	ENGL	15	Rhetoric and Comp	3.00	SAT

CAS 100A or CAS 100B

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	CAS	100A	Effective Speech	3.00	A

ENGL 202C

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	ENGL	202C	Technical Writing	3.00	IP

Quantification (GQ)

Complete at least 6 GQ units, as shown below.

Units also apply to major and/or option requirements.

C or higher required

MATH 140

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-

MATH 141

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A

Integrative Studies

Complete 6 Inter-Domain units *OR* 6 Linked units

Courses may satisfy other General Education or Major requirements per approved curriculum.

LINKED courses

Satisfied

· **Units:** 6.00 required, 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP

Natural Sciences (GN)

Complete at least 9 units, as shown below.

Units also apply to major requirements.

At least 3 units of GN must be fulfilled by a class that is *not* Inter-Domain.

PHYS 211

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	PHYS	211	Mechanics	4.00	SAT

PHYS 212

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	PHYS	212	Elect. and Mag.	4.00	SAT

PHYS 213 or PHYS 214 or Approved Natural Science Course

Satisfied

· **Units:** 1.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	ANTH	21	Intro Biol Anth	3.00	A

Arts (GA)

Courses with the GA attribute fulfill this requirement

At least 3 units of GA must be fulfilled by a class that is *not* Inter-Domain.

Arts (GA)

Satisfied

· **Units:** 6.00 required, 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	ARTH	100	Intro to Art	3.00	IP
FA 2020	ARTH	112	Ren to Modern Art	3.00	A

Humanities (GH)

Courses with the GH attribute fulfill this requirement

At least 3 units of GH must be fulfilled by a class that is *not* Inter-Domain.

Humanities (GH)

Satisfied

· **Units:** 6.00 required, 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	MATH	230H	Hnr Calc/Vect Anly	4.00	IP

Course List: CMPSC 464, MATH 230

Social and Behavioral Sciences (GS)

Courses with a GS attribute fulfill this requirement

At least 3 units of GS must be fulfilled by a class that is *not* Inter-Domain.

Social and Behavioral Sciences (GS)

Not Satisfied: Complete 6 GS units

At least 3 units cannot be Inter-Domain.

· **Units:** 6.00 required, 3.00 used, 3.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A

Health and Wellness (GHW)

Courses with the GHW attribute fulfill this requirement

At least 3 units of GHW must be fulfilled by a class that is *not* Inter-Domain.

Health and Wellness (GHW) - No Inter-Domain

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP

Computer Science, BS (CMPSC_BS) Major

106-108 units required

Prescribed Courses

49-50 units required

Prescribed Courses-C or higher required

Not Satisfied: Complete the following

· **Units:** 40.00 required, 31.00 used, 9.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	CMPSC	221	Oop With Web	3.00	A
SU 2023	CMPSC	311	Intro Sys Progmg	3.00	IP
SP 2022	CMPSC	360	Discrete Math/Cs	3.00	A
SU 2023	CMPSC	465	Data Struc and Algor	3.00	IP
SP 2023	ENGL	202C	Technical Writing	3.00	IP
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A
FA 2020	PHYS	211	Mechanics	4.00	SAT
SP 2021	PHYS	212	Elect. and Mag.	4.00	SAT

Course List: CMPEN 331, CMPSC 461, CMPSC 473

Prescribed Courses

Not Satisfied: Complete the following

· **Units:** 7.00 required, 4.00 used, 3.00 needed

MATH 220 - Variable Units

Satisfied

· **Units:** 2.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	MATH	220	Matrices	3.00	B+

Additional Courses

35 units required

CMPSC 121 or CMPSC 131 - C or higher required

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	CMPSC	121	Intro Prgmg Tech	3.00	SAT

CMPSC 122 or CMPSC 132 - C or higher required

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	CMPSC	122	Intermed Progmg	3.00	A

CMPEN 270 - C or higher required

Satisfied

· **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	CMPEN	270	Digital Design	4.00	IP

First-Year Seminar

Not Satisfied: Complete 1 unit with the first year seminar attribute to meet university and major requirements. This course cannot double count with General Education.

· **Units:** 1.00 required, 0.00 used, 1.00 needed

ENGL 15 - C or higher required

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	ENGL	15	Rhetoric and Comp	3.00	SAT

CAS 100A or CAS 100B - C or higher required

Satisfied

· **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	CAS	100A	Effective Speech	3.00	A

Probability

Not Satisfied: Complete 3 units

· **Units:** 3.00 required, 0.00 used, 3.00 needed

Course List: MATH 318, MATH 414, MATH 418, STAT 318, STAT 414, STAT 418

Statistics

Not Satisfied: Complete 3 units

· **Units:** 3.00 required, 0.00 used, 3.00 needed

Course List: MATH 319, MATH 415, STAT 319, STAT 415

Additional Computer Science Courses

Not Satisfied: Complete 6 units

- **CMPEN 362 and EE 362 are cross-listed courses. Only complete one course.**
 - **CMPEN 454 and EE 454 are cross-listed courses. Only complete one course.**
 - **CMPSC 442 and DS 442 are cross-listed courses. Only complete one course.**
 - **CMPSC 451 and MATH 451 are cross-listed courses. Only complete one course.**
 - **CMPSC 455 and MATH 455 are cross-listed courses. Only complete one course.**
 - **CMPSC 456 and MATH 456 are cross-listed courses. Only complete one course.**
 - **CMPSC 467 and MATH 467 are cross-listed courses. Only complete one course.**
 - **EE 456, EGEE 456 and ESC 456 are cross-listed courses. Only complete one course.**
- **Units:** 6.00 required, 0.00 used, 6.00 needed

Course List: CMPEN 362, CMPEN 431, CMPEN 454, CMPSC 442, CMPSC 443, CMPSC 444, CMPSC 450, CMPSC 451, CMPSC 455, CMPSC 456, CMPSC 458, CMPSC 466, CMPSC 467, CMPSC 467, CMPSC 471, CMPSC 475, DS 442, EE 362, EE 454, EE 456, EGEE 456, ESC 456, MATH 451, MATH 455, MATH 456, MATH 467

CMPSC 431W or CMPSC 483W-Writing

Not Satisfied: Complete 3 units with the writing attribute to meet university writing and major requirements.

· **Units:** 3.00 required, 0.00 used, 3.00 needed

Course List: CMPSC 431W, CMPSC 483W

400-level CMPEN or CMPSC

Not Satisfied: Complete 3 units

· **Units:** 3.00 required, 0.00 used, 3.00 needed

Supporting Courses and Related Areas-Physics and Natural Science

2-3 units required

PHYS 213 or PHYS 214 or Approved Natural Science Course

Satisfied

· **Units:** 2.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	ANTH	21	Intro Biol Anth	3.00	A

Supporting Courses and Related Areas-400 Level Non-CMPEN/CMPSC

6 units required

Group 1

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 2

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 3

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 4

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 5

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 6

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 7

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 8

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 9

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 10

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 11

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

OR Group 12

Not Satisfied: Complete 6 units in consultation with adviser

· **Units:** 6.00 required, 0.00 used, 6.00 needed

Supporting Courses and Related Areas-Language and Dept List

14 units required

· **Units:** 14.00 required, 13.00 used, 1.00 needed

Foreign Language (Second-Semester Proficiency)

Waived

This requirement has been waived

Foreign Language requirement was Satisfied by High School Transcript/Record. Because of this you will need a minimum of 14 credits total in Dept List. 08/29/22 ARC

Entered by: ARC88

Department List

Not Satisfied: Complete 10-14 units

This requirement has been changed

Minimum Units changed from 10.00 to 14.00
 Maximum Units changed from 14.00 to 14.00
 Foreign Language requirement was Satisfied by High School Transcript/Record. Because of this you will need a minimum of 14 credits total in Dept List. 08/29/22 ARC

Entered by: ARC88

· **Units:** 14.00 required, 13.00 used, 1.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	ARTH	111Z	Anc to Med Art Z	3.00	IP
SP 2022	CMPSC	296	Indep Studies	3.00	A
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP
SU 2023	STAT	200	Elem Statistics	4.00	IP

Computer Science Major, (CMPSC_BS) Total

127 units are required for the degree

 · **Units:** 127.00 required, 85.00 used, 42.00 needed

Computer Science Major, (CMPSC_BS) Total units

121-127 units required for General Education & Computer Science Major

 · **Units:** 121.00 required, 85.00 used, 36.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A
FA 2021	ANTH	21	Intro Biol Anth	3.00	A
SP 2023	ARTH	100	Intro to Art	3.00	IP
SU 2023	ARTH	111Z	Anc to Med Art Z	3.00	IP
FA 2020	ARTH	112	Ren to Modern Art	3.00	A
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
FA 2021	CAS	100A	Effective Speech	3.00	A
SU 2023	CMPEN	270	Digital Design	4.00	IP
SP 2021	CMPSC	121	Intro Prgrmg Tech	3.00	SAT
FA 2021	CMPSC	122	Intermed Progrmg	3.00	A
SP 2022	CMPSC	221	Oop With Web	3.00	A
SP 2022	CMPSC	296	Indep Studies	3.00	A
SU 2023	CMPSC	311	Intro Sys Progrmg	3.00	IP
SP 2022	CMPSC	360	Discrete Math/Cs	3.00	A
SU 2023	CMPSC	465	Data Struc and Algor	3.00	IP
FA 2020	ENGL	15	Rhetoric and Comp	3.00	SAT
SP 2023	ENGL	202C	Technical Writing	3.00	IP
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A
FA 2021	MATH	220	Matrices	3.00	B+
SP 2023	MATH	230H	Hnr Calc/Vect Any	4.00	IP
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP
FA 2020	PHYS	211	Mechanics	4.00	SAT
SP 2021	PHYS	212	Elect. and Mag.	4.00	SAT
SU 2023	STAT	200	Elem Statistics	4.00	IP

Knowledge Domain Flexibility

Complete 0-6 units

**Includes 6 additional units of possible electives from the General Education Knowledge Domain Flexibility **

 · **Units:** 0.00 used

30 units General Education Coursework in areas of GN, GA, GH, GS, GHW

This area verifies that 30 units of General Education Coursework in the areas of GN, GA, GH, GS, GHW have been completed.

If the GN, GA, GH, GS and GHW requirements in the General Education area above are completed prior to earning 30 total General Education units in those areas, complete additional General Education courses with those attributes in order to meet the 30 unit requirement.

 · **Units:** 30.00 required, 51.00 used, 22.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	ANTH	21	Intro Biol Anth	3.00	A
SP 2023	ARTH	100	Intro to Art	3.00	IP
SU 2023	ARTH	111Z	Anc to Med Art Z	3.00	IP
FA 2020	ARTH	112	Ren to Modern Art	3.00	A
FA 2020	ASTRO	1	Astro Universe	3.00	SAT
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP
FA 2020	PHYS	211	Mechanics	4.00	SAT
SP 2021	PHYS	212	Elect. and Mag.	4.00	SAT

Courses not used to satisfy degree requirements in CMPSC_BS

(Courses not used in total units required for the degree)

Courses Not Used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	ASTRO	1	Astro Universe	3.00	SAT

General Education- Mathematics Major (MTHBS_BS)

45 units required

Writing/Speaking (GWS)

Courses with a GWS attribute fulfill this requirement

C or higher required

Writing/Speaking (GWS)
Satisfied

 · **Units:** 9.00 required, 9.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	CAS	100A	Effective Speech	3.00	A
FA 2020	ENGL	15	Rhetoric and Comp	3.00	SAT
SP 2023	ENGL	202C	Technical Writing	3.00	IP

Quantification (GQ)

Complete at least 6 GQ units, as shown below.

Units also apply to major and/or option requirements.

C or higher required

MATH 140
Satisfied

 · **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-

MATH 141
Satisfied

 · **Units:** 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A

Integrative Studies

Complete 6 Inter-Domain units *OR* 6 Linked units

Courses may satisfy other General Education or Major requirements per approved curriculum.

LINKED courses

Satisfied

· Units: 6.00 required, 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP

Natural Sciences (GN)

Courses with the GN attribute fulfill this requirement

At least 3 units of GN must be fulfilled by a class that is *not* Inter-Domain.

Natural Sciences (GN)

Satisfied

· Units: 9.00 required, 9.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	ASTRO	1	Astro Universe	3.00	SAT
FA 2020	PHYS	211	Mechanics	4.00	SAT
SP 2021	PHYS	212	Elect. and Mag.	2.00	SAT

Arts (GA)

Courses with the GA attribute fulfill this requirement

At least 3 units of GA must be fulfilled by a class that is *not* Inter-Domain.

Arts (GA)

Satisfied

· Units: 6.00 required, 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	ARTH	100	Intro to Art	3.00	IP
FA 2020	ARTH	112	Ren to Modern Art	3.00	A

Humanities (GH)

Courses with the GH attribute fulfill this requirement

At least 3 units of GH must be fulfilled by a class that is *not* Inter-Domain.

Humanities (GH)

Satisfied

· Units: 6.00 required, 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP

Social and Behavioral Sciences (GS)

Courses with a GS attribute fulfill this requirement

At least 3 units of GS must be fulfilled by a class that is *not* Inter-

Domain.

Social and Behavioral Sciences (GS)

Not Satisfied: Complete 6 GS units

At least 3 units cannot be Inter-Domain.

· Units: 6.00 required, 3.00 used, 3.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A

Health and Wellness (GHW)

Courses with the GHW attribute fulfill this requirement

At least 3 units of GHW must be fulfilled by a class that is *not* Inter-Domain.

Health and Wellness (GHW) - No Inter-Domain

Satisfied

· Units: 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP

Mathematics, BS (MTHBS_BS) Major

30-32 units required

Prescribed Courses

24-25 units required

Prescribed Courses-C or higher required

Not Satisfied: Complete the following

· Units: 15.00 required, 12.00 used, 3.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A
SP 2023	MATH	230H	Hnr Calc/Vect Anly	4.00	IP

Course List: MATH 230, MATH 312

Prescribed Courses

Satisfied

· Units: 4.00 required, 4.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	STAT	200	Elem Statistics	4.00	IP

MATH 311W-Writing-C or higher required

Not Satisfied: Complete this course with the writing attribute to meet university writing and major requirements

· Units: 3.00 required, 0.00 used, 3.00 needed

Course List: MATH 311W

MATH 220 - Variable Units - C or higher required

Satisfied

· Units: 2.00 required, 2.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	MATH	220	Matrices	2.00	B+

Additional Courses

6-7 units required

Computer Science
Satisfied

 · **Units:** 3.00 required, 3.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2021	CMPSC	121	Intro Prgmg Tech	3.00	SAT

Differential Equations-C or higher required
Not Satisfied: Complete 3-4 units

 · **Units:** 3.00 required, 0.00 used, 3.00 needed

Course List: MATH 250, MATH 251

Systems Analysis Option - MTHBS_BS-SYANL

50-51 units required

 · **Units:** 50.00 required, 18.00 used, 32.00 needed

Prescribed Courses

12 units required

****C or higher required****
Prescribed Courses
Not Satisfied: Complete the following

****MATH 414 and STAT 414 are cross-listed courses. Only complete one course.****
****MATH 415 and STAT 415 are cross-listed courses. Only complete one course.****

 · **Units:** 12.00 required, 0.00 used, 12.00 needed

Course List: MATH 414, MATH 414, MATH 415, MATH 415, MATH 436, MATH 484, STAT 414, STAT 415

Additional Courses

9 units required

****C or higher required****
Advanced Mathematics
Not Satisfied: Complete 6 units

 · **Units:** 6.00 required, 0.00 used, 6.00 needed

Course List: CMPSC 451, MATH 310, MATH 451, MATH 485, MATH 486

400 Level Mathematics
Not Satisfied: Complete 3 units

****Excluding MATH 401, MATH 405, MATH 406, MATH 441, MATH 470, and MATH 471****

 · **Units:** 3.00 required, 0.00 used, 3.00 needed

Supporting Courses and Related Areas

29-30 units required

Area of Application
Not Satisfied: Complete 12 units in consultation with adviser

 · **Units:** 12.00 required, 0.00 used, 12.00 needed

Department List
Satisfied

 · **Units:** 17.00 required, 18.00 used

Term	Subject	Cat #	Course Title	Units	Grade
FA 2021	ANTH	21	Intro Biol Anth	3.00	A
SU 2023	ARTH	111Z	Anc to Med Art Z	2.00	IP

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	CMPEN	270	Digital Design	4.00	IP
SP 2022	CMPSC	221	Oop With Web	3.00	A
SP 2022	CMPSC	296	Indep Studies	3.00	A
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP

Mathematics Maj, Systems Analysis Opt (MTHBS_BS-SYANL) Elect & Total

120 units are required for the degree

 · **Units:** 120.00 required, 78.00 used, 42.00 needed

Math Maj, Systems Analysis Opt (MTHBS_BS-SYANL) Total units not incl elect

113-120 units required for General Education and Mathematics Major, Systems Analysis Option

 · **Units:** 113.00 required, 72.00 used, 41.00 needed

Mathematics Major, Systems Analysis Opt (MTHBS_BS-SYANL) Electives

Complete 0-7 units

****Includes 6 additional units of possible electives from the General Education Knowledge Domain Flexibility****

 · **Units:** 6.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	CMPSC	311	Intro Sys Progmg	3.00	IP
SU 2023	CMPSC	465	Data Struc and Algor	3.00	IP

30 units General Education Coursework in areas of GN, GA, GH, GS, GHW

This area verifies that 30 units of General Education Coursework in the areas of GN, GA, GH, GS, GHW have been completed.

If the GN, GA, GH, GS and GHW requirements in the General Education area above are completed prior to earning 30 total General Education units in those areas, complete additional General Education courses with those attributes in order to meet the 30 unit requirement.

 · **Units:** 30.00 required, 41.00 used, 30.00 needed

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A
FA 2021	ANTH	21	Intro Biol Anth	3.00	A
SP 2023	ARTH	100	Intro to Art	3.00	IP
SU 2023	ARTH	111Z	Anc to Med Art Z	3.00	IP
FA 2020	ARTH	112	Ren to Modern Art	3.00	A
FA 2020	ASTRO	1	Astro Universe	3.00	SAT
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP
FA 2020	PHYS	211	Mechanics	4.00	SAT
SP 2021	PHYS	212	Elect. and Mag.	2.00	SAT

Courses not used to satisfy degree requirements in MTHBS_BS-SYANL

(Courses not used in total units required for the degree)

Courses Not Used

Term	Subject	Cat #	Course Title	Units	Grade
SU 2023	ARTH	111Z	Anc to Med Art Z	1.00	IP
FA 2021	CMPSC	122	Intermed Progrmg	3.00	A
SP 2022	CMPSC	360	Discrete Math/Cs	3.00	A
FA 2021	MATH	220	Matrices	1.00	B+
SP 2021	PHYS	212	Elect. and Mag.	2.00	SAT

Total Units Earned

Total Units Earned

- Units: 88.00 used

Term	Subject	Cat #	Course Title	Units	Grade
SP 2022	ANTH	2N	World Arch	3.00	A
FA 2021	ANTH	21	Intro Biol Anth	3.00	A
SP 2023	ARTH	100	Intro to Art	3.00	IP
SU 2023	ARTH	111Z	Anc to Med Art Z	3.00	IP
FA 2020	ARTH	112	Ren to Modern Art	3.00	A
FA 2020	ASTRO	1	Astro Universe	3.00	SAT
SP 2023	CAMS	5Z	Anc Mediterranean Civilizations	3.00	IP
FA 2021	CAS	100A	Effective Speech	3.00	A
SU 2023	CMPEN	270	Digital Design	4.00	IP
SP 2021	CMPSC	121	Intro Prgmg Tech	3.00	SAT
FA 2021	CMPSC	122	Intermed Progrmg	3.00	A
SP 2022	CMPSC	221	Oop With Web	3.00	A
SP 2022	CMPSC	296	Indep Studies	3.00	A
SU 2023	CMPSC	311	Intro Sys Progrmg	3.00	IP
SP 2022	CMPSC	360	Discrete Math/Cs	3.00	A
SU 2023	CMPSC	465	Data Struc and Algor	3.00	IP
FA 2020	ENGL	15	Rhetoric and Comp	3.00	SAT
SP 2023	ENGL	202C	Technical Writing	3.00	IP
FA 2020	MATH	140	CALC ANLY GEOM I	4.00	A-
SP 2021	MATH	141	CALC ANLY GEOM II	4.00	A
FA 2021	MATH	220	Matrices	3.00	B+
SP 2023	MATH	230H	Hnr Calc/Vect Anly	4.00	IP
SP 2023	NUTR	175Z	Healthy Food Eat USA LINKED	3.00	IP
SP 2023	NUTR	251	Intro Prin Nutr	3.00	IP
FA 2020	PHYS	211	Mechanics	4.00	SAT
SP 2021	PHYS	212	Elect. and Mag.	4.00	SAT
SU 2023	STAT	200	Elem Statistics	4.00	IP

CMPSC	121	Intro Prgmg Tech	3.00	SP 2021	SAT	EN
MATH	141	CALC ANLY GEOM II	4.00	SP 2021	A	EN
PHYS	212	Elect. and Mag.	4.00	SP 2021	SAT	EN
ANTH	21	Intro Biol Anth	3.00	FA 2021	A	EN
CAS	100A	Effective Speech	3.00	FA 2021	A	EN
CMPSC	122	Intermed Progrmg	3.00	FA 2021	A	EN
MATH	220	Matrices	3.00	FA 2021	B+	EN
ANTH	2N	World Arch	3.00	SP 2022	A	EN
CMPSC	221	Oop With Web	3.00	SP 2022	A	EN
CMPSC	296	Indep Studies	3.00	SP 2022	A	EN
CMPSC	360	Discrete Math/Cs	3.00	SP 2022	A	EN
MATH	230	Calc/Vector Anly	4.00	SP 2022	LD	EN
CMPEN	270	Digital Design	4.00	FA 2022	W	EN
CMPSC	311	Intro Sys Progrmg	3.00	FA 2022	W	EN
CMPSC	465	Data Struc and Algor	3.00	FA 2022	W	EN
STAT	200	Elem Statistics	4.00	FA 2022	W	EN
ARTH	100	Intro to Art	3.00	SP 2023		IP
CAMS	5Z	Anc Mediterranean Civilizations	3.00	SP 2023		IP
ENGL	202C	Technical Writing	3.00	SP 2023		IP
GLIS	102N	Global Pathways	3.00	SP 2023	LD	EN
MATH	230H	Hnr Calc/Vect Anly	4.00	SP 2023		IP
NUTR	175Z	Healthy Food Eat USA LINKED	3.00	SP 2023		IP
NUTR	251	Intro Prin Nutr	3.00	SP 2023		IP
ARTH	111Z	Anc to Med Art Z	3.00	SU 2023		IP
CMPSC	311	Intro Sys Progrmg	3.00	SU 2023		IP
CMPSC	465	Data Struc and Algor	3.00	SU 2023		IP
CMPEN	270	Digital Design	4.00	SU 2023		IP
STAT	200	Elem Statistics	4.00	SU 2023		IP

Course History

Subject	Catalog #	Title	Units	Term	Grade	Type
ARTH	112	Ren to Modern Art	3.00	FA 2020	A	EN
ASTRO	1	Astro Universe	3.00	FA 2020	SAT	EN
ENGL	15	Rhetoric and Comp	3.00	FA 2020	SAT	EN
MATH	140	CALC ANLY GEOM I	4.00	FA 2020	A-	EN
PHYS	211	Mechanics	4.00	FA 2020	SAT	EN
CAS	100B	Effective Speech	3.00	SP 2021	LD	EN