



Geology A.S.

Career Community: Science and Mathematics

Curriculum Code: 1841

Effective: Fall 2025 – Summer 2030

Purpose of the Major

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in a geology-related program. The courses outlined in this pathway are designed for students interested pursuing degrees related to geology, environmental geoscience, or earth science as their main emphasis of study. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions and qualify for an LCC Transfer Studies Certificate of Achievement.

Milestone

In addition to the required General Education courses in Math and English, completion of CHEM 151, CHEM 161, and GEOL 221 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

GEOL 222 is only offered during Spring semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department in the Arts & Sciences Building, Room 3203, telephone number 517-483-1092 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Major Required Courses - Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 161	General Chemistry Lab I	1 / 3

Course Code	Course Title	Credit / Billing Hours
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
GEOG 120 or GEOG 200	Introduction to Geography World Regional Geography	3 / 3 4 / 4
GEOL 221	Physical Geology	4 / 6
MATH 120 or MATH 126 or MATH 151	College Algebra Precalculus Calculus I	4 / 4 5 / 5 4 / 4
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Major Required Courses, Limited Choice – Humanities and Fine Arts - Select two from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).

Major Required Courses, Limited Choice - Social Sciences - Select one course from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#), from a discipline other than GEOG.

Major Required Courses, Limited Choices – Select 10 credits

Course Code	Course Title	Credit / Billing Hours
BIOL 210	Natural Resource Conservation	4 / 6
CHEM 162	General Chemistry Lab II	1 / 3

Course Code	Course Title	Credit / Billing Hours
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 272	Organic Chemistry Laboratory	2 / 6
ECON 202	Principles of Economics-Macro	4 / 4
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
GSCI 100	Intro to Geospatial Tech	3 / 3
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Note: GEOL 222 is highly recommended (only offered Spring semester).

General Education – Transfer (MTA) Courses

- English Composition
Major Required Courses meet this requirement.
- English Composition (second course)/Communication
Major Required Courses meet this requirement.
- Humanities and Fine Arts
Major Required Courses meet this requirement.
- Mathematics
Major Required Courses meet this requirement.
- Natural Sciences
Major Required Courses meet this requirement.
- Social Sciences
Major Required Courses meet this requirement.

Elective Courses

Complete courses as needed from the list of [AA and AS Elective Courses](#) to reach the 60-credit minimum for this degree. Courses used to fulfill the requirements above cannot be used as Elective courses. For course selections, speak with an advisor or consult the program website(s) at the institution(s) you are considering for transfer.

Minimum Total Credit Hours

60 credit hours / 68 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
GEOL 221 – Milestone course
MATH 120 or MATH 126 or MATH 151

Semester II
CHEM 151 – Milestone course
CHEM 161 – Milestone course
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
Limited Choice - Humanities and Fine Arts
Limited Choice (GEOL 222 is highly recommended)

Semester III
CHEM 152
GEOG 120 or GEOG 200
PHYS 221
Limited Choice – Social Sciences
Limited Choice

Semester IV
PHYS 222
Limited Choice – Humanities and Fine Arts
Limited Choice
Elective courses as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.