



Geology A.S.

Career Community: Science and Mathematics

Curriculum Code: 1841

Effective: Fall 2023 – Summer 2028

Description

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

For AA and AS degrees - A student must earn a minimum grade of 2.0 in all courses.

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.

General Education – Transfer (MTA) Courses, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meets this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.

- Natural Sciences
Program of Study Required Courses will meet this requirement.
- Social Sciences
Program of Study Required Courses and Science and Mathematics Career Community Courses meet this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

| Course Code | Course Title | Credit / Billing Hours |
|---|---|--|
| ACAD 100 | First-Year Experience | 1 / 1 |
| ANTH 270 or ECON 120 or ECON 201 or EDUC 204 or EDUC 220 or GEOG 120 or GEOG 200 or POLS 120 or POLS 240 or POLS 260 or PSYC 200 or SOCL 120 | Cultural Anthropology Power, Authority and Exchange Principles of Economics-Micro Educational Psychology Introduction to Education Introduction to Geography World Regional Geography American Political System Introduction to Public Policy Comparative Political Systems Introduction to Psychology Introduction to Sociology | 3 / 3 4 / 4 4 / 4 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4 3 / 3 3 / 3 4 / 4 4 / 4 |
| BIOL 120 or BIOL 127 or GEOL 221 or GEOL 230 or PHYS 251 | Environmental Science Cell Biology Physical Geology Environmental Geology Physics I with Calculus | 4 / 6 4 / 6 4 / 6 4 / 6 5 / 7 |
| CHEM 151 | General Chemistry Lecture I | 4 / 4 |
| CHEM 161 | General Chemistry Lab I | 1 / 3 |
| COMM 120 or COMM 130 or ENGL 122 or ENGL 132 | Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II | 3 / 3 3 / 3 4 / 4 4 / 4 |
| ENGL 121 or ENGL 131 | Composition I Honors Composition I | 4 / 4 4 / 4 |
| MATH 120 or MATH 126 or MATH 151 | College Algebra Precalculus Calculus I | 4 / 4 5 / 5 4 / 4 |

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.

Choose any non-GEOG course and GEOL 221 for this degree.

Program of Study Required Courses

| Course Code | Course Title | Credit / Billing Hours |
|-------------|------------------------------|------------------------|
| CHEM 151 | General Chemistry Lecture I | 4 / 4 |
| CHEM 152 | General Chemistry Lecture II | 3 / 3 |
| CHEM 161 | General Chemistry Lab I | 1 / 3 |
| GEOL 221 | Physical Geology | 4 / 6 |
| GEOL 222 | Historical Geology | 4 / 6 |
| PHYS 221 | Introductory Physics I | 4 / 6 |
| PHYS 222 | Introductory Physics II | 4 / 6 |

Note: If CHEM 151 and CHEM 161 and GEOL 221 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice - Geography - *Select one*

| Course Code | Course Title | Credit / Billing Hours |
|-------------|---------------------------|------------------------|
| GEOG 120 | Introduction to Geography | 3 / 3 |
| GEOG 200 | World Regional Geography | 4 / 4 |

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two from different disciplines.

| Course Code | Course Title | Credit / Billing Hours |
|-------------|---------------------------------|------------------------|
| ENGL 211 | World Literature I | 4 / 4 |
| HIST 211 | U.S. History to 1877 | 4 / 4 |
| HIST 212 | U.S. History: 1877 to Present | 4 / 4 |
| HUMS 223 | The Western World to 1500 | 4 / 4 |
| HUMS 224 | The Western World since 1500 | 4 / 4 |
| LING 230 | Introduction to Linguistics | 3 / 3 |
| PHIL 151 | Intro to Logic & Critical Think | 4 / 4 |
| RELG 150 | Intro to World Religions | 4 / 4 |

Program of Study Required Courses, Limited Choices – *Select a minimum of 8 credits to reach the 60 total credits required for this degree.*

| Course Code | Course Title | Credit / Billing Hours |
|-------------|--------------------------------|------------------------|
| BIOL 210 | Natural Resource Conservation | 4 / 6 |
| CHEM 162 | General Chemistry Lab II | 1 / 3 |
| CHEM 251 | Organic Chemistry Lecture I | 4 / 4 |
| CHEM 252 | Organic Chemistry Lecture II | 4 / 4 |
| CHEM 272 | Organic Chemistry Laboratory | 2 / 6 |
| COMM 240 | Interpersonal Communication | 3 / 3 |
| ECON 202 | Principles of Economics-Macro | 4 / 4 |
| ENVR 121 | Environmental Rules and Regs | 3 / 3 |
| GEOG 230 | Environmental Geology | 4 / 6 |
| GSCI 100 | Intro to Geospatial Tech | 3 / 3 |
| GSCI 240 | Cartography in GIS | 3 / 4 |
| GSCI 241 | Remote Sens/AirPhoto Interpret | 3 / 4 |
| MATH 141 | Calculus with Applications | 4 / 4 |
| MATH 151 | Calculus I | 4 / 4 |
| MATH 152 | Calculus II | 4 / 4 |
| PHYS 251 | Physics I with Calculus | 5 / 7 |
| PHYS 252 | Physics II with Calculus | 5 / 7 |
| STAT 215 | Intro to Probability and Stats | 4 / 4 |

Minimum Total Credit Hours

60 credit hours / 72 billing hours

Recommended Course Sequence

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|----------------------------------|
| Semester I |
| ACAD 100 |
| CHEM 151 - Milestone course |
| CHEM 161 - Milestone course |
| ENGL 121 or ENGL 131 |
| MATH 120 or MATH 126 or MATH 151 |

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| Semester II |
| CHEM 152 |
| COMM 120 or COMM 130 or ENGL 122 or ENGL 132 |
| GEOG 221 – Milestone course |
| Limited Choice - Humanities and Fine Arts |

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| Semester III |
| GEOG 120 or GEOG 200 |
| PHYS 221 |
| ANTH 270, ECON 120, ECON 201, EDUC 204, EDUC 220, GEOG 120, GEOG 200, POLS 120, POLS 240, POLS 260, PSYC 200, or SOCL 120 |
| Limited Choice |

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| Semester IV |
| GEOL 222 |
| PHYS 222 |
| Limited Choice - Humanities and Fine Arts |
| Limited Choice 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 title changes, and make course changes as needed, without prior notice.