



## **Conservation and Sustainability A.S.**

Career Community: Science and Mathematics

Curriculum Code: 1840

Effective: Fall 2023 – Summer 2028

### **Purpose of 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 natural resources related program. The courses outlined in this pathway are designed for students interested in pursuing degrees related to conservation, environmental science, fisheries and wildlife management, natural resources management and/or sustainability, 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 (1482)

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

### **Milestone**

In addition to the required General Education courses in Math and English, completion of GEOG 120 or GEOG 200 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.

### **Contact Information**

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

### **General Education – Transfer Degrees (MTA) - 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 meet this requirement.

- Mathematics  
Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences  
Science and Mathematics Career Community Courses meet this requirement.
- Social Sciences  
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.

Select BIOL 127, and a course other than GEOG 120 or GEOG 200 for this degree.

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

**Program of Study Required Courses – Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required 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
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3

Note: If BIOL 127, CHEM 151, and CHEM 161 were completed as part of the Career Community block, do not repeat enrollment.

**Program of Study Required Courses, Limited Choice - Social Science – 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 – Select one**

Course Code	Course Title	Credit / Billing Hours
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6

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

*Select two from two different disciplines.*

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ENGL 220	Science Fiction	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
RELG 150	Intro to World Religions	4 / 4

**Program of Study Required Courses, Limited Choice –** *Select a minimum of 14 credits to reach the minimum 60 total credits required for this degree.*

Course Code	Course Title	Credit / Billing Hours
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
BIOL 270	Human Genetics	3 / 3
CHEM 152	General Chemistry Lecture II	3 / 3
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
GEOL 222	Historical Geology	4 / 6
GEOL 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 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
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 credits / 66 billing hours

## Recommended Course Sequence

Semester I
ACAD 100
CHEM 151
CHEM 161
ENGL 121 or ENGL 131
MATH 120 or MATH 126 or MATH 151
Semester II
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
ANTH 270, ECON 120, ECON 201, EDUC 204, EDUC 220, POLS 120, POLS 240, POLS 260, PSYC 200, or SOCL 120
Limited Choice – Humanities and Fine Arts
Semester III
BIOL 127
GEOG 120 or GEOG 200 – Milestone course
Limited Choice – Humanities and Fine Arts
Limited Choice courses as needed
Semester IV
BIOL 128
GEOG 220 or GEOG 221 or GEOL 221
Limited Choice courses as needed

*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.*