



North Central Michigan College

2025/26

WMU Curriculum Guide for Freshwater Science and Sustainability

Program description and notes:

- The program provides the broad interdisciplinary training that will enable graduates to help solve problems involving the quality, availability, and use of fresh water.
- The program prepares students for positions in the field such as: watershed managers, freshwater quality analysts, sustainability coordinators, environmental and resource managers, and/or for graduate school.
- The Freshwater Science and Sustainability program requires 77-79 credit hours of coursework.
- All WMU degrees require at least 122 credit hours for graduation, including WMU Essential Studies. At least 60 of those credits must come from a four-year institution.
- No minor is required for the program.
- There will be a significant fieldwork component to several courses in the program, and some summer work may be required for timely completion of program.
- Given the interdisciplinary nature of the program, it is very important that students work regularly with program advisors (see contact information below).
- 18 credit hours of approved electives are required. Content-appropriate courses taken at NCMC *could* apply; please see your WMU advisor for possible approval.

Courses that may be taken at NCMC:

WMU courses		NCMC courses
BIOS 1610	Molecular & Cellular Biology	BIO 151
BIOS 1620	Ecology and Evolution	BIO 152
CHEM 1100 1110	General Chemistry I & Lab I	CEM 121
STAT 2160	Introductory Statistics	STAT 200

Students in this program must earn a grade of “C” or better in all courses counted toward their major. Courses that transfer to WMU must also have a minimum of a “C” grade to transfer in.

MATH 120 (MATH 1110 @ WMU) or ALEKS placement of 61 or better will be required to take CHEM 1100|1110 at WMU.

For further information about this program visit the Environmental and Sustainability Studies program link at <https://wmich.edu/academics/undergraduate/freshwater>.

General education requirements:

- Please refer to the [WMU Essential Studies \(WES\) Transfer Guide](#) that lists courses meeting WES requirements at WMU that may be taken at NCMC.
- All students graduating from the College of Arts & Sciences must complete the College of Arts and Sciences Essentials (**CASE**). This includes world language proficiency (detailed in next bullet point), ENGL 1050/1060 sequence, and by completing the baccalaureate writing requirement.
- Students will meet the world language proficiency by completing two semesters (6-8 hours) of the same foreign language or American Sign Language or passing WMU's proficiency by exam. Please contact the College of Arts & Sciences Undergraduate Advising Office at (269) 387-4366 with any questions. Neither the MACRAO Agreement nor the MTA satisfy the world language requirement.
 - If the student's first language is not English, then the student is exempt from this requirement. Determination of eligibility for this exemption is based on whether the student was required to take the TOEFL test for admission and can be verified through the WMU departments of Spanish or World Language and Literatures.
- Students receiving the Michigan Transfer Agreement (MTA) will have CASE (including world language proficiency), and WMU Essential Studies Level III – Connections to complete.
- For those *not* obtaining the MTA, please refer to WMU Essential Studies Transfer Guide.
- You may email the WMU advisors in the College of Arts and Sciences for further clarification about **WES** or **CASE**.

Contact information:

Diana Blouin, Director of Academic Advising
College of Arts & Sciences
<https://wmich.edu/arts-sciences/advising>
coas-advising@wmich.edu
(269) 387-4366

Jacquelyn Bizzell, Academic Advisor Sr.
jacquelyn.bizzell@wmich.edu
<https://wmich.edu/arts-sciences/advising>
coas-advising@wmich.edu
(269) 387-4366

McKenzie Vliek, Academic Advisor Sr.
mckenzie.vliek@wmich.edu
<https://wmich.edu/arts-sciences/advising>
coas-advising@wmich.edu
(269) 387-4366

For general education advising or world language requirement questions:
wmich.edu/arts-sciences/advising