WMU Curriculum Guide for Freshwater Science and Sustainability

Program description and notes:

- WMU and Northwestern Michigan College in Traverse City have collaborated to create this new program, which became a WMU offering effective Fall 2014;
- 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 program requires 92 credit hours of coursework. All WMU degrees require a total of at least 122 credit hours for graduation;
- There are two options for students to complete this program:
  - The first is to take as many courses as you can at Alpena and then to transfer to WMU (in Kalamazoo) for the last two years of the program in regular classroom format;
  - The second option is to take a combination of online and hybrid courses. The hybrid courses include some online coursework and face-to-face meetings which are only available in Traverse City at this time;
- No minor is required;
- There will be a significant fieldwork component to several courses in the program;
- Given the interdisciplinary nature of the program, it is very important that students work regularly with program advisors (see contact information below). Please consult with a program advisor and review the schedule of courses closely when selecting your classes.

Courses that may be taken at Alpena:

<table>
<thead>
<tr>
<th>WMU courses</th>
<th>Alpena equivalent courses</th>
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</thead>
<tbody>
<tr>
<td>ECON 2010 or 2020 (2010 preferred)</td>
<td>ECN 231 or 232</td>
</tr>
<tr>
<td>BIOS 1610</td>
<td>BIO 161</td>
</tr>
<tr>
<td>CHEM 1100 and 1110</td>
<td>CEM 121</td>
</tr>
<tr>
<td>MATH 1110</td>
<td>MTH 113</td>
</tr>
<tr>
<td>STAT 3660</td>
<td>MTH 223</td>
</tr>
<tr>
<td>ANTH 1200</td>
<td>No equivalent</td>
</tr>
<tr>
<td>BIOS 1620</td>
<td>No equivalent</td>
</tr>
</tbody>
</table>
GEOG 2250 No equivalent
GEOS 3220 No equivalent

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 in order to transfer in.

For further information about this program visit the Environmental and Sustainability Studies program website, linked in the WMU website’s “Academics” (undergraduate) directory pages.

General Education Requirements:

- Please find information about general education requirements on this link;
- The College of Arts and Sciences requires a world language, which is not fulfilled by the MACRAO or the Michigan Transfer Agreement (MTA). This requirement can be met in one of three ways:
  - Completing two years of one high school language with a B- or better in the last (fourth) semester, or at any point after that if more than two years are completed;
  - Completing two semesters of a college-level language (or American Sign Language);
  - Or through passing a language proficiency test. Please contact the WMU World Languages department for languages other than Spanish, and the Spanish department for that language;
- The College of Arts and Sciences curriculum requires a critical thinking course, to be chosen from Proficiency 4c, if MACRAO or MTA has not been met.

Contact information:

Dr. Steve Kohler – Professor
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(269) 387-2987

Or

Deb Stoyanoff – Advisor
Environmental and Sustainability Studies
debra.stoyanoff@wmich.edu
(269) 387-2716

And

College of Arts and Sciences (general education advising)
wmich.edu/cas
(269) 387-4366