

# WATER QUALITY ENVIRONMENTAL TECHNOLOGY, ASSOCIATE IN APPLIED SCIENCE DEGREE

NMC Code 152

NMC's Water Quality and Environmental Technology program focuses on training a workforce supporting the direct monitoring and cleanup of waters within the Great Lakes watershed directly impacting the quality of our water resources. The coastal communities around Michigan, the "front door" to the state, represent areas where there exists the greatest potential for economic development. The Environmental Protection Agency estimates that over the next 30 years, more than 200 billion dollars in economic activity will result from the cleanup of approximately 294,000 waste sites across the country. The Water-Quality/Environmental Technician program provides training for a skilled workforce that will be readily available to respond to this ongoing need. The employment markets for graduates of this degree include local, regional, national, and international opportunities.

Within this degree students will have the opportunity to earn the following: CSWA Certified Solidworks Associate, PCEP- Certified Entry-Level Python Programmer, HAZWOPER 40-hour certification, and FAA Part 107.

## Requirements

### MAJOR REQUIREMENTS

Course	Title	Credits
ENG 111	English Composition	4
ENG 220	Technical Writing	3
MTH 121	College Algebra	4
or MTH 131	Intro to Prob & Stats	
BIO 110	Essential Biology	4
or BIO 115	Cell, Plant & Ecosystem Biology	
BIO 110L	Essential Biology Lab	0
or BIO 115L	Cell, Plant, Ecosystem Bio Lab	
CHM 101	Introductory Chemistry	4
or CHM 150	General Chemistry I	
CHM 101L	Introductory Chemistry Lab	0
or CHM 150L	General Chemistry I Lab	
ENV 111	Physical Geology	
ENV 111L	Physical Geology Lab	
GEO 115	Introduction to GIS	3
Group 1 Humanities		
EET 103	Electrical Studies I	3
DD 170	CADD/Computer Modeling	4
UAS 121	UAS Applications in Surveying	3
SVR 111	Intro to Field Surveying	2
WSI 106	Introduction to Water Quality	3
WSI 110	OSHA HAZWOPER 40 hour	3
WSI 150	Introduction to Site Assessment and Remediation	3

WSI 250	Groundwater Monitoring and Aquifer Sampling	4
WSI 290	Freshwater Studies Internship	1-3

### APPROVED ELECTIVE COURSES

Course	Title	Credits
ENV 140	Watershed Science	4
ENV 140L	Watershed Science Lab	0
WSI 200	GL Research Technologies	3
WSI 210	Underwater Acoustics and Sonar	3
WSI 230	Water Policy & Sustainability	3
RAM 155	Microcontroller Programming	3
RAM 255	Microcontroller Automation	3
WPT 111	Welding Theory I	3
WPT 112	Welding Lab I	4

### Course Sequence Guide

Course	Title	Credits
<b>Year 1</b>		
<b>Fall</b>		
ENG 111	English Composition	4
EET 103	Electrical Studies I	3
WSI 106	Introduction to Water Quality	3
GEO 115	Introduction to GIS	3
<b>Credits</b>		<b>13</b>
<b>Spring</b>		
ENG 220	Technical Writing	3
MTH 121	College Algebra	4
UAS 121	UAS Applications in Surveying	3
ENV 111	Physical Geology	4
ENV 111L	Physical Geology Lab	0
<b>Credits</b>		<b>14</b>
<b>Summer</b>		
WSI 150	Introduction to Site Assessment and Remediation	3
WSI 290	Freshwater Studies Internship	1-3
<b>Credits</b>		<b>4-6</b>
<b>Year 2</b>		
<b>Fall</b>		
Group 1 Humanities		3
BIO 110	Essential Biology	4
BIO 110L	Essential Biology Lab	0
WSI 250	Groundwater Monitoring and Aquifer Sampling	4
DD 170	CADD/Computer Modeling	4
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
CHM 101	Introductory Chemistry	4
CHM 101L	Introductory Chemistry Lab	0
WSI 110	OSHA HAZWOPER 40 hour	3
Approved Elective		3
Approved Elective		3
<b>Credits</b>		<b>13</b>

**Summer**

WSI 290	Freshwater Studies Internship	1-3
<b>Credits</b>		<b>1-3</b>
<b>Total Credits</b>		<b>60-64</b>