

WATER QUALITY & ENVIRONMENTAL TECHNOLOGY, ASSOCIATE IN APPLIED SCIENCE DEGREE

NMC Code 152

NMC's Water Quality & 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 Technology 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	3-4
or MTH 131	Intro to Prob & Stats	
BIO 110	Essential Biology	4
or BIO 115	General Biology I	
BIO 110L	Essential Biology Lab	0
or BIO 115L	General Biology I 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	4
ENV 111L	Physical Geology Lab	0
GEO 115	Introduction to GIS	3
Group 1 Humanities		3-4
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
Directed Elective	3-6 hours	3-6

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
WPT 111	Welding Theory I	3
WPT 112	Welding Lab I	4
ENV 117	Meteorology & Climatology	4
ENV 117L	Meteorology & Climatology Lab	0

Course Sequence Guide

Course	Title	Credits
Year 1		
Fall		
ENG 111	English Composition	4
GEO 115	Introduction to GIS	3
MTH 121	College Algebra	3-4
or MTH 131	or Intro to Prob & Stats	
WSI 106	Introduction to Water Quality	3
Credits		13-14

Spring		
CHM 101	Introductory Chemistry	4
or CHM 150	or General Chemistry I	
CHM 101L	Introductory Chemistry Lab	0
or CHM 150L	or General Chemistry I Lab	
ENG 220	Technical Writing	3
ENV 111	Physical Geology	4
ENV 111L	Physical Geology Lab	0
WSI 110	OSHA HAZWOPER 40 hour	3
WSI 150	Introduction to Site Assessment and Remediation	3
Credits		17

Summer		
WSI 290	Freshwater Studies Internship	1-3
Credits		1-3

Year 2		
Fall		
BIO 110	Essential Biology	4
or BIO 115	or General Biology I	
BIO 110L	Essential Biology Lab	0
or BIO 115L	or General Biology I Lab	
DD 170	CADD/Computer Modeling	4
EET 103	Electrical Studies I	3
WSI 250	Groundwater Monitoring and Aquifer Sampling	4
Credits		15

Spring

Approved Elective		3-4
Approved Elective		3-4
Group 1 Humanities		3-4
UAS 121	UAS Applications in Surveying	3
Credits		12-15
Total Credits		58-64

A minimum of 60 credits are required for this degree.