

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 |

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| 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 |
|--------------------|---|------------|
| Year 1 | | |
| Fall | | |
| ENG 111 | English Composition | 4 |
| EET 103 | Electrical Studies I | 3 |
| WSI 106 | Introduction to Water Quality | 3 |
| GEO 115 | Introduction to GIS | 3 |
| Credits | | 13 |
| Spring | | |
| 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 |
| Credits | | 14 |
| Summer | | |
| WSI 150 | Introduction to Site Assessment and Remediation | 3 |
| WSI 290 | Freshwater Studies Internship | 1-3 |
| Credits | | 4-6 |
| Year 2 | | |
| Fall | | |
| 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 |
| Credits | | 15 |
| Spring | | |
| CHM 101 | Introductory Chemistry | 4 |
| CHM 101L | Introductory Chemistry Lab | 0 |
| WSI 110 | OSHA HAZWOPER 40 hour | 3 |
| Approved Elective | | 3 |
| Approved Elective | | 3 |
| Credits | | 13 |

Summer

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|----------------------|-------------------------------|--------------|
| WSI 290 | Freshwater Studies Internship | 1-3 |
| Credits | | 1-3 |
| Total Credits | | 60-64 |