

# SECONDARY CERTIFICATION TEACHING MAJOR/MINOR CHEMISTRY

## Major Requirements

A minimum of 33 semester hours is required.

Code	Title	Credit Hours
<b>Required Courses</b>		
CHEM 134 & 134L	General Chemistry IA and General Chemistry IA Lab/Rec	4
CHEM 136 & 136L	General Chemistry IIA and General Chem IIA Lab/Rec	4
CHEM 225	Organic Chemistry I	3
CHEM 226	Organic Chemistry II	3
CHEM 227	Organic Chemistry Laboratory	2
CHEM 303	Inorganic Chemistry I	3
CHEM 344 & 344L	Quantitative Analysis and Quantitative Analysis Lab	4
CHEM 368	Physical Chemistry I	3
<b>Advanced Chemistry Course</b>		
Select at least one from the following:		3-4
CHEM 348	Environmental Chemistry	
CHEM 403	Inorganic Chemistry II	
CHEM 447	Instrumental Methods of Analysis	
CHEM 469	Physical Chemistry II	
CHEM 470	Biochemistry I	
<b>Additional Chemistry Lab Courses</b>		
Select one from the following:		1-2
CHEM 450	Adv Org Syn & Character Lab	
CHEM 452	Adv Inorg Synth & Char Lab	
CHEM 481	Physicochemical Measurements	
<b>Total Credit Hours</b>		<b>30-32</b>

### Major Notes:

1. A minimum GPA of 2.75 is required for a major.
2. For the major, 16 semester hours must be in courses numbered 300 or above.
3. At least 15 semester hours in UM-Dearborn courses required for the major.

### Program Notes:

1. Minimum GPA's are required for program completion: 2.75 cumulative, 2.75 in major, 2.75 in minor, and 2.75 in Professional Studies.
2. Advising Policy: The student is responsible for complying with requirements described in the Undergraduate Catalog as well as on the Four Phase Checklist. Students are expected to meet with their College of Education, Health, and Human Services advisor at least once per year and in the term prior to graduation.
3. Courses taken on a PASS/FAIL basis will NOT be accepted toward program completion.

4. CEHHS recommends successful program completers for State of Michigan Certification, however, it is ultimately up to the State of Michigan to issue certificates. Certain offenses on a criminal record can keep individuals from obtaining teacher certification. Please refer to The Revised School Code, Act 451 of 1976, section 380.1539b.
5. Initial certification program students must have passing scores on the appropriate MTTC subject area test reported to the University of Michigan-Dearborn College of Education, Health, and Human Services by electronic delivery or direct mail from Pearson Evaluation Systems prior to student teaching.
6. Certified teachers pursuing an endorsement in a post-degree program must complete all program requirements and have passing scores on the appropriate MTTC subject area test reported to the University of Michigan-Dearborn College of Education, Health, and Human Services by electronic delivery or direct mail from Pearson Evaluation Systems prior to a recommendation being made to the State of Michigan Department of Education.

## Minor Requirements

A minimum of 22 semester hours is required.

Code	Title	Credit Hours
<b>Required Courses</b>		
CHEM 134 & 134L	General Chemistry IA and General Chemistry IA Lab/Rec	4
CHEM 136 & 136L	General Chemistry IIA and General Chem IIA Lab/Rec	4
CHEM 225	Organic Chemistry I	3
CHEM 226	Organic Chemistry II	3
CHEM 303	Inorganic Chemistry I	3
CHEM 344 & 344L	Quantitative Analysis and Quantitative Analysis Lab	4
EDD 481	Practicum in Science:Secnd Grd	1
<b>Total Credit Hours</b>		<b>22</b>

### Minor Notes:

1. A minimum GPA of 2.75 is required for a minor.
2. For the minor, 7 semester hours must be in courses numbered 300 or above.