CHEMISTRY MINOR FOR SECONDARY TEACHING

Updated February 2005

The minor in Chemistry for Secondary teachers consists of a minimum of 21 credits in Chemistry. Candidates for certification in this minor must pass the Michigan Test for Teacher Certification (MTTC) in Chemistry (Test #18). You must demonstrate your knowledge in following categories:

1. Construct/Reflect on Scientific Knowledge 21-30 items
2. Properties of Matter 11-20 items
3. Energy, Chemical Bonds, & Chemical Reactions 21-30 items
4. Organic, Bio-, Nuclear, & Environmental Chemistry 11-20 items

You may access a study guide at the MTTC testing site; the courses below have been selected so that you will be well prepared for the test.

The following chart is intended to provide you a guide for scheduling your semesters and for keeping track of your grade point average.

Please note: Though the Chemistry Department requires a minimum GPA of 2.0 for the science major chemistry courses, students seeking the Chemistry endorsement for teacher certification must have a major and/or minor GPA of 2.5.

CHEMISTRY FOUNDATIONS - REQUIRED (13 credits)

SUBJECT/ COURSE	TITLE	CREDIT HOURS	SEMESTER	GRADE
CHEM 111	General Chemistry I	3		
CHEM 113	Lab of General & Analytic Chemistry I	1		
CHEM 121	General Chemistry II	3		
CHEM 114	Lab of General & Analytic Chemistry II	1		
CHEM 221	Organic Chemistry I	3		
CHEM 255	Organic Chemistry Laboratory I	2		

REMAINING ELECTIVE COURSES (8 credits) ***Choose 8 credits from courses listed below:***

SUBJECT/ COURSE	TITLE	CREDIT HOURS	SEMESTER	GRADE
CHEM 311	Biochemistry I	3		
CHEM 322	Inorganic Chemistry	3		
CHEM 331 CHEM 332	Analytical Chemistry Lecture & Analytical Chemistry Laboratory	3 1		
CHEM 343	Physical Chemistry I	3		
CHEM 231	Organic Chemistry II	3		
CHEM 256	Organic Chemistry Laboratory II	1-2		
CHEM 314	Biochemistry II	3		
CHEM 315	Biochemistry II Lab	1		
CHEM 324	Inorganic Laboratory	1		
CHEM 344	Physical Chemistry II	3		
CHEM 345	Physical Chemistry Lab I	1		
CHEM 346	Physical Chemistry Lab II	1		
CHEM 347	Chemical Modeling Laboratory	1		
CHEM 348	Advanced Spectroscopy Laboratory	1		
CHEM 421	Structure, Dynamics and Synthesis I	3		
CHEM 422	Structure, Dynamics and Synthesis II	3		
CHEM 490	Research in Chemistry	1-3		
CHEM 499	Internship in Chemistry	1-2		

_____ **GPA in Chemistry courses (2.5 is required to qualify for student teaching)**