

Chemistry 2

10-806-112

Dr. Amy Payne

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608-246-6608

Office: 260D
Office Hours: M 9:30 – 11:30
Or by appointment

Required Materials: 3-Ring Binder
Lecture Notebook
Laboratory Notebook (MATC bookstore; duplicate, numbered pages)
Safety Goggles (MATC bookstore)
Scientific Calculator (non-graphing, exponential and logarithm functions)

Required Text: General Chemistry: The Essential Concepts by R. Chang
4th edition (McGraw-Hill 2005)

Optional Text: Problem Solving Workbook with Solutions by B. Cruickshank and R. Chang
(tips & solutions to even numbered problems)

Lectures: MWF 8:30 – 9:20 **Room 347**

Lab: W 9:30 – 11:20 **Room 332**

Prerequisites: Chemistry I or equivalent course in college level inorganic chemistry. It is recommended that students have earned at least a B in the prerequisite courses. If you have not taken the prerequisites, please discuss your situation with the instructor as soon as possible.

Course Description: Chemistry 112 is the second semester of a year-long course in college chemistry. It is designed for students in the Biotechnology program offered at MATC. The course covers the fundamentals of chemistry with an emphasis on quantitative problem solving, data analysis, and experimental skills. *Note this class generally does not meet chemistry course requirements for students seeking to transfer to another educational institution.*

Workload: Based on feedback from previous students in the course, you should expect to spend approximately 10 hours per week outside of class for this course. If you are carrying a course load greater than 12 credits, it is suggested that you limit outside employment to less than 20 hours/week.

Learning Resources: The required and optional texts are on reserve in the Truax library; please see front desk. Student Computer Help and the Learning Center are located in the Truax Library. For computer help by phone, call 608-243-4444, or toll-free at 866-277-4445.

Grades:	Take Home Quizzes	10	x	20	= 200 pts
	Lab Reports	10	x	20	= 200 pts
	Lecture Exams	3	x	100	= 300 pts
	Exam Corrections	3	x	10	= 30 pts
	Quiz Corrections	10	x	2	= 20 pts
	Participation			daily	= 50 pts
	Final Exam	1	x	200	= 200 pts
	Total				= 1000 pts

Homework problems will be assigned throughout the course. Solutions to most of the problems are presented in the Problem Solving Workbook or in the back of the textbook. Students are strongly encouraged to complete all homework sets, as these problems will prepare you for the quizzes and exams.

Take Home Quizzes will be given throughout the semester to monitor comprehension and help students prepare for the examinations. These quizzes are open book and open notes, but you may not give or receive help from any other person. The lowest score will be dropped when determining your final grade. There are no make-up quizzes. If you are absent the day the quiz is handed out, you are responsible for contacting me by email and requesting a copy. No late quizzes will be accepted.

Lab Reports will be assigned throughout the semester. Reports must be recorded **in ink** using a duplicate copy lab notebook available at the MATC bookstore. Reports are due one week after the completion of the lab experiment. Late reports will be accepted minus 5% per day late penalty. For detailed information on writing lab reports, see the *Lab Report Guidelines* handout.

Lecture Exams will be scheduled during the regular 110 minute lab periods. Because of the difficulty of creating fair makeup exams, here will be no make-up exams. Only non-graphing calculators may be used during exams. Once the exam begins, you will not be allowed to leave the room until you turn in your exam, so plan accordingly. If must miss an exam, you are responsible for contacting me as soon as possible (prior to the exam, if possible) regarding the missed exam. If you miss an exam, your score on the final exam will serve as the grade for the missed exam, too.

Exam and Quiz Corrections will be assigned during the semester. These corrections are due the following lecture period. You may work collaboratively on the corrections.

Participation points are based on attendance, group work, and questions asked during lecture.

A Final Exam will be administered during exam week at a time to be announced. The exam will be comprehensive.

Grading Scale:	A	93-100%
	AB	88-92
	B	83-87
	BC	78-82
	C	70-77
	D	60-69
	F	< 60

Cell Phones & Pagers Cell phones and pagers must be turned off in the classroom.

Grade Disputes Questions about grading must be submitted in writing and stapled to the assignment, quiz, or exam in question. The timeframe for submitting questions is limited to the first two weeks after the graded work has been returned. After that time, no grading questions will be accepted for that particular assignment.

Classroom Environment My classroom is an open, collaborative environment based on mutual respect. You should be prepared to ask and be asked questions about the course material. We will also spend time working collaboratively on class activities and lecture supplement worksheets. If you have any concerns about our group work, please feel free to discuss them with me. I welcome feedback about the operation and content of the course. The best opportunities to provide feedback are by email, during office hours, or in the mid-semester or final Student Opinionnaire surveys.

Attendance. Previous semesters have shown that the fewer the number of absences the higher the course grade. Missing lab periods will result in your final grade will be dropped by 10% (one letter grade) per three lab periods missed. For example, if you have a final grade of A and you missed three lab periods, your grade will be lowered to a B.

MATC Student's Rights and Responsibilities

Students are expected to be familiar with MATC policies and procedures. Many of the important policies and procedures are on the MATC website. An easy way to find them is to go to the A-Z index, click on R, go to "rights and responsibilities", and click to see the menu at the top of the web page or, click on <http://matcmadison.edu/matc/studentresources/rights/> and put on your favorites list.

These policies and procedures are also found in the *MATC Planner and Student Handbook* available at MATC Bookstore, and students are encouraged to retain a current copy of the *MATC Planner and Student Handbook* for reference as needed during their attendance at MATC.

Academic Integrity is an expectation in all MATC classes. Plagiarism and cheating are unacceptable in this class and in the workplace. MATC has a strong policy on Academic Misconduct which is published on the MATC website. This policy will be enforced in this class. Please refer to this page on the MATC Website to review all Academic Integrity and Misconduct policies.
<http://matcmadison.edu/matc/studentresources/rights/misconduct.shtm>

ADA Statement

To request academic accommodations due to a disability for the MATC Truax or Regional Campuses, please contact Disability Resources Services at 246-6716 (Students who are deaf via Relay 711), room 159 at Truax or email drs@matcmadison.edu

For assistance at the MATC Downtown Education Center contact: Disability Resources Services at 259-2979 in room 109 at DTEC.

If you have an accommodation card from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need in this class. It is best to request these accommodations at the beginning if not before class so there is ample time to make the accommodations.

Tentative Laboratory Schedule

Week	Lab Date	Topic
1	01/17	Chromatography (Forensics Lab) and Spectroscopy (Chemicals&Color)
2	01/24	Introduction to Organic Chemistry (web activity) and Synthesis of Aspirin
3	01/31	Synthesis of Aspirin Continued
4	02/07	Synthesis of Aspirin Continued – product analysis
5	02/14	LECTURE EXAM 1
6	02/21	Reaction Rate and Catalysis (KMnO ₄ Oxidation)
7	02/28	Chemical Equilibrium Lecture
8	03/07	Reaction Kinetics and Enzymes (Laccase)
9	03/14	Chemical Equilibria and LeChatelier's Principle
10	03/21	Keq and Spectroscopy (FeSCN)
11	03/28	LECTURE EXAM 2
	04/04	SPRING BREAK
12	04/11	Ka of a Weak Acid
13	04/18	Weak acids, Salts, and Buffers
14	04/25	Electrochemistry – Building an Electrochemical Cell
15	05/02	LECTURE EXAM 3
16	05/09	Review for Final Exam