

## 1. COURSE IDENTIFICATION

COURSE TITLE: Chemistry of Life  
COURSE NUMBER: CEM 137  
CREDIT HOURS: 4.00  
MEETING TIMES: 8:00 A.M. - 9:25 A.M.  
DAYS: Monday and Wednesday

SECTION NUMBERS: 03/04  
LOCATION: JM 216

## 2. INSTRUCTOR INFORMATION AND COURSE MATERIALS

INSTRUCTOR: JOHN SINGER OFFICE: JM 232A  
PHONE: (517) 796-8588 E-MAIL: singerjohnw@jccmi.edu  
OFFICE HOURS: 7:30-8:00 MW, 2:15-3:15 MWR, 11:00-1:00 TR

TEXT: General, Organic, and Biological Chemistry, Raymond  
CALCULATOR: A Scientific Calculator is Required  
PERIODIC TABLE: SARGENT WELCH  
LABORATORY MANUAL

## 3. COURSE DESCRIPTION & PREREQUISITES

COURSE DESCRIPTION: This course meets the chemistry requirement for ADN nursing, elementary education and programs requiring a lab science course. It introduces the fundamental principles of general chemistry (structure of atoms and compounds, states, energy, equations, radioactivity, solutions, and acids/bases), organic (structure and properties of major classes), and biochemistry (carbohydrates, proteins, lipids, metabolism, and body fluids).

This course is not an easy course. In order to be successful, students are expected to attend every class. Read the text before and after class. Work all homework problems, and ask questions of the instructor. Expect to earn your grade in this course by working hard and learning well.

## 4. ASSOCIATES DEGREE OUTCOMES

Chemistry 137 supports the following Associates Degree Outcomes:  
#3 Students will demonstrate computational skills and mathematical reasoning.  
#4 Students will demonstrate scientific reasoning.

## 5. SAFETY PROCEDURES

Students are expected to conduct themselves in a safe manner in both the classroom and laboratory. The Laboratory Safety Contract contains more comprehensive safety guidelines.

## 6. ATTENDANCE POLICY

Students are expected to attend all classes. Absences while sometimes necessary are to be avoided if possible. Walking into class late is disruptive to the class. Therefore, avoid tardiness and absences if possible. If you must miss class, be sure to contact the instructor. If you cannot attend class on the day that an assignment is due, make sure that the assignment is delivered to the instructor before the next class meeting.

## 7. MAKE-UP AND LATE PAPER WORK PROCEDURES

Even extenuating circumstances rarely allow for make-up. To compensate for extenuating circumstances, students will be allowed to drop their two lowest quiz scores and lowest lab report from the calculation of the final grade. Late assignments will not be accepted after said assignment has been graded and returned to the rest of the class.

Students are expected to be present for all examinations. However if extraordinary circumstances occur that causes one to miss an exam, the exam grade will be recorded as the average of the other exams (not including the final exam). Any additional missed exams will receive a "zero" grade, and zero grades will be included in the average calculations.

## 8. GRADING PROCEDURE

**HOMEWORK:** Problems will be assigned at the end of each lecture session. It is in the student's best interest to work all problems assigned and any additional problems in order to develop the skills necessary to succeed in this course. Questions about the previous day's problems will be addressed in the next lecture.

**QUIZZES:** Quizzes can be of several types, Take-Home, Announced In-class, and Surprise In-class. Surprise quizzes may occur at anytime. Take-Home Quizzes will be assigned periodically and the due date will be announced. Quizzes will be graded out of 100 points.

**TESTS:** Tests will be given after every two chapters. Dates for the tests will be announced in class. Tests will be graded out of 100 points each. Up to 10% of the material may include material from previous chapters.

**FINAL EXAM:** A comprehensive final exam covering the entire semester will be taken during final exam week. The final exam grade will be recorded twice and therefore is weighted as two tests in the test category.

**EXTRA CREDIT:** There is no such thing as extra credit. There is only credit. Do not ask about extra credit. This syllabus describes how you are to earn credit. Dedicate your time and energy to studying and developing the knowledge and skills necessary to be successful at the course objectives.

Each assignment will be graded out of points. The types of assignments will contribute to the final course grade as follows:

Quizzes/Other	10 %
Tests	70 %
Lab Reports	20 %

Grades will be assigned according to the following scale:

90% to 100%	=	4.0
85% to 89%	=	3.5
80% to 84%	=	3.0
75% to 79%	=	2.5
70% to 74%	=	2.0
65% to 69%	=	1.5
60% to 64%	=	1.0
0% to 59%	=	0.0

## **9. ETHICS POLICY**

Consistent with JCC policy, academic dishonesty such as cheating, plagiarism etc, will not be tolerated. A first offense of academic dishonesty will result in a zero grade for the experience. A second offense will result in a zero for the course. All cases of academic dishonesty will be documented and forwarded to the Academic Dean. Students involved in disruptive behavior or dishonest scholarly practices will be dealt with in accordance to the Student Handbook.

Student behavior that is detrimental to an environment conducive to learning or the maintenance of a reasonable level of order on campus or in the classroom shall be considered disruptive conduct. Further, students exhibiting behaviors that may cause injury to themselves or others can result in removal from this course.

Academic dishonesty includes, but is not necessarily limited to taking, using, or copying another's work and submitting it as one's own, using notes on Quizzes or Quizzes, intentionally falsifying information or taking another's ideas with the intention of passing of ideas in class as one's own.

## **10. AVAILABLE ASSISTANCE**

If you have documented disability, make sure that you make me aware ASAP so that suitable arrangements may be made. If you are experiencing difficulties with any aspect of this course, it is best if you consult the instructor. Tutoring assistance is also available in the Center for Student Success, Bert Walker Hall Room 123, (796-8415).

## **11. STUDENT WORK**

All Quizzes, Homework Assignments, Tests and Lab Reports will be graded and returned on a timely basis. The final exam will not be returned.

## **12. SYLLABUS REVISION/INSTRUCTOR PREROGATIVE**

All schedules and policies contained in this document are tentative and are subject to revision at the instructor's discretion with timely notice.

## **13. INCOMPLETES**

Consistent with JCC policy, an incomplete grade will only be issued if the student has completed the vast majority of the course, is already passing the course after the withdraw deadline, and is unable to complete the course due to an extenuating circumstance. If a grade of incomplete is issued, all grades/scores earned to that date will be used in calculating the course grade.

## **14. WITHDRAW**

The last day to withdraw from this course for winter 2009 is \_\_\_\_\_.

## 15. Activity Schedule

CEM 137 Winter 2009  
Schedule

WEEK	DATES	CHAPTER	TOPICS	Laboratory
1	1/12-1/15	1	Scientific Method and Measurement	Check In and Safety Density
2	1/19-1/22	2	<b>No Class 1/19 Professional Dev. Day</b> Atoms and Elements	Emission Spectra and Energy Levels
3	1/26-1/29	3	Compounds	Radioactivity
4	2/2-2/5	3	Compounds <b>No Classes 2/3 Project Success Day</b>	Nomenclature and Molecular Models
5	2/9-2/12	4	Introduction to Organic Compounds	Molecular Models of Organic Compounds
6	2/16-2/19	5	Gases, Liquids, and Solids	Specific Heat of a Metal
7	2/23-2/26	6	Reactions	States of Matter and Phase Changes
8	3/2-3/5	7	Solutions, Colloids, and Suspensions	Chemical Reactions and Equations
9	3/9-3/13	9	Acids/Bases/Buffers	Hardness of Water
	<b>3/16-3/19</b>	<b>No Classes</b>	<b>Midwinter Break</b>	
10	3/23-3/26	10	Carboxylic Acids, Phenols, and Amines	Electrolytes/Acids and Bases
11	3/30-4/2	11	Alcohols, Ethers, Aldehydes, and Ketones	% Alcohol in Beer
12	4/6-4/9	8	Lipids and Membranes	TLC of Analgesic Substances
13	4/13-4/16	12	Carbohydrates	Sugars
14	4/20-4/23	13	Peptides, Proteins, and Enzymes	Vitamin C
15	4/27-4/30	14	Nucleic Acids	Human Digestion and Metabolism
16	5/4-5/7	15	Metabolism	
17	5/5-5/6		<b>Final Exam (Comprehensive)</b>	

The above schedule is tentative and subject to change at the instructor's discretion with timely notice.