Heartland Community College  
Math, Science Division  
Course Syllabus for Students, fall 2009

Course Prefix and Number: CHEM 099  
Course Title: Preparatory College Chemistry

Credit Hours: 2 hrs  
Lecture Hours: 2 hrs  
Laboratory Hours: 0 hrs

Days and times the course meets:  
Lecture: section 01 @ 9 – 10:50am T

CATALOG DESCRIPTION:  
Prerequisite: Concurrent enrollment in MATH 087 or placement. This is a course designed to prepare a student to take either CHEM 120 or CHEM 161. Students who have not completed a high school chemistry course within the last five years will be required to take CHEM 099 before taking CHEM 161. Those with a weak background in the subject should strongly consider taking CHEM 099 first before enrolling in CHEM 120 or CHEM 161. Topics covered include Significant Figures, Dimensional Analysis, the Periodic Table, Nomenclature, Chemical Reactions & Quantities, and more.

Instructor Information:  
Instructor name: R. John Muench  
Phone number: (309) 268-8656  
Email Address: John.Muench@Heartland.edu  
Web pages: http://employee.heartland.edu/rmuench/  
(Note: do NOT put a www. at the front)  
Office: ICB 2412  
Hours and days of Office Hours: M 4 – 4:50pm*, T 1:30 – 3:20pm, W 6:30 – 7:30pm*, R 2:30 – 3:20pm, and by appointment when available.

*Study Session hours held in ICB 1401 (Chemistry Lab room).

TEXTBOOK:  

Supplies: Scientific Calculator, Periodic Table (I will supply one)

RELATIONSHIP TO ACADEMIC DEVELOPMENT PROGRAMS AND TRANSFERABILITY:  
CHEM 099 is designed to enhance students' academic performance for either CHEM 120 or CHEM 161. Credit earned from successful completion of this course (or other developmental course) is not calculated into students' HCC GPA, will not apply toward degree or certificate requirements, nor will it transfer to other colleges or universities. However, some institutions calculate admissions GPA using grades from all courses, including developmental courses.
COURSE OBJECTIVES (Learning Outcomes)
This course will prepare students for future College Chemistry courses by working on those skills essential to success in either CHEM 120 or CHEM 161. This will include developing core concepts and problem-solving skills by:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>General Education Outcomes</th>
<th>Range of Assessment Methods</th>
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<tbody>
<tr>
<td>Using significant figures in all measurements and calculations.</td>
<td></td>
<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Understanding how to use your calculator.</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<td>Applying dimensional analysis in conversion and density problems.</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<td>Associating chemical names to their formulas</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<td>Defining an element by its location on the Periodic Table</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Describing the concepts of matter and energy</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<td>Distinguishing the parts of an atom including atomic and mass numbers</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Applying nomenclature rules for naming and writing all compounds</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Solving quantitative chemistry problems including moles, molar mass, and empirical formulas</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Understanding a written chemical equation including balancing them</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Solving quantitative aspects of a chemical equation</td>
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<td>Worksheets, Quizzes, and Exams</td>
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<tr>
<td>Understanding and writing the electronic configurations of an element</td>
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<td>Worksheets, Quizzes, and Exams</td>
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A discussion of both study techniques and test-taking will also be included during this course.

COURSE/LAB OUTLINE:
1. Introduction to Chemistry and the Calculator
2. Standards for Measurement
3. Elements and Compounds
4. Properties of Matter and Energy
5. Atomic Theory and Structure
6. Nomenclature of Inorganic Compounds
7. Quantitative Composition of Compounds
8. Chemical Equations
9. Calculations from Chemical Equations
10. Periodic Table and Electronic Structure
COURSE POLICIES

Method of Evaluation (Tests/Exams, Grading System): Students will be evaluated through the use of worksheets, quizzes, and exams. The breakdown will be:

- Worksheets = 200 points
- Quizzes = 100 points
- 2 Exams @ 50 points each = 100 points
- Final Exam = 100 points

Grades will be based on a 90 – 80 – 70 – 65 percentage.

Attendance: Each class session will include one or two in-class worksheets that you MUST be present to receive credit for. Because this class meets only eight times, missing more than two class sessions will result in an automatic failure of this class. If for some reason you cannot make it to class, please inform your instructor by phone or email.

Worksheets: All the worksheets will be introduced during the lecture and then completed in class – if possible. If not, then you will need to finish them outside of class and turn them in the next period.

Quizzes: There will be a total of six twenty-point quizzes for this class with the lowest score dropped. All of the quizzes will be of the take-home variety and due the next class period. The quizzes are of the

Exams: A total of two 50-point exams and one 100-point final exam will be given in the course. These are multiple choice exams designed to provide practice for taking either CHEM 120 or CHEM 161 exams. Tips for taking such exams will be part of this class.

Make-Up Policy: If you know in advance of an absence, then please inform your instructor as far in advance as possible. Any missed worksheets due to an absence can be made up at one-half the credit value of that assignment. Any quizzes missed may be turned in up to one week late with no penalty. After one week, the quizzes will not be accepted. Any missed exam must be made up BEFORE the next class session. If not, then you will receive a zero for that exam.

Required Reading / Writing: You will be required to read approximately 200 pages from the textbook for the eight-week period.

Telecommunications Policy: Please practice good cell phone etiquette by either turning off or putting your cell phone into a silent mode before the start of each class session. Repeat offenders may be dismissed from a class period after an interruption.

ACADEMIC INTEGRITY and PLAGIARISM

Academic Integrity: Academic integrity is a fundamental principle of collegial life at Heartland Community College and is essential to the credibility of the College’s educational programs. Moreover, because grading may be competitive, students who misrepresent their academic work violate the right of their fellow students. The College, therefore, views any act of academic dishonesty as a serious offense requiring disciplinary measures, including course failure, suspension, and even expulsion from the College. In addition, an act of academic dishonesty may have unforeseen effects far beyond any officially imposed penalties. Violations of academic integrity include, but are not limited to cheating, aiding or suborning cheating or other acts of academic dishonesty, plagiarism, misrepresentation of data, falsification of academic records or documents and unauthorized access to computerized academic or administrative records or systems. Definitions of these violations may be found in the college catalog.
In this course, there is a fine line between cheating and working collaboratively. On Worksheets, you are strongly encouraged to work together to collaboratively solve problems. This means that you should work together, step-by-step, until you arrive at a solution or work independently and then compare work at the end. That line is crossed, however, when you directly copy someone else’s work without bothering to learn “how.”

Finally, the penalty in my course for cheating on an exam is dismissal from the course with a final grade of an “F.” In addition, I may place a letter in your permanent file here at HCC. Note that you do have the right to appeal this decision based on the appeals process found in the student handbook.

**Plagiarism:** Plagiarism is the presenting of others’ ideas as if they were your own. When you write a paper, create a project, do a presentation or create anything original, it is assumed that all the work, except for that which is attributed to another author or creator, is your own. Plagiarism is considered a serious academic offense and may take the following forms:

- Copying word-for-word from another source and not giving that source credit.
- Paraphrasing the work of another and not giving that source credit.
- Adopting a particularly apt phrase as your own.
- Using an image or a copy of an image without crediting its source.
- Paraphrasing someone else’s line of thinking in the development of a topic as if it were your own.
- Receiving excessive help from a friend or elsewhere, or using another project as if it were your own.

**Support Services**

**Heartland Library Information:** The Library, located in the Students Commons Buildings at the Raab Road campus, provides Heartland students with a full range of resources including books, online journal databases, videos, newspapers, periodicals, reserves, and interlibrary loan. Librarians are available to assist in locating information. For more information please call the Library (309) 268-8200 or (309) 268-8292

**Tutoring Center:** Heartland Community College offers tutoring in various forms at no cost to Heartland students at the Academic Support Center (ASC) in Normal and at the Pontiac and Lincoln Centers. Tutors are available at convenient times throughout the week. Study groups (group tutoring facilitated by a specially trained tutor) are also available by request. For more information about services available at each location, please call the ASC in Normal (309) 268-8231; the Pontiac Center (815) 842-6777; the Lincoln Center (217) 735-1731.

**Testing Center:** The Testing Center provides a quiet environment for students to complete make-up exams, online exams, and exams for students with special accommodations. Students may be able to complete exams in the Testing Center if arrangements are made with their instructor. For more information, contact the Testing Center at (309) 268-8231.

**Study Sessions:** I hold two of my office hours in the Chemistry lab room (ICB 1401). This is a time that any student may drop into to ask questions or work on homework. This semester’s times are: Monday from 4 – 4:50pm and Wednesday from 6:30 – 7:30pm.