



Chemistry 151-- Investigating Chemistry
Syllabus
Spring 2009



<u>Lecture Instructor</u>	<u>Office Number</u>	<u>Office Hours</u>	<u>Email Address</u>
Dr. Jeremy Ramsey	232 Heim 321-4103	Just stop by or make an appointment	ramsey@lycoming.edu

Meeting Times

<u>Lecture</u>	<u>Laboratory</u>
MWF	Thursday
10:15 am until 11:05 am	Section R: 1:00 pm until 2:50 pm Section RT: 3:00 pm until 4:50 pm
Heim G40	Heim 239

Course Description

In many ways, the material presented in this course covers the same basic principles of chemistry as the majority of non-majors chemistry courses. The difference is that this course will use the field of forensic chemistry to illustrate chemical concepts. During the semester, we will cover a wide range of topics that will require conceptual and mathematical problem solving skills that students tend to have difficulty learning. The best approach for success is to avoid just memorizing facts. Instead, focus on understanding why. Using this method, you will be able to handle any question that will come your way.

One of the goals that I have for this semester is to introduce you to the fundamental principles of chemistry, and I have dedicated myself to helping you reach this goal. The motivation, however, must begin with you. The material in this course will be challenging and requires a lot of hard work for its mastery. A wealth of opportunities exists to assist you with your studies so please take advantage of them. If you do, I am confident that we can both achieve our goals for the semester.

Course Materials

- Textbook: Investigating Chemistry: A Forensic Science Perspective, 1st Edition by Johll (hard copy available at the Lyco bookstore; ISBN: 0716764334)
- Laboratory Manual: Investigating Chemistry in the Laboratory, 1st Edition by Collins (hard copy available at the Lyco bookstore; ISBN: 0716774852)
- Non-programmable calculator (no passing or sharing allowed in exams or quizzes)
- Safety Glasses (available at the Lyco bookstore)

Distribution Requirement

Because this course meets a distribution requirement, it includes a writing component. At least 10 pages of writing will be expected from each student during the semester, some of which will be formally evaluated. If you need help with writing, please feel free to ask the instructors for assistance. You can also get assistance with writing at the writing center on the third floor of Snowden Library.

Moodle

This course utilizes a content management system (fancy name for a website) called Moodle. You will be **expected** to check this website frequently for announcements, course information, and scheduling. This is the only place where homework assignments will be announced. Using your email username and password, you can log onto moodle.lycoming.edu. From the list of available courses, choose Chem 151—Investigating Chemistry. The password for enrolling in the course is bubblegum.

Office Hours/Additional Help

Office hours are for the purpose of walk in instruction, discussion, or just to chat. Unless otherwise announced, I will normally be available when my door is open, but you are always welcome to make an individual appointment. The Academic Research Center (ARC) is available for course tutoring, including writing. ARC is on the third floor of Snowden Library. **Do not wait until the night before an exam or assignment is due to get assistance.**

Special Needs

If you have a specific disability and choose to request academic accommodations to meet your needs, please consult with Mr. Dan Hartsock, Coordinator of Services for Students with Disabilities. His office is in the Academic Resource Center on the third floor of Snowden Library. You can also reach him by phone (570-321-4294).

Technology Policy

While you are expected to attend and participate in this class, your cell phone, computer, and MP3 players are **not**. Use of cell phones, computers, and MP3 players during class will not be permitted and may result in your dismissal from the class for the day. Use of cell phones, computers, and MP3 players during examinations and quizzes will be considered academic dishonesty, which will result in a zero being awarded for the quiz or examination (No exceptions!).

Grading

- Grades will be scaled to the number of points in the table below.

	<u>Points</u>
Examinations (4)	400
<i>Highest midterm score</i>	<i>110</i>
<i>Second highest midterm score</i>	<i>105</i>
<i>Third highest midterm score</i>	<i>95</i>
<i>Lowest exam score</i>	<i>90</i>
Quizzes	50
Laboratory	150
Total	<u>600</u>

- Your highest *five* quiz scores will count toward your quiz grade. **There will be no makeup quizzes.**
- If you know that you will be unable to attend class on the day of an examination (for a funeral, health-related circumstance, or Lycoming athletics), it is your responsibility to contact the instructor a week before to arrange to take the exam early. If you miss an exam due to an unforeseen emergency (with an excuse from the Provost's office), the exam will be replaced with the average of your other exam scores (only one exam per semester may be replaced). All other absences on exam dates will result in the awarding of zero points for the exam. **No examinations will be given after the scheduled exam date/time.**
- The grading scale will be as follows. Adjustments to this scale are possible, but highly unlikely.

≥ 90%	A range (A/A- cutoff: 92%)
80-89%	B range (B+/B cutoff: 88%, B/B- cutoff: 82%)
70-79%	C range (C+/C cutoff: 78%, C/C- cutoff: 72%)
60-69%	D range (D+/D cutoff: 68%, D/D- cutoff: 62%)
< 60%	Fail

- In order to receive a passing grade, you must achieve at least 60% of the points in both the lecture (exams/quizzes) and laboratory portions of this course.***

Academic Honesty (from the Student Handbook):

Academic dishonesty is a willful perversion of truth, or stealing, cheating, or defrauding in instructional matters. Students will have engaged in academic dishonesty if they copied the work of another without attribution, willfully allowed another to copy their work, falsified information, submitted the work of another as though it were their own, or committed other acts of plagiarism or actions deemed to be dishonest by the instructor.

ACADEMIC DISHONESTY IS A VERY SERIOUS CHARGE, WHICH CAN LEAD TO SUSPENSION FROM THE COLLEGE. All students should become familiar with the rules of academic honesty and apply them in ALL academic work.

Quizzes

Quizzes will be announced at least one lecture before they will occur and will be given in lecture. The purpose of these quizzes is to provide you with an opportunity to determine where your deficiencies may be and to provide a "gentle" reminder of how important it is to stay current with the progress of the course (quiz questions are normally taken from homework problems). Quizzes may contain information from the laboratory or lecture portion of the course. Quizzes will occur on Wednesdays unless an announcement indicating otherwise is made.

Homework

In this course, homework assignments will not be collected, but it is of utmost importance that you attempt them. The selected homework problems provide an indication of the topics that are important. This makes solving them of utmost importance to your grade and your performance in the course will likely correlate with the amount of time spent solving problems. Because learning can be much more efficient through failure, I feel strongly that they should be attempted individually before seeking help from others or before checking the solutions manual. Homework assignments will be posted on our class Moodle website and will not be announced in class. Please feel free to stop by my office to discuss any difficulties you may have with any of the homework problems.

Examinations

Midterm examinations will be given during regularly-scheduled lecture time and will be administered on the following dates. Because the material presented later in the class builds upon concepts presented earlier, all exams will be cumulative. However, the focus of the exams will be the most recently covered material.

Examination 1	February 4 (Wednesday)
Examination 2	March 11 (Wednesday)
Examination 3	April 8 (Wednesday)
Examination 4	April 28 (Tuesday; 1:00 to 4:00 PM)**

** The final examination time and date is established by the registrar.

Attendance

Regular attendance at lecture is **expected**. Students with 4 or more absences will incur a reduction in their final grade of 5%. I do not distinguish between excused and unexcused absences. Extra credit will be awarded for attendance at selected chemistry colloquia (Fridays from 3-4:15pm). Four points will be added to your exam grade for each seminar attended. If your schedule does not permit attendance at colloquium, you may write a 10 page, double-spaced research paper on some aspect of chemistry. The paper must be original (not written for another class) and will be submitted to Turnitin. Plagiarism of an extra credit paper will be considered a violation of the academic honesty policy of the student handbook and will be reported to the Provost.

Laboratory Attendance

Acceptable performance in the laboratory is imperative for success in chemistry. ***No student will pass the course with less than a score of 60% in the laboratory portion of the course.*** You will be expected to arrive to laboratory on-time. Missing the prelab lecture will result in your dismissal from the lab for the day.

Attendance in laboratory is mandatory. Makeup laboratory experiments will not be allowed.

Laboratory Safety

Safe laboratory practices, including proper attire, will be expected at all times. Long pants are required as well as closed toe shoes (no sandals or bare feet). Wearing contact lenses during laboratory session is strongly discouraged. If you feel you need to wear your contact lenses during laboratory session, you should first discuss this with the instructor. You will not be permitted to begin any experimental procedures until all safety concerns have been addressed. **Repeated safety violations will cause your expulsion from the laboratory and a zero for the experiment.**

Tentative Laboratory Schedule

Experiment 1—Measurements (1 week)

Experiment 13—Bloodstain Pattern Analysis (1 week)

Experiment 2—Polymer Identification (2 weeks)

Experiment 11—Fingerprints (2 weeks)

Experiment 7—Blood Alcohol Concentration (1 week)

Original Experiment—Classification and Identification of Illicit Drugs (3 weeks)

Original Experiment—Identification of Inks Using Chromatography (2 weeks)