

**Syllabus Chemistry 102/104  
Introduction to Organic, Biochemistry,  
Pharmaceutical and Fuel Chemistry**

**Professor: Kimi S. Hatton, Ph. D.  
Office: Planetary Hall, Rm 309  
Phone: 7039931078  
Email: shatton@gmu.edu (preferred contact)**

**Required:**

**Textbook:** 1) Chemistry for Changing Times, by Hill, 2016

This course meets the Natural science requirement CORE, one of the requirements of the University General Education program.

**WEEK #**

**CHAPTER**

1	9
2	9
3	9
4	10
5	10
6	16
7	16
8	18
9	18
10	15
11	15
12	15
13	

## **Grading**

Your grade for Chemistry 104 will be derived from the following categories with the indicated percentage points:

Exams (2) 15% each, 30 %

Final Exam 20 %

Class participation in Collaborative Projects 25 %

Laboratory 25%

Your grade for Chemistry 102 will be derived from the following categories with the indicated percentage points:

Exams (2), 20 % each, 40 %

Final Exam 27 %

Class participation in Collaborative Projects 33 %

## **Course Policies:**

- 1) A student in 104 must complete 75% of the laboratory sessions (which include lab attendance and submission of a laboratory report). A grade of F will be entered for those not completing this requirement.
- 2) The Honor Code operates during all aspects of the course. Familiarize yourself with the honor code.
- 3) Class attendance is required to optimize your participation grade. No make-up exams or alternatively scheduled final exams are permitted. Plan your schedule in advance of taking this course.

## **Overall goals for General Education in the Natural Sciences And The Mason Core**

George Mason University's Mason Core is designed to complement work in a student's chosen area of study. These classes serve as a means of discovery for students, providing a foundation for learning, connecting to potential new areas of interest and building tools for success in whatever field a student pursues. Learning outcomes are guided by the qualities every student should develop as they move toward graduating with a George Mason degree. Through a combination of courses, the Mason Core program helps students to become:

### ***Critical and Creative Scholars***

Students who have a love of and capacity for learning. Their understanding of fundamental principles in a variety of disciplines, and their mastery of quantitative and communication tools, enables them to think creatively and productively. They are inquisitive, open-minded, capable, informed, and able to integrate diverse bodies of knowledge and perspectives.

### ***Self-Reflective Learners***

Students who develop the capacity to think well. They can identify and articulate individual beliefs, strengths and weaknesses, critically reflect on these beliefs and integrate this understanding into their daily living.

### ***Ethical, Inquiry-Based Citizens***

Students who are tolerant and understanding. They can conceptualize and communicate about problems of local, national and global significance, using research and evaluative perspectives to contribute to the common good.

### ***Thinkers and Problem-Solvers***

Students who are able to discover and understand natural, physical, and social phenomena; who can articulate their application to real world challenges; and who approach problem-solving from various vantage points. They can demonstrate capability for inquiry, reason, and imagination and see connections in historical, literary and artistic fields.

### **Natural Science**

The Mason Core natural sciences courses engage student in scientific exploration; foster their curiosity; enhance their enthusiasm for science; and enable them to apply scientific knowledge and reasoning to personal, professional and public decision-making. Lab courses must meet all five learning outcomes; non lab courses must meet learning outcomes 1 through 4.

To achieve these goals, students will:

- Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding:
  - evolves based on new evidence
  - differs from personal and cultural belief
- Recognize the scope and limits of science
- Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conversation, sustainability, energy, natural disasters, etc.)
- Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information)
- Participate in scientific inquiry and communicate the elements of the process, including:
  - Making careful and systematic observations
  - Developing and testing a hypothesis
  - Analyzing evidence
  - Interpreting results

Additional information is included here from the **Office of the Provost:**

## **ACADEMIC INTEGRITY**

Mason is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process (<http://oai.gmu.edu/the-mason-honor-code-2/>). The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification from the professor.

## **MASON EMAIL ACCOUNTS**

Students must use their MasonLIVE email account to receive important University information, including messages related to this class. See <http://masonlive.gmu.edu> for more information.

## **OFFICE OF DISABILITY SERVICES**

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS.  
<http://ods.gmu.edu>

## **OTHER USEFUL CAMPUS RESOURCES:**

**WRITING CENTER:** A114 Robinson Hall; (703) 993-1200;  
<http://writingcenter.gmu.edu>

**UNIVERSITY LIBRARIES** "Ask a Librarian"  
<http://library.gmu.edu/>

**COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS):** (703) 993-2380;  
<http://caps.gmu.edu>

## **UNIVERSITY POLICIES**

The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at <http://universitypolicy.gmu.edu/>. All members of the university community are responsible for knowing and following established policies

The topics of this course include the chemistry of carbon containing compounds, polymers (both synthetic and biological), medicines and fuels.