

## CHEM 101 001 APPLYING CHEMISTRY TO SOCIETY

Fall, 2<sup>nd</sup> half semester

Oct 13 – Dec 3

CRN 11618

Course Credit Hours: 3

Instructor: Kristen Kull

Office: Sims 107B

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Phone: 323-4921

### Virtual Office Hours via Blackboard

Office Hours: Platform	Date, Time	Chem	Login
BB Collaborate Ultra	Mon, 2-4:50 pm	108	
BB Collaborate Ultra	Wed, 10-11 am	101/108	
BB Collaborate Ultra	Thurs 6:30-8 pm	108	
BB Collaborate Ultra	Friday 1:45-2:45	101	

### Individual /Virtual Meeting     Arrange via Blackboard or E-mail

*Attendance policy* Faculty should review [Winthrop's student class attendance policy](#), which stipulates that "attendance" is measured by course activity participation in online learning modalities. The definition of an absence needs to be operationally defined in the course syllabus, particularly for the COVID-19 pandemic.

*For Online Learning:Regarding coursemanagement:* course management: Any student enrolled in courses at Winthrop regardless of modality (traditional in-person, online, hybrid, telepathy, ...) is entitled access to all campus resources. These resources include, but are not limited to, admissions counseling, recreational facilities, and health, library, and academic services. Questions regarding access to these resources should be directed to the assigned academic advisor.

For any interaction with the course professor, regardless of the location, and for on-campus interaction the following *Masking Expectations* guideline exists: Winthrop requires that all students adhere to safety practices that will minimize the transmission of COVID-19 within the campus community. Accordingly, students are expected to engage in social distancing and wear a cloth face mask while on campus. Failure to comply with this requirement in the classroom will result in dismissal from the current class meeting. Repeated violations will be reported to the Dean of Students as a violation of the Student Conduct Code. Students with conditions that prohibit the wearing of a face mask should discuss this with their instructor and/or contact the Office of Accessibility to arrange appropriate accommodations.

## Required Course Materials

### Sapling Learning:

Go through Blackboard Chem101 to get assignments and access to Sapling.

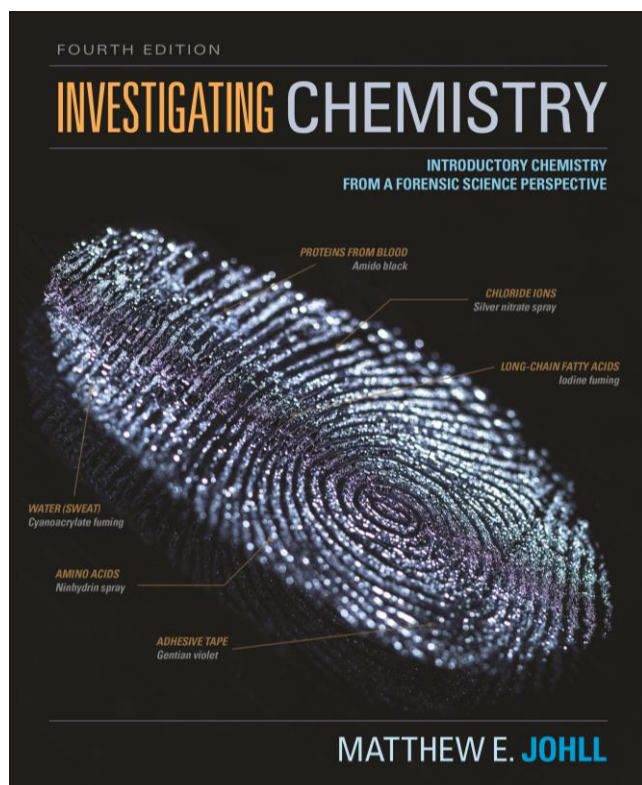
The Sapling Learning content section is found in the Chapters. Included are the slides and assignments.

Three sources for access to the e-book and on-line course activities (Sapling). **You must purchase Sapling Plus, available through one of these resources to get assignments.**

- 1) 978-1-319-27716-1 Loose-Leaf textbook with SaplingPlus
- 2) 978-1-319-27701-7 Cloth textbook with SaplingPlus
- 3) 978-1-319-25836-8 SaplingPlus (includes eBook)

The assignments are listed in Blackboard and link directly to the external site. Click on any Sapling assignment link to launch the assignment. Select your access option and continue to your assignment page. You are now enrolled in the course and can access future assignments through the links on your instructor's course page.

### Textbook:



INVESTIGATING CHEMISTRY: Introductory Chemistry  
From A Forensic Science Perspective  
*FOURTH EDITION*

### Accessing course material for Investigating Chemistry, Johll, 4ed., Sapling course STUDENT INSTRUCTIONS

*If applicable*, to access your ebook click on the image of the cover on the right sidebar of your course site. Create an account or log in with an existing Macmillan Learning eBook account.

### Need Help?

Answers to many common questions are found in our Student Support Community. If you need direct assistance you can also contact technical support:

<https://macmillan.force.com/macmillanlearning/s/>

The following link includes more detailed instructions on how to register for your course:

<https://macmillan.force.com/macmillanlearning/s/article/Students-Register-for-Sapling-Learning-courses-via-your-school-s-LMS>

### Course Goals:

- Establish an understanding of basic chemistry principles
- Relate how these principles apply to the world around us
- Develop problem-solving and critical thinking skills

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**Global learning Initiative:** As a knowledgeable member of society, this course should help ensure good decisions are made in reference to materials safe use in the home and community. Dangerous situations potentially averted.

#### **University Level Competencies:**

- Competency 1: Winthrop graduates think critically and solve problems.
- Competency 2: Winthrop graduates are personally and socially responsible.
- Competency 3: Winthrop graduates understand the interconnected nature of the world and the time in which they live.
- Competency 4: Winthrop graduates communicate effectively

#### **Course Outline:**

The following topics will be covered during the course:

- Matter, compounds, and mixtures
- Chemical reactions
- Atomic structure
- Chemical bonding
- Organics - Fossil Fuels, Polymers, Functional groups
- Environmental aspects
- Water, acids and bases
- Redox reactions
- Pollution
- Ozone layer
- Greenhouse gasses
- Nuclear chemistry

The approach will come from a forensic perspective addressing evidence collection and atomic clues. Use of the scientific method for a logical approach to validate or oppose a theory, supported by chemical and physical knowledge and investigation.

#### **Class Preparation:**

This course will test your time management and prioritization skills. You will perform better on graded events if you spend time reading the material, reviewing lessons on Blackboard and answering suggested problems well in advance of assignment deadlines. **Once an assignment is due, you will have a leniency period with grade deduction for tardiness. The final assignment is the only one with no extension. Failure to complete on time will receive a grade of zero.**

You may work at an accelerated pace, but you may not request a retake if you rushed ahead and were not fully prepared.

#### **Lectures:**

There is no classroom meeting time for this course. Chapter PowerPoint slides are available on Blackboard. There are also many resources on the online book site.

#### **Homework:**

Practice assignments will appear on the syllabus but will not be included in your grade. These problems will not be collected but are recommended for practice before taking the quiz. I have selected the problems as representative of questions asked.

#### **Graded assignments:**

- There will be nine quizzes/evaluations worth 60 points each. **No make-ups will be allowed.**
- The lowest quiz grade will be dropped. If a quiz is missed, that grade will be one of the dropped scores.
- **You should carefully read the Winthrop University Student Conduct Code printed in the *Winthrop University Student Handbook*. As noted in the Student Conduct Code: *Responsibility for good conduct rests with students as adult individuals. This policy on student academic misconduct is outlined in the Student Conduct Code Academic Misconduct Policy in the online Student Handbook* <http://www2.winthrop.edu/studentaffairs/handbook/StudentHandbook.pdf>**

### Grading System

			Lowest dropped	scaled
Quizzes/Evaluations	9@60 pts	540 pts	480	100%

A		B+		B		C+		C		CR	I	UN	Grade	F 2020
100	89.6	89.5	86.6	86.5	79.6	79.5	76.6	76.5	69.6	69.5	59.6	59.5	%	Section
540	483.8	483.3	467.6	467.1	429.8	429.3	413.6	413.1	375.8	375.3	321.8	321.3	tot pts	001, 002
480	430.1	429.6	415.7	415.2	382.1	381.6	367.7	367.2	334.1	333.6	286.1	285.6	LQD	001, 002
510	457	456.5	441.7	441.2	406	405.5	390.7	390.2	355	354.5	304	303.5	tot pts	003
470	430.1	429.6	415.7	415.2	382.1	381.6	367.7	367.2	334.1	333.6	286.1	285.6	LQD	003

### Calculator

A basic scientific calculator or graphing calculators (one with exponential notation, logarithms, and orders of operation) is necessary for all quizzes and exams.

### Communication:

Information may also be sent via the Class List Servers. If you added the course late or are not receiving emails, go to <http://www.winthrop.edu/technology/default.aspx?id=7081> to add yourself.

If you have any questions, e-mail or see me before/after class to set up an appointment.

### Course Withdrawal:

Dec 3rd is the last day to S/U a full semester course. *Students may not withdraw from a course after this date without documented extenuating circumstances.*

### Students with Disabilities/Need of Accommodations for Access:

Winthrop University is committed to providing access to education. If you have a condition which may adversely impact your ability to access academics and/or campus life, and you require specific accommodations to complete this course, contact the Office of Accessibility (OA) at 803-323-3290, or, [accessibility@winthrop.edu](mailto:accessibility@winthrop.edu). Please inform me as early as possible, once you have your official notice of accommodations from the Office of Accessibility.

### Academic Success Center:

Winthrop Academic Success Center is a free resource for all undergraduate students seeking to perform their best academically. The ASC offers a variety of personalized and structured resources that help students achieve academic excellence, such as tutoring, academic skill development (test taking strategies, time management counseling, and study techniques), and group/individual study spaces. The ASC is located on the first floor of Dinkins, Suite 106. Tutoring for this specific course is offered through the

office. If you wish to request a tutor, you must attend ONE Tutee Seminar, offered every Friday. Please contact the ASC at 803-323-3929 or [success@winthrop.edu](mailto:success@winthrop.edu) if you have any questions. For more information on ASC services, please visit [www.winthrop.edu/success](http://www.winthrop.edu/success).

### **General Education Requirements**

Chem 101 fulfills three hours of general education requirement for natural sciences. Listed below are the seven fundamental student learning outcomes for natural science courses as well as examples of how they will be fulfilled in Chem 101.

#### **Course Objectives and Student Learning Outcomes - Students should be:**

1. Conversant with a few fundamental concepts from the three main areas of natural science, including earth, life, and physical sciences. (e.g., *chemical reactions, global warming, nuclear power, etc.*)
2. Able to apply the scientific methodologies of inquiry. (e.g., *Problem solving exercises*)
3. Able to discuss the strengths and limitations of science. (e.g., *discussion of scientific methodology*)
4. Able to demonstrate an understanding of the history of scientific discovery. (e.g., *The development of the periodic table and discovery of subatomic particles*)
5. Able to discuss the social and ethical contexts within which science operates. (e.g., *global warming, fossil fuels, nuclear power...*).
6. Able to communicate about scientific subjects including the defense of conclusions based on one's own observations. (e.g., *homework assignments and analytic exam questions*)
7. Able to discuss the application of scientific knowledge to the social sciences and to non-scientific disciplines. (e.g., *research paper on current scientific topic in the news*)

#### **This is a tentative schedule and will be updated as needed.**

- If changes occur, you will be notified via Blackboard. A record of this transmission will be recorded in announcements.
- Quizzes and exams will be available on Blackboard and should be completed/ submitted there.
- There is no time limit on an individual graded event, but the Events must be submitted by the due date.
- It is an open resource, I want you to get in and read. There are many good videos available on the web if additional explanation is needed.

# Assignments-Due dates F20\_101\_2nd half\_001

Submitted by 11 pm

Date (not later than)	Day #	Assignments	Text Focus Sections	Suggested Homework Problems (answers to odd problems found in book)																
10/13	1	Class official start																		
10/17	5	Input review, Math review		Sapling																
10/22	10	Quiz 1 Introduction to Forensic Chemistry	All	Ch 1: 1-53, odd																
10/27	15	Quiz 2 Evidence Collection and Preservation	All	Ch 2																
11/1	20	Quiz 3 Atomic Clues	All	Ch 3																
11/7	25	Quiz 4 Chemical Evidence	All	Ch 4																
11/12	30	Quiz 5 Nuclear Chemistry: Energy, Medicine, Weapons, and Terrorism	All	Ch 12																
11/16	34	Quiz 6 Properties of Solutions I: Aqueous Solutions	All	Ch 6																
11/20	38	Quiz 7 Properties of Solutions II: Intermolecular Forces and Colligative Properties	All	Ch 7																
12/1	43	Quiz 8 Chemistry of Fire and Heat	All	Ch 9																
		<p><b>Complete course evaluation</b> - Chemistry course evaluations for Fall 2020 is located <a href="https://winthrop.qualtrics.com/jfe/form/SV_9BOfZt6tJPGZZVr">https://winthrop.qualtrics.com/jfe/form/SV_9BOfZt6tJPGZZVr</a></p> <p>Each student will sign in with their student number (W-----) and section CRN.                      Example: Student number: W12345678 Access outside the available dates will give a message of survey ended.</p> <table> <thead> <tr> <th>Available dates</th> <th>Course</th> <th>Section</th> <th></th> </tr> </thead> <tbody> <tr> <td>Oct 01 – Oct 12</td> <td>Chem 101</td> <td>Section CRN: 11836</td> <td>Section 002, 1<sup>st</sup> ½ sem</td> </tr> <tr> <td>Nov 27- Dec 4</td> <td>Chem 101</td> <td>Section CRN: 11618</td> <td>Section 001, 2<sup>nd</sup> ½ sem</td> </tr> <tr> <td>Nov 27- Dec 4</td> <td>Chem 101</td> <td>Section CRN: 11664</td> <td>Section 003, full sem</td> </tr> </tbody> </table>			Available dates	Course	Section		Oct 01 – Oct 12	Chem 101	Section CRN: 11836	Section 002, 1 <sup>st</sup> ½ sem	Nov 27- Dec 4	Chem 101	Section CRN: 11618	Section 001, 2 <sup>nd</sup> ½ sem	Nov 27- Dec 4	Chem 101	Section CRN: 11664	Section 003, full sem
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12/3	45	<b>Last day to S/U a first half semester course.</b>																		
12/7	49	Quiz 9 Chemistry of Explosions (Final)	All	Ch 10																

- *This document may be adjusted as needed during the semester. The student is responsible for being aware of any changes and so should check Blackboard course page for changes to this syllabus. There will always be notification sent from the announcements*