**CHEMISTRY 152 COURSE INFORMATION**

[**201850-MON-60376: 201850-MON-CHE-152-715 General College Chemistry II.**](https://mcc.open.suny.edu/webapps/blackboard/execute/launcher?type=Course&id=_27743_1&url=)

Instructor: Dr. Joe Lanzafame or just call me Joe

1. **Office Hours**:

Office: Before or after class or by appointment.

Phone: 314-1240 (off campus)

E-mail: jmlsch@rit.edu or jlanzafame@monroecc.edu

2. CHE 152 - GENERAL COLLEGE CHEMISTRY II

**4 Credits**

A continuation of CHE 151. Topics include: solution concentrations and properties; chemical kinetics; gas and solution phase chemical equilibrium including solubility; acids; and bases; thermodynamics; electrochemistry.

Prerequisite: CHE 151 with a minimum grade of C-.

**SUNY General Education:** SUNY-NS - Natural Sciences (SNSC)

**MCC General Education:** MCC-CT - Critical Thinking (MCT), MCC-SCI - Scientific Reasoning (MSCI)

**Course Learning Outcomes**
1. Calculate solution concentrations such as percent concentration, mole fraction, molarity, and molality.
2. Determine reaction order from graphical and experimental data.
3. Use integrated rate equations to make predictions related to reaction order and half life.
4. Calculate equilibrium concentrations based on initial concentrations.
5. Predict the direction of an equilibrium reaction based on changes in reaction conditions.
6. Discuss acids and bases and their reactions using Bronsted-Lowry theory.
7. Calculate the pH of strong/weak acids and bases.
8. Calculate the pH of buffer systems.
9. Calculate the solubility of sparingly soluble salts.
10. Predict the spontaneity of a chemical process based on thermodynamic considerations.
11. Write balanced oxidation/reduction reactions.
12. Distinguish galvanic, concentration, and electrolytic cells.
13. Calculate cell potentials for galvanic cells at standard and nonstandard conditions.
14. Explain the different parts of a voltaic cell and write its corresponding cell diagram.
15. Demonstrate proper laboratory techniques, such as using volumetric glassware or performing titrations.
16. Apply aspects of the scientific method.

3. **Textbooks, etc**.

1. Textbook:The textbook is available free of charge as an open education resource:[https://courses.lumenlearning.com/suny-mcc-chemistryformajors-2/](https://courses.lumenlearning.com/suny-mcc-chemistryformajors-2/%22%20%5Ct%20%22_blank). The text can also be accessed on Blackboard (or course website). A copy of the text is available for purchase in the Bookstore.

2. Calculator with scientific functions (Log, ln, yx, etc.)

3. Chem 152 lab manual (in bookstore)

4. Lab goggles (in bookstore)

4. **Homework and in-class assignments**

 These count as part of your grade as well as giving you valuable practice. Ultimately it is your responsibility to obtain as much practice as YOU need. If that means doing 3x as many exercises as I suggest, do them.

We will also have a few in-class assignments that will be graded to encourage participation and attendance.

5. **Grading**

3 exams (drop lowest) - 100 points each [200 points total]

Final Exam - 100 points

Laboratory Write-ups- 120 points

Homework - 90 points

Post-Sprint assessments – 30 points

Post-Sprint quizzes – 60 points

Total possible points – 600 points

Grading is NOT on a curve.

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| Grade | Points |
| A | 552 |
| A- | 540 |
| B+ | 528 |
| B | 492 |
| B- | 480 |
| C+ | 468 |
| C | 420 |
| C- | 408 |
| D | 360 |
| F | <360 |

NO MAKE-UPS WILL BE GIVEN except in cases of accident or serious illness. In the case of illness, you ABSOLUTELY MUST contact me in advance of the quiz/exam.

## 6. **WITHDRAW**

**Add/Drop**

Each semester you can sign up for (add), or remove (drop) classes during the add/drop period.  Log in to MyMCC to add or drop courses.  If you prefer to add/drop in person, visit us at the Registration and Records Office at the Brighton Campus (Bldg 6 Rm 203) or the Downtown Campus (2nd Floor, Rm 210).

**Withdrawals**

Withdrawing means officially leaving an individual class after the add/drop period, but before 80% of the course has been completed. “Complete withdrawal,” on the other hand, lets you withdraw from all courses in a semester until the last day of classes (aka the Friday before finals week). After a complete withdrawal, you’ll need to [reapply to MCC](http://www.monroecc.edu/quick-links/apply/) to return.

There are many reasons why you might need or want to withdraw. Before doing so, please connect with advisors in [Academic Advisement](http://www.monroecc.edu/depts/advisement/) and [Counseling Services](http://www.monroecc.edu/depts/counsel/). They can go over your options, especially since withdrawing can affect your financial aid, athletics eligibility, and veteran's benefits. You are responsible for 100% of tuition if you withdraw from a course after the add/drop period.

Your instructors cannot withdraw you. To withdraw online, log in to [myMCC](https://my.monroecc.edu/%22%20%5Ct%20%22_blank). To withdraw in person, visit us at the Brighton Campus (Bldg 6, Rm 203) or the Downtown Campus (2nd Floor, Rm 210).

In cases of catastrophic illness, injury, or medical event requiring hospitalization that prevents you from withdrawing yourself before the end of the semester, you may request a withdrawal from the College through the Office of Health Services. You must submit medical documentation within 20 working days beyond the completion of the semester unless there are extraordinary circumstances.

7. **Learning Centers**

Monroe Community College has a number of Learning Centers at Brighton (for example, Accounting, Math, Psychology, Writing, the Electronic Learning Center, etc.) and at Damon (for example, the Integrated Learning Center, Electronic Learning Center, etc.). Learning Centers are staffed with instructional personnel and may be equipped with computers and software to assist students. It is recommended that students use the Learning Centers to get additional help with concepts learned in the classroom and with their homework. Please refer to your MCC student email to review your referral and objectives for your use of the Learning Center(s).

8. **Emergency Closings**

If the College is **closed** or classes are cancelled due to inclement weather or some other emergency, all Rochester area radio and television stations will be notified no later than 5:30 a.m. or in the case of a mid-day decision, no later than 3:00 p.m. In addition, the home page on the MCC website ([www.monroecc.edu](http://www.monroecc.edu/)) will display a message indicating the College is closed or classes are cancelled.  Please do not call the College to avoid overloading the telephone lines.

In the event of an **emergency**, such as a campus evacuation or closure, severe weather alert, fire in a building, hazardous material incident, etc., where time-sensitive, proactive actions need to be communicated, the **SUNY NY-Alert** system will be utilized to provide immediate notification to all MCC students and employees who have opted to receive such alerts.  Those who sign up for SUNY NY-Alert can choose to receive emergency messages via a variety of communication technologies, such as e-mail (college and/or personal accounts), and audio and/or text message to a campus, home or cell phone, fax, etc.  For more information on SUNY NY-Alert, including how to sign up, please visit <http://www.monroecc.edu/depts/pstd/NYAlert.htm>.

Information regarding **class cancellation** is available daily on the web or through the telephone. Simply go to the MCC website ([www.monroecc.edu](http://www.monroecc.edu)) and select the link in the second heading menu labeled “Current Students”, and then select the “Class Cancellations” link along the left column under the “Academics at MCC “section. Additionally, class cancellation information is available by dialing 292-2066, press “1” for the Brighton campus and “2” for the Damon City campus. If possible, please use the web, as there could be delays in the voice recordings based on the number of cancellations.

9. **Notice of Non-Discrimination**

Monroe Community College prohibits discrimination based on race, color, religion, sex, sexual orientation, pregnancy, familial status, gender identity or expression, age, genetic information, national or ethnic origin, physical or mental disability, marital status, veteran status, domestic violence victim status, socioeconomic status, criminal conviction, or any other characteristic or status protected by state or federal laws or College policy in admissions, employment, and treatment of students and employees, or in any aspect of the business of the College.

Inquiries regarding the application of Title IX and other laws, regulations and policies prohibiting discrimination may be directed to Kristin Lowe, Esq., Title IX Coordinator, (585) 292-2108 or klowe5@monroecc.edu OR Melissa Fingar, Esq., Assistant Title IX Coordinator, (585) 292-2117 or mfingar@monroecc.edu.

## ACADEMIC HONESTY

[See The Student Handbook for details. https://www.monroecc.edu/etsdbs/MCCatPub.nsf/Online%20Catalog%20by%20Title/academic-honesty?OpenDocument]

1.8 Statement on Academic Honesty

In the academic process, it is generally assumed that intellectual honesty and integrity are basic responsibilities of the student. However, faculty members should accept their correlative responsibility to regulate academic work and to conduct examination procedures in such a manner as not to invite violations of academic honesty. Such violations consist mainly of cheating and plagiarism.

1.8.1 Definition (2011)

**Cheating** is defined as the unauthorized use or exchange of information by students or others for the purpose of achieving unfair advantage in the classroom or assessment process.

**Plagiarism** is using someone else’s work as if it were one’s own, whether or not it is done intentionally. This includes, but is not limited to: using the exact language, using nearly the exact language, and using ideas without showing they originated in another’s work. The work taken from another person or source (including publications, web sites, speeches, etc.) may be as little as an isolated formula, portions of a speech, a simple sentence, an idea, or as much as entire paragraphs, papers, or writings of professionals or other students; however, well-known, common knowledge is generally an exception. Omitting quotation marks when using language copied from another’s work, failing to use citations for ideas or language taken from other authors, or failing to use one’s own style of writing when summarizing and paraphrasing someone else’s work constitute plagiarism. Any form of plagiarism is essentially an act of cheating. Specific concerns should be directed to your professor.

The academic honesty policy pertains to all instructional delivery methods offered at the College, including but not limited to classroom and online instruction, and self-study.

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| Date | Lab topic | Lecture topic | Noteworthy events |
| 27-May | MEMORIAL DAY | MEMORIAL DAY | MEMORIAL DAY |
| 28-May |   | 11. Intermolecular Forces/Solutions |   |
| 29-May | Lab#0 - Sig fig review Lab#1 Concentration |   |   |
| 30-May |   | 12. Kinetics |   |
| 3-Jun | 2. Freezing Pt Depression |   | Lab #0 and Lab #1 due |
| 4-Jun |   |  | HW #1 due & Sprint 1 quiz |
| 5-Jun | 3a. Iodine Clock |   |   |
| 6-Jun |   | 12. Kinetics |   |
| 10-Jun | 3b. Iodine Clock (T dependence) |   | Lab #2 due |
| 11-Jun |   | 13. Equilibrium | HW #2 due & Sprint 2 quiz |
| 12-Jun | 5a Equilibrium I |   | Lab #3a due |
| 13-Jun |   | 13. Equilibrium cont'd | Test #1 on Chapter 11, 12 |
| 17-Jun | 5b Equilibrium II |   | Lab #3b due |
| 18-Jun |   | 14. Acid-Base Equilibria | HW #3 due & Sprint 3 quiz |
| 19-Jun | 6. Acid-Base Titration |   | Lab #5a, 5b due |
| 20-Jun |   | 15. Ionic Equilibria |   |
| 24-Jun | 8. Acids, Bases and Buffers |   |   |
| 25-Jun |   | catch-up | Test #2 on Chapter 13, 14, part 15 |
| 26-Jun | 9. Titration curves |   | Lab #6 due |
| 28-Jun |   | 16. Thermodynamics |   |
| 1-Jul | 10. Solubility of Ag2CrO4 |   | Lab #8 due |
| 2-Jul |   | 17. Electrochemistry | HW #4 due & Sprint 5 quiz |
| 3-Jul | 10. Solubility of Ag2CrO4 |   | Lab #9 due |
| 4-Jul | 4th of July | 4th of July | 4th of July |
| 8-Jul | 13. Oxidation Reduction Reactions. |  |   |
|  | 14. Electrochemical cells |  | Test #3 on Chapter 15, 16, part 17 |
| 9-Jul |  | 17. Electrochemistry | Lab #10 due |
| 10-Jul | Review | Review | Sprint 6 Quiz |
| 11-Jul | CUMULATIVE Final Exam - Chem I and Chem II | Lab #13 & #14 due |

**What is a “Scrum”?**

A “scrum” is an iterative development method used in software engineering. [Yes, the term is borrowed from rugby.] The Project Owner has a task he needs done, so he puts together a development team. The development team breaks up the task into “Sprints”, usually of 1 or 2 weeks in duration. Each Sprint has defined goals. At the end of each Sprint, the team evaluates the progress made, identifies any hurdles encountered, and then reassesses both the goals and the method for the next Sprint and reports back to the Project Owner.

**We’re developing software?**

No, we’re not. But the basic methodology can also be used to manage any project. And there’s no reason why “learn Chem II” can be considered a project.

**What’s the advantage of this approach?**

There are four main advantages of this approach when applied to the classroom:

1. Communication – Each Sprint ends with a conversation between you (the developer) and me (the Project Owner). As a result, we will have frequent discussions about your progress and any gaps.
2. Ownership – You get to own your own education. You make the plan. You decide what you need. You set the pace.
3. Individualization – Since you own the process, you can individualize the process.
4. Self-correcting – You can learn what works best and refine your process as the semester unfolds.

**Okay, I’m sold. What’s the downside?**

The downside is the same as the upside. You have to be willing to communicate with me. You own the process, so that puts a lot more responsibility on you for your own education. And, most importantly, it is only self-correcting, if you are willing to try and correct as you go. You have to be willing to be honest with yourself, and possibly with me, about what your gaps are and what bad strategies you have tried.

But, the bigger upside is that it can really change the way you think about your education and how you approach your education – in ALL your courses. The end of Sprint reflections have a metacognitive portion which is actually asking you to think about thinking. You should come out of the process not only with a better understanding of chemistry but also with a better understanding of how YOU learn.