

C1152-02: Principles of Chemistry 2 (Hybrid)

Fall Semester, 2017

Kirk Boraas instructor

v.8.14.2017



Contact Information:

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- Office Hours: Available on the course website (subject to change)

WARNING

***This hybrid course requires ON CAMPUS Exams and Laboratories.
If you are taking this course because you believe it to be entirely on-line, you should withdraw.***

Principles of Chemistry 2 might be the most difficult course you've taken so far in your college career. New terminology, abstract concepts and mathematical problem solving all contribute to a demanding course that requires a lot of time spent studying and working problems outside of class. I've selected a very good textbook, created narrated lectures and utilized on-line resources to give you the best chance at mastering the material.

However, you must be able to devote yourself to this course and you must be reasonable about your responsibilities. If you work and have a family, this one course could be too much to manage.

*20 hours per week is the minimum you should spend studying and working problems in this class.
Typically, students who do well devote at least this much time to Principles of Chemistry 2.*

Use the table below to determine what course load is realistic for you. Courses with required laboratories like this one will require even more work outside of class.

Working (Full Time)	Working (part time)	Family	Recommended Number of Course(s)
Yes	No	Yes	1 (very challenging)
Yes	No	No	1
No	Yes	Yes	1
No	Yes	No	2
No	No	Yes	2
No	No	No	3 (full time student)

Week 1 Quick Start:

Here's what you must do the **first week** of class. Details are available in this syllabus below.

- Print out this syllabus and mark your calendars with important exam dates.
- Acquire a textbook and begin reading chapter 12. (Note that any edition, 1st, 2nd or 3rd is acceptable)
- Purchase and enroll in Mastering Chemistry.
You will not have to re-purchase MC if you have an active subscription from your Principles of Chemistry 1 course. However, you will have to re-connect with this course using the course name (C1152-02 Fall 2017) and course ID (MCBORAAS20960).
 - You MUST select the **Principles of Chemistry: A Molecular Approach 3rd edition** when setting up your account.
Do NOT select Chemistry: A Molecular Approach
 - Begin working Chapter 12 problems
- Visit the course website: http://www.mctcteach.org/chemistry/C1152/C1152_Hybrid/
 - View Chapter 12 video lectures (These are narrated...be sure you can hear the instructor's voice)
 - Note Quiz deadlines and begin taking the appropriate D2L quizzes
- Attend lab... Yes, lab meets the first week of class and there will be a quiz.
Visit the lab handout web page (<http://www.mctcteach.org/chemistry/C1152/index.htm>), study the week 1 materials and prepare your laboratory notebook.

Course Description

The Chem 1152 course is the second part of a two semester sequence designed to give students a broad introduction to the field of chemistry. It involves both lecture and required laboratory sessions. Students are expected to be knowledgeable in the topics covered by C1151, C1020 or their equivalents (see additional prerequisites below). *The pace WILL be fast and challenging.*

Prerequisites

You need to have successfully completed Chem 1151, Chem 1020, Math 0080, Read 0200 and English 0900 or the equivalent of these courses **with good grades**. More math is better. It is your responsibility to have met the course prerequisites at the beginning of the semester.

Textbook and Materials:

- Chemistry: Principles of Chemistry: A Molecular Approach, 3rd edition Nivaldo Tro.
- Scientific Calculator only. (phones and laptop computers will not be permitted during exams).
- Laboratory handouts are available on the Chemistry Student Resources page.

Important Websites:

- **Course Website (Daily announcements, lectures, videos and additional HW problems):** http://www.mctcteach.org/chemistry/C1152/C1152_Hybrid/
- **Mastering Chemistry (Required online homework):** <http://www.masteringchemistry.com>
- **D2L (online quizzes, exams and discussion forum):** <http://minneapolis.ims.mnscu.edu/>
- **Lab Manual (laboratory handouts and instructions):** <http://www.mctcteach.org/chemistry/C1152/>

Lecture:

- The online/hybrid (sec 02) and traditional lecture (section 01) courses utilize completely different instructional formats and testing schedules and are not compatible. It is not possible to transfer between these sections once the semester is underway.
- Daily announcements/discussion will appear on the course website. You are responsible for checking the course website every day.
- View/study the narrated online Lectures that are available on the course website.
- D2L Discussion board.
 - Post all chapter specific questions on the D2L discussion board.
 - Use email **ONLY** for confidential communication.

Homework and quizzes:

- Homework assignments are found on the Mastering Chemistry website (www.masteringchemistry.com)
 - If you paid for Mastering Chemistry previously for Principles 1, you should not have to pay again. Subscriptions are typically 2 years in length.
 - You must register on the **Mastering Chemistry** website during the first week of class (cost ~ \$60). Authorizations can be purchased online using your credit card or are available for sale at the college bookstore.
 - Course title: **C1152-02 Fall 2017** Course ID: **MCBORAAS20960**
 - Assignments must be completed before they expire (No exceptions).
 - Mastering Chemistry enrollment closes at the end of the 3rd week.
- Required quizzes are made available on the D2L website. Late quizzes are not permitted.

Laboratory:

- You must be registered for one of the C1152 laboratory sessions.
- Lab meets the first week of class. Come prepared having studied the lab handout and assembled your lab notebook. There will be a quiz.
- **Not performing more than 3 laboratory experiments will result in you automatically being dropped from the class**
- Attending a different laboratory session requires 1 week prior approval of all instructors involved.
- The lowest laboratory report and quiz grades are dropped when calculating grades throughout the semester.

Student Responsibilities

- You are responsible for all of the information, requirements and procedures described in this syllabus. Read it carefully.
- Not every topic assigned on the syllabus can be covered in detail. Use your textbook in these situations to become familiar with the material. Any topic assigned on the syllabus may appear on an exam.
- Your online activity is monitored and is very important. It is your responsibility to be aware of all course announcements.
- You are responsible for all announcements and materials presented in class regardless of whether the topic appears in the text or syllabus.
- You are responsible for all assignments, handouts and announcements including schedule or homework changes.
- You are responsible for knowing and obeying the Student Code of Conduct as established by MCTC.
- Academic dishonesty (including but not limited to plagiarism and cheating) is absolutely prohibited on any assigned work, including: homework, exams, quizzes, and lab reports.
- First-time violations of the Student Code of Conduct will be reported on the Student Misconduct Form and, if the misconduct involves homework or an exam, a zero will be assigned for the work in question. Appropriate sanctions will be imposed for second-time violations, and a grade of "F" will be assigned for the entire course.
- Cell phones, music, pagers, etc. are to be **TURNED OFF** during exams and laboratories.

Study Hints

- **Prioritize:**
 1. **Work a lot of homework problems. Practice = proficiency and confidence.**
Working the same problem more than once helps you see patterns and sharpens your skills.
Work the text book's end of chapter problems for even more practice.
Additional daily practice problems and answers are available on the course website.
 2. View the online notes & lectures (Provide a flash drive and I'll give you a copy of the online video lectures).
 3. Previous exams are available on the course website. Work them out and check your answers against the posted solutions.
 4. Read the textbook to fill in the details
- Spend time studying and working problems outside of class: **minimum 20 hours/week**
- Organize a study group. (Look for groups on the D2L discussion board)
- Check the discussion board for other student questions and answers.
- Talk to the instructor whenever you can. (During lab and office hours).
- Enlist the free tutoring services of the Learning Center.
- Follow the schedule and be aware of changes.
- Use flashcards to assist memorization.

Special Needs

If you need an accommodation to make it possible for you to succeed in the lecture and/or laboratory section of this course (such as, but not limited to, wheelchair access or a sign language interpreter), please contact the Office for Students with Disabilities: (612-659-6730 or 612-659-6731 (TTY), T223).

If you qualify for special quiz and testing accommodations through the Accessibility Resource Center, you must make these arrangements at least two weeks in advance. You must take quizzes and exams the same day as the rest of the class. Failure to make advanced arrangements means you will take quizzes/exams at the times and locations listed on the course schedule and webpage with the rest of the class. It is recommended that you make arrangements as soon as possible to guarantee testing rooms are available.

Religious Accommodations

Minneapolis Community and Technical College is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Students' sincerely held religious beliefs shall be reasonably accommodated with respect to scheduling and other academic requirements for this course. *Students requesting academic accommodations due to religious beliefs must notify the instructor of such requests in writing or by email by the end of the second full week of classes.* If a student fails to notify the instructor accordingly, then there is no obligation on the part of the Chemistry Department or its staff to accommodate the student in any manner.

Grading:

Grade Cutoffs:

Online Exam #1	10%	A > 90%
On-Campus Exam #2 (Ch. 12 – 15)	25%	B > 80%
Online Exam #3	10%	C > 70%
On-Campus Exam #4 (Ch. 16 – 20)	25%	D > 60%
Homework and D2L quizzes	10%	F < 60%
Laboratory	20%	
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Total	100%	

- **Exam Times and Dates:** Exams 1 & 3 are available on two different consecutive days (check the course schedule for details). You are responsible for taking only one version of each exam. If both exam versions are attempted, a zero grade is awarded for the exam. The mid-semester and final exams are available only once on the days and times indicated on the course schedule. Exam questions are designed to test your knowledge and confidence and will not be reproductions of homework or quiz problems.
- **Final Exam:** The Final Exam is optional and you can take it to improve your grade. If taken, the final exam score can be substituted for either Exam #2 or #4 (whichever is lower). There is no penalty for taking the final exam.
- **Makeup Exams: There are no makeup exams.** All exams are to be taken at the scheduled dates and times (this includes the Final) Mark your calendars now. See calendar below for details.
- **Homework** (Mastering Chemistry) and regular D2L quizzes will contribute 10% to the total course grade.
- **Posted Grades:** Coded grades will be posted periodically on the course website as an Excel spreadsheet. The standard D2L grade book *will not be used.*
- **Last Date of Attendance.** Your attendance in this class is monitored. Failure to attend class regularly or missing more than 3 laboratory experiments will result in you being dropped from the class.
- **Incompletes:** Incompletes are very rarely granted. A signed contract is required and coursework must be completed during the first week of the next semester. Failure to do so results in the "I" automatically turning into an "F".
- **Extra Credit:** There is no extra credit available for this course.

Laboratory



Week 1: Laboratory meets the first week of class. To properly prepare for the first lab you should:

- Study the Week 1 lab materials (<http://www.mctcteach.org/chemistry/C1152/index.htm>)
- Prepare your BOUND lab notebook (Example at right) before coming to the first lab.



Lab Meeting Times (Room S-2300)

Thursday	Section 31	Erbs	11:15 AM – 1:45 PM
Wednesday	Section 32	Erbs	2:30 PM – 5:00 PM
Wednesday	Section 41	Boraas	5:30 PM – 8:00 PM

Missed Labs

- Missed labs cannot be made up.
- For legitimate reasons it may be possible to attend another lab session that same week IF THERE IS ROOM (Maximum occupancy: 18 students/lab).
- You can only attend a different lab session if advance permission (1 week) has been granted by the laboratory instructor.

Tentative C1152-02 Schedule (Subject to change. Refer to blog for details):

	Laboratory	Textbook	Important Dates
Week 1 (M 8/21 – 8/25 F)	Introductions and Required Lab Safety	Chapter 12: Solutions	8/25 (F) Last day to drop or add
Week 2 (M 8/28 – 9/1 F)	L1: Freezing Point Depression	Chapter 12: Solutions	
Week 3 (M 9/4 – 9/8 F)	L2: Determination of Reaction Rates	Chapter 13: Chemical Kinetics	9/4 (M) Labor Day (No Classes)
Week 4 (M 9/11 – 9/15 F)	None	Chapter 13: Chemical Kinetics	*9/13 (W) Student Success Day
Week 5 (M 9/18 – 9/22 F)	L3: Equilibrium Const. Determination	Chapter 14: Equilibrium Concepts	Online Exam #1 9/18 OR 9/19 Ch. 12 & 13 7:30 – 9:00 PM
Week 6 (M 9/25 – 9/29 F)	L4: Le Chatelier's Principle	Chapter 14: Equilibrium Concepts	
Week 7 (M 10/2 – 10/6 F)	L5: Acid Dissociation Constant	Chapter 15: Acid/Base Equilibrium	
Week 8 (M 10/9 – 10/13 F)	L6: Buffer Titrations	Chapter 15: Acid/Base Equilibrium	*
Week 9 (M 10/16 – 10/20 F)	None	Chapter 16: Ionic Equilibrium	10/19 & 10/20 Education Minnesota (No Classes) On-Campus Exam #2 Ch. 12-15 10/17 (T) 6:00 – 9:00 PM
Week 10 (M 10/23 – 10/27 F)	L7: Water Hardness	Chapter 16: Ionic Equilibrium	
Week 11 (M 10/30 – 11/3 F)	L8: Det. of H_f: Calorimeter Comp	Chapter 17: Thermodynamics	
Week 12 (M 11/6 – 11/10 F)	L9: Hypochlorite in Bleach	Chapter 17: Thermodynamics	*11/7 (T) Election Day 11/10 (F) Veteran's Day (No Classes)
Week 13 (M 11/13 – 11/17 F)	L10: REDOX Reactions	Chapter 18: Electrochemistry	Online Exam #3 11/13 or 11/14 Ch. 16 & 17 7:30 – 9:00 PM
Week 14 (M 11/20 – 11/24 F)	None	Chapter 18 Electrochemistry	11/23 – 11/26 Thanksgiving vacation (No Classes)
Week 15 (M 11/27 – 12/1 F)	L11: Faraday's Constant	Chapter 20 Organic Chemistry	
Week 16 (M 12/4 – 12/8 F)	L12: Soap Preparation	Chapter 20 Organic Chemistry	On-Campus Exam #4 Ch. 16 - 20 12/8 (F) 6:00 – 9:00 PM
Final Exams 12/11(M) – 12/15 (F)			Optional On-Campus Final Exam 12/13 (W) Ch. 12 - 20 6:00 – 9:00 PM