University of South Florida Sarasota-Manatee
CHM 2046L, Sections 521 and 522, 1 Credit Hour

General Chemistry II Lab
Spring 2015

Only those who will risk going too far can possibly find out how far one can go. ~T.S. Elliot

Instructor: Dr. K. Kenneth Caswell
E-mail: kcaswell@usf.edu

Class Meetings Time/Date in Building/Room:
Lab Section 521: 2:30-5:15/T in SMM/2004
Lab Section 522: 2:30-5:15/W in SMM/2004

Office: C236
Phone: 941-359-4611
Office Hours: After class and by appointment


PREREQUISITES: CHM 2045 and CHM 2045L or equivalents and co-enrollment in CHM 2046 is required.

COURSE DESCRIPTION: Lab component of CHM 2046.

COURSE TOPICS: This course will cover 15 labs (see schedule for topics).

COURSE OBJECTIVES: This course is designed in accordance with the following common outcomes in the STEM Academic Learning Compacts:
- Assessment occurs on lab assignments
- Ability to analyze, interpret, and draw conclusions from scientific data
- Oral and written communication skills
- Application of knowledge
- Solving real-world problems

Also, the course design, objectives, and student learning outcomes attend to the following USFSM General Education Student Learning Outcomes:
- Students will demonstrate the ability to critically examine and evaluate scientific observations, hypotheses, or model constructions and the use of the scientific method to explain the natural world. (General Education Florida, Statewide Natural Sciences Outcome #1)
- Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world. (General Education Florida, Statewide Natural Sciences Outcome #2)
- Students will apply ethical perspectives and concepts to situations and justify the implications of their applications. (USFSM Pillars of Intellectual Engagement Outcome #4)

CANVAS: This class will use Canvas (my.usf.edu) to post all course materials, including announcements, media, and grades. Your successful completion of this course requires that you check Canvas regularly for updates. Information on how to use Canvas is available at http://usfsm.edu/e-learning-services/student-resources/.

COMPUTER LAPTOP USE: USFSM requires all students to have laptops to bring with them to class. Students are invited to bring their laptops to class whenever they wish (except exam days) for note taking and course-related research purposes. Any student suspected of checking Facebook or other social media, playing games, or using their computer for other non-course-related activities will lose this privilege for the remainder of the semester.

PLAGIARISM SOFTWARE: The University of South Florida has an account with an automated plagiarism detection service, Turnitin, which checks student assignments for plagiarism. Dr. Caswell reserves the right to ask students to submit their assignments to Turnitin through Canvas.

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With this software, assignments are compared automatically with a database of journal articles, web articles, and previously submitted papers. The instructor receives a report showing exactly how a student’s paper was plagiarized. Please remove your name from the body and file name of your paper and replace it with your USF ID# (e.g., U12345678 Essay 1.docx) before submitting it to Turnitin. Pursuant to the provisions of the Family Educational Rights and Privacy Act (FERPA), students are requested to use their school ID numbers to maintain their confidentiality and keep their personal contact information (i.e., name, address, telephone) from being disclosed to vendors or other outside agencies. By your submission, you agree to release your original work for review for academic purposes to Turnitin.

**GRADING, EVALUATION, AND ATTENDANCE POLICIES**

**ATTENDANCE AND CLASS PARTICIPATION:** Attendance is mandatory and is part of your class participation grade. Lab work requires that you be prepared, in the lab, and able to contribute meaningfully to an investigative relationship with lab partners. In-class group work, quizzes, discussions, and labs will assess whether students are attending, actively participating, and obtaining the requisite process skills. Thus, students must come to class prepared; preparation includes, but is not limited to, completing pre-lab reading and research investigations posted to Canvas. Class participation is essential for success. If students come to class unprepared to contribute meaningfully to the in-class group work, discussions, and labs, the instructor will make the requisite adjustment to the class participation grade. Also, as a means to assess whether students are prepared to contribute meaningfully, a quiz will be administered five minutes after the scheduled class start time. Each student will be graded on her or his individual work and active participation as part of group work/discussions. For class discussions, students are required to research, collect, and present contextually relevant sources. In-class work (e.g., quizzes, labs) cannot be made up; students may miss one lab session without their grade being negatively affected. In other words, students may drop one day of in-class participation assessments. For each additional class day missed, students’ final course grades will be reduced by one letter grade.

Pre-Lab investigations are posted on Canvas under the Files tab in the Pre-Lab Investigations folder. Students must post a completed Pre-Lab investigation to Canvas/Turnitin prior to the start of that week’s scheduled lab meeting (i.e., Pre-Lab 4 must be submitted by 2:29 p.m.). Students who come to lab without a completed Pre-Lab Investigation will not be considered prepared for, will not be allowed to participate in, and will not receive any credit for that day’s lab. There are 15 Pre-Lab Investigations, each of which is worth 12 points: 15 pre-labs × 12 points per pre-lab = 180 points. There are 15 quizzes, each worth 8 points: 15 quizzes × 8 points per quiz = 120 points. Thus students may earn a total of 300 points for their attendance and class participation grades, equivalent to 30% of the total course grade. Pre-labs must be posted to Canvas/Turnitin prior to the start of your lab meeting; you will not be permitted to attend that week’s lab without a posted pre-lab.

**LABS:** There are 14 labs. Each lab is worth 45 points: 14 labs × 45 points = 630 points. Of this total, the lab notebook accounts for 70 points (i.e., 5 of the 45 total points for each lab; 14 labs × 5 points = 70 points). You must attend each lab with and maintain the lab notebook each week. There will be random notebook checks throughout the semester. Notebooks “constructed” at the end of the semester will not be accepted and will receive zero points. In addition, the Alternative Fuel Project Presentation (Lab Manual #16) is worth 70 points; the presentations will be graded by peer review and Dr. Caswell. Students thus may earn a total of 700 points for their Lab grade, equivalent to 70% of the total course grade. Labs must be posted to Canvas/Turnitin before the start of the next scheduled lab meeting (i.e., lab 4 must be submitted prior to attending the lab 5 meeting).

**EXAMS:** There are no exams in this course.

**GRADING:** No S/U grades will be assigned in this course. An incomplete grade will be granted only when, due to circumstances beyond the control of the student, a **very small** portion of the required work remains undone, and the student is otherwise passing the course. The grading scale is as follows:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Score</th>
<th>Letter Grade</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>1000-950</td>
<td>C+</td>
<td>799.750</td>
</tr>
<tr>
<td>A</td>
<td>949-900</td>
<td>C</td>
<td>749.700</td>
</tr>
<tr>
<td>B+</td>
<td>899-850</td>
<td>D</td>
<td>699-600</td>
</tr>
<tr>
<td>B</td>
<td>849-800</td>
<td>F</td>
<td>599-0</td>
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</tbody>
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University of South Florida Sarasota-Manatee
USFSM AND USF SYSTEM POLICIES

ACADEMIC DISHONESTY: The University of South Florida considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the USFSM Catalog (http://usfsm.edu/catalog/), the USF System Academic Integrity of Students (http://usfsm.edu/catalog/academics/academic-integrity-of-students/), and the USF System Student Code of Conduct (http://usfsm.edu/catalog/academics/student-code-of-conduct/).

DISRUPTION OF ACADEMIC PROCESS POLICIES: The University of South Florida does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty; please be sure to review the university’s policy in the USFSM Catalog (http://usfsm.edu/catalog/), the USF System Academic Integrity of Students (http://usfsm.edu/catalog/academics/academic-integrity-of-students/), and the USF System Student Code of Conduct (http://usfsm.edu/catalog/academics/student-code-of-conduct/).

CONTINGENCY PLANS AND UNIVERSITY-WIDE EMERGENCY PROCEDURES: In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and e-mail messaging and/or an alternate schedule. It is the responsibility of each student to monitor the Canvas site for each class for course-specific communication, and the main USFSM and College websites, e-mails, and MoBull messages for important general information. The USF hotline at (800) 992-4231 is updated with pre-recorded information during an emergency. See the Campus Police Website (http://usfsm.edu/campus-police/) for further information.

DISABILITY ACCOMMODATION: Students are responsible for registering with the Office of Students with Disabilities Services (SDS) to receive academic accommodations. Reasonable notice must be given to the SDS office (typically five working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714 (http://usfsm.edu/disability-services/).

SEXUAL MISCONDUCT/SEXUAL HARASSMENT REPORTING: USFSM is committed to providing an environment free from sex discrimination, including sexual harassment and sexual violence (USF System Policy 0-004). The Counseling and Wellness Center is a confidential resource where you can talk about incidents of sexual harassment and gender-based crimes including sexual assault, stalking, and domestic/relationship violence. This confidential resource can help you without having to report your situation to either the Office of Student Rights and Responsibilities (OSSR) or the Office of Diversity, Inclusion, and Equal Opportunity (DIEO), unless you request that they make a report.

Please be aware that in compliance with Title IX and under the USF System Policy, educators must report incidents of sexual harassment and gender-based crimes, including sexual assault, stalking, and domestic/relationship violence. If you disclose any of these situations in class, in papers, or to me personally, I am required to report it to OSSR or DIEO for investigation. The Deputy Coordinator for USFSM is Mary Beth Wallace, AVP for Student Enrollment, Engagement and Success, 941-359-4330 or marybeth@sar.usf.edu.

Campus Resources:
Counseling and Wellness Center: 941-487-4254
Victim Advocate (24/7): 941-504-8599
Off-Campus Resources:
Hope of Manatee: 941-755-6805

Safe Place & Rape Crisis Center (SPARCC) Sarasota: 941-365-1976
First Call for Help Manatee: 941-708-6488
Sarasota & North Port: 941-366-5025
Manatee Glens: 941-782-4800

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FIRE ALARM INSTRUCTION: At the beginning of each semester, please note the emergency exit maps posed in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See Emergency Evacuation Procedures (http://usfsm.edu/facilities/safetypreparedness/).

RELIGIOUS OBSERVANCES: USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes.

WEB PORTAL INFORMATION: Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and Canvas course information via that address.

GENERAL INSTRUCTION FOR STUDENTS
• Lectures may be recorded with the instructor’s permission; however, tapes or notes for this course may NOT be sold or posted on the Internet.
• You are encouraged to share notes with fellow students, except during exams.
• Facebooking, texting, and playing of video games are NOT allowed in class.
• Academic Support Services: Information Commons provides students with individual and group study spaces, computers, printers, and various media equipment for temporary use. Information Commons is staffed with a librarian, learning support faculty, tutors, and technology and e-learning specialists. Students challenged by the rigors of academic writing, mathematics, or other course content are urged to contact their professors early in the semester to chart out a plan for academic success, and/or regularly use the tutoring services provided by the Learning Support Services, which are provided at no cost to students.
• Every student has two weeks after receiving a graded assignment to dispute the actual grade. Specific or detailed grading issues are not discussed via e-mail due to FERPA regulations. If you need to discuss a grade on an assignment, please make an appointment with your instructor to meet on campus. Prepare an explanation for why you believe there is an error before coming to this meeting. Also, make sure to bring the graded assignment with you to the meeting.

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<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>In-Class Topic Coverage and Exams</th>
<th>Homework</th>
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<tbody>
<tr>
<td>Jan 5</td>
<td>M</td>
<td>First Day of Classes Spring 2015 Semester</td>
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</tr>
<tr>
<td>Jan 6,7</td>
<td>T,W</td>
<td>Lab 1: Orientation, Safety, and Lab Notebooks</td>
<td>HW: Pre-Lab 1 Due in Class</td>
</tr>
<tr>
<td>Jan 13,14</td>
<td>T,W</td>
<td>Lab 2: Laboratory Skills and Solutions 101; introduce Alternative Fuel Project Part I (Lab Manual #16)</td>
<td>HW: Pre-Lab 2 Due in Class</td>
</tr>
<tr>
<td>Jan 20,21</td>
<td>T,W</td>
<td>Lab 3: Titration</td>
<td>HW: Pre-Lab 3 Due in Class</td>
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<tr>
<td>Jan 27,28</td>
<td>T,W</td>
<td>Lab 4: Chromatography: Isolation and Characterization of Yellow Dye (Lab Manual #14)</td>
<td>HW: Pre-Lab 4 Due in Class</td>
</tr>
<tr>
<td>Feb 3,4</td>
<td>T,W</td>
<td>Lab 5: Freezing Point Depression or A Lesson in Making Ice Cream (Lab Manual #15)</td>
<td>HW: Pre-Lab 5 Due in Class</td>
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<tr>
<td>Feb 10,11</td>
<td>T,W</td>
<td>Alternative Fuel Project Presentations (Lab Manual #16)</td>
<td>HW: Pre-Lab 6 Due in Class</td>
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<tr>
<td>Feb 17,18</td>
<td>T,W</td>
<td>Lab 6: Alternative Fuel Project Part II and III (Lab Manual #16)</td>
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<tr>
<td>Feb 24,25</td>
<td>T,W</td>
<td>Lab 7: The Green Fades Away (Lab Manual #17)</td>
<td>HW: Pre-Lab 7 Due in Class</td>
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<tr>
<td>Mar 3,4</td>
<td>T,W</td>
<td>Spring Break; No Labs</td>
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<tr>
<td>Mar 10,11</td>
<td>T,W</td>
<td>Lab 8: Chemical Kinetics (Lab Manual #18)</td>
<td>HW: Pre-Lab 8 Due in Class</td>
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<tr>
<td>Mar 17,18</td>
<td>T,W</td>
<td>Lab 9: Analysis of Phosphoric Acid in Coca-Cola Classic: Spectrophotometric Analysis (Lab Manual #19)</td>
<td>HW: Pre-Lab 9 Due in Class</td>
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<tr>
<td>Mar 24,25</td>
<td>T,W</td>
<td>Lab 10: Analysis of Phosphoric Acid in Coca-Cola Classic: pH Titration (Lab Manual #20)</td>
<td>HW: Pre-Lab 10 Due in Class</td>
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<td>Mar 31,</td>
<td>T,W</td>
<td>Lab 11: Borax Solubility: Investigating the Relationship between Thermodynamics and Equilibrium (Lab Manual #21)</td>
<td>HW: Pre-Lab 11 Due in Class</td>
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<tr>
<td>Apr 1</td>
<td></td>
<td>Thermodynamics and Equilibrium (Lab Manual #21)</td>
<td></td>
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<tr>
<td>Apr 7,8</td>
<td>T,W</td>
<td>Lab 12: Electrochemical Preparation of Nickel Nanowires (Lab Manual #22)</td>
<td>HW: Pre-Lab 12 Due in Class</td>
</tr>
<tr>
<td>Apr 14,15</td>
<td>T,W</td>
<td>Lab 13: Synthesis of K₃Fe(C₂O₄)₃• 3 H₂O (Lab Manual #23)</td>
<td>HW: Pre-Lab 13 Due in Class</td>
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<tr>
<td>Apr 21,22</td>
<td>T,W</td>
<td>Lab 14: Analysis of Oxalate in K₃Fe(C₂O₄)₃• 3 H₂O (Lab Manual #24)</td>
<td>HW: Pre-Lab 14 Due in Class</td>
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