

CHEMISTRY 1002

Chemistry in our everyday life: Chemistry of Cooking

Welcome to CHE 1002:

Chemistry 1002 is an introductory chemistry class designed to teach you the basics of chemistry of cooking. It is suitable for anyone who has never taken any chemistry classes before and is a General Education requirement. Chemistry might be scary for some of you, but I would like to challenge you to work regularly, practice and ask questions in order to succeed. Some teaching methods used in this course (group and team work, learning activities) might be different than what you are used to, yet I am confident that it will improve your learning experience and you will be better prepared for your future endeavors. I am glad you are here and I look forward to helping you discover the importance of chemistry in cooking.

INSTRUCTOR

Dr. Matthieu Rouffet
Office : Rohr Science 340
Phone : 619-849-3278
Email : matthieurouffet@pointloma.edu

Office Hours:

MW 10:30 am – 12:00
pm and by appointment

TIME & LOCATION

Section 1 MWF 8:30 am – 9:25 am
Lab Friday 2:00 pm – 5:00 pm

LSCC 205 A
Evans 112



TEXTBOOK & SUPPLIES

- Science of Cooking. Understanding the Biology and Chemistry Behind Food and Cooking. ISBN: 978-1-118-67420-8
Required.

PLNU MISSION

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE GOALS and LEARNING OUTCOMES

At the end of the course you will be able to:

- Design and conduct an investigation based on the scientific method.
- Analyze observable facts and numerical data to arrive at an evidence-based conclusion.
- Apply knowledge of fundamental chemistry/biochemistry principles to food and cooking examples.
- Identify and use appropriate and sufficient scientific evidence to evaluate claims and explanations about the natural and designed world in the context of food and cooking.

GENERAL EDUCATION LEARNING OUTCOMES

- GELO 1d will be assessed directly using questions on the final exam

FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examination **on its scheduled day**. The final examination schedule is posted on the [Class Schedules](#) site. No requests for early examinations or alternative days will be approved.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See [Academic Policies](#) in the Undergraduate Academic Catalog.

ADMINISTRATION

- **Exams and Learning Activities:** Three (3) lecture exams, a comprehensive final exam and several learning activities will be given during the semester. Make-up exams will be arranged only if the instructor is contacted prior to the scheduled exam time and then only if you present an institutionally valid excuse.

EVALUATION

The activities described above will contribute to your total course grade according to the following:

Lecture Examinations (3)	40%
Learning Activities/homework	40%
Final Examination	20%

Letter grades will be assigned at the end of the course based on your percentage of total possible points, according to the following scale:

A- 90 – 92.9 %	A 93 – 100 %	
B- 80 – 82.9 %	B 83 – 86.9 %	B+ 87 – 89.9 %
C- 70 – 72.9 %	C 73 – 76.9 %	C+ 77 – 79.9 %
D- 60 – 62.9 %	D 63 – 66.9 %	D+ 67 – 69.9 %
F < 59.9 %		

CHEMISTRY 1002 TENTATIVE CLASS SCHEDULE

WEEK	DATE	LECTURE TOPICS	CHAPTERS	LAB
Week 1	Tue 01/14	Introduction: syllabus/ course overview/ team building	////////////////////	Friday 01/17 Lab 1: Intro to cooking (group 1)
	Wed 01/15	Ch 1: The Science of Food and Cooking: Macromolecules	1	
	Fri 01/17	Ch 1: The Science of Food and Cooking: Macromolecules	1	
Week 2	Mon 01/20	MLK day	////////////////////	Friday 01/24 Lab 1: Intro to cooking (group 2)
	Wed 01/22	Ch 1: The Science of Food and Cooking: Macromolecules	1	
	Fri 01/24	Ch 1: The Science of Food and Cooking: Macromolecules	1	
Week 3	Mon 01/27	Ch 1: The Science of Food and Cooking: Macromolecules	1 <i>Learning Activity 1 assigned</i>	Friday 01/31 Lab 1: Cheese (group 1)
	Wed 01/29	Ch 1: The Science of Food and Cooking: Macromolecules	1	
	Fri 01/31	Ch 1: The Science of Food and Cooking: Macromolecules	1	
Week 4	Mon 02/03	Ch 1: The Science of Food and Cooking: Macromolecules	1 <i>Learning Activity 2 due</i>	Friday 02/07 Lab 2: Cheese (group 2)
	Wed 02/05	Ch 1: The Science of Food and Cooking: Macromolecules	1	
	Fri 02/07	Ch 1: The Science of Food and Cooking: Macromolecules	1	
Week 5	Mon 02/10	Ch 1: The Science of Food and Cooking: Macromolecules	1	Friday 02/14 Lab 2: Caramel (group 2)
	Wed 02/12	Ch 1: The Science of Food and Cooking: Macromolecules	1	
	Fri 02/14	Ch 1: The Science of Food and Cooking: Macromolecules/ Review session	1	
Week 6	Mon 02/17	EXAM 1 (Chapters 1)	////////////////////	Friday 02/21 Lab 3: Caramel (group 1)
	Wed 02/19	Ch 3: Milk and Ice Cream	3	
	Fri 02/21	Ch 3: Milk and Ice Cream	3	
Week 7	Mon 02/24	Ch 3: Milk and Ice Cream	3	Friday 02/28 Lab 3: Ice Cream (group 1)
	Wed 02/26	Ch 3: Milk and Ice Cream	5	
	Fri 02/28	Ch 5: Cheese, Yogurt and Sour Cream	5	
Week 8	Mon 03/02	Ch 5: Cheese, Yogurt and Sour Cream	5	Friday 03/06 Lab 4: Ice Cream (group 2)
	Wed 03/04	Ch 5: Cheese, Yogurt and Sour Cream	5	
	Fri 03/06	Ch 5: Cheese, Yogurt and Sour Cream	5	

Week 9	03/09 – 03/13	Spring Break	////////////////////////////////////	SPRING BREAK
Week 10	Mon 03/16	Ch 6: Browning	6 <i>Learning Activity 2 assigned</i>	Friday 03/20 Lab 5: Browning (group 1)
	Wed 03/18	Ch 6: Browning	6	
	Fri 03/20	Ch 6: Browning	6	
Week 11	Mon 03/23	Ch 6: Browning/ Review session	6 <i>Learning Activity 2 due</i>	Friday 03/27 Lab 5: Browning (group 2)
	Wed 03/25	EXAM 2 (Chapters 3, 5, 6)	////////////////////////////////////	
	Fri 03/27	Ch 8: Meat and Fish	8	
Week 12	Mon 03/30	Ch 8: Meat and Fish	8	Friday 04/03 Lab 6: Meat lab (group 1)
	Wed 04/01	Ch 8: Meat and Fish	8	
	Fri 04/03	Ch 8: Meat and Fish	8	
Week 13	Mon 04/06	Ch 9: Eggs, Custard and Foam	9 <i>Learning Activity 3 assigned</i>	Friday 04/10 Lab 6: Meat Lab (group 2)
	Wed 04/08	Ch 9: Eggs, Custard and Foam	9	
	Fri 04/10	Ch 9: Eggs, Custard and Foam	9	
Week 14	Mon 04/13	Ch 9: Eggs, Custard and Foam	9 <i>Learning Activity 3 due</i>	EASTER No Lab
	Wed 04/15	Ch 10: Bread, Cakes and Pastry	10	
	Fri 04/17	Easter Recess	////////////////////////////////////	
Week 15	Mon 04/20	Easter Recess	////////////////////////////////////	Friday 04/25 Lab 7; Eggs Lab (group 1)
	Wed 04/22	Ch 10: Bread, Cakes and Pastry	10	
	Fri 04/25	Ch 10: Bread, Cakes and Pastry	////////////////////////////////////	
Week 16	Monday 04/27	EXAM 3 (Chapters 8, 9, 10)	////////////////////////////////////	Friday 05/01 Lab 7; Eggs Lab (group 2)
	Wed 04/29	Ch 12: Alcohol	12	
	Fri 05/01	Review session	13	
	05/04 – 05/08	Final exam		No Lab