Course Syllabus

Jump to Today 📎 Edit

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 CHEMISTRY 1003

 MAZARENE UNIVERSITY
 General, Organic and Biological Chemistry

 Value
 Hunits (plus 1 unit CHE1003L corequisite laboratory)

Course info			
Meeting days: MWF	Instructor title and name: Dr. Katherine Maloney, Professor of Chemistry		
Meeting times: 8:30-9:35 am (Section 2); 11:00 am -12:05 pm (Section 3)	Phone: 619-849-3425		
Meeting location: Latter 2	Email: <u>kmaloney@pointloma.edu</u> (mailto:kmaloney@pointloma.edu)		
Final Exam: 4:30 - 7 pm on Monday, December 13th	Office hours: TF 1-2:30pm, or by appointment via <u>Zoom</u> (https://pointloma.zoom.us/j/3709958838)		

PLNU Mission

To Teach ~ To Shape by~ 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 is an expression of

faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Foundational Explorations Mission

PLNU provides a foundational course of study in the liberal arts informed by the life, death, and resurrection of Jesus Christ. In keeping with the Wesleyan tradition, the curriculum equips students with a broad range of knowledge and skills within and across disciplines to enrich major study, lifelong learning, and vocational service as Christ-like participants in the world's diverse societies and culture.

COURSE DESCRIPTION

From the PLNU Catalog: Examination of those aspects of inorganic and organic chemistry that are pertinent to biology and chemistry. Examines the structures and metabolic reactions of biomolecules. Provides a background for nursing, family and consumer sciences and physical education majors. (Meets a general education requirement; does not count toward any Chemistry Department majors.)

Chemistry 1003 is an introductory chemistry class suitable for anyone who has never taken any chemistry classes before.

COURSE LEARNING OUTCOMES

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

- 1. Speak fluently in the language of chemistry, describing the composition of matter at multiple levels: from the macroscopic to the atomic level.
- 2. Predict the properties of atoms, molecules, ions and molecular compounds, on the basis of structure.
- 3. Write balanced equations to describe common types of chemical transformations, including acidbase reactions.
- 4. Identify the main organic functional groups, and explain how intermolecular forces influence their properties.
- 5. Identify major classes of biological molecules, and describe how their chemical structure facilitates their biological function.

FOUNDATIONAL EXPLORATIONS LEARNING OUTCOMES

The following Foundational Explorations Learning Outcome (FELO) will be assessed in this class:

FELO 1e: Quantitative Reasoning: Students will be able to solve problems that are quantitative in nature.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

<u>Fundamentals of General, Organic and Biological Chemistry</u>, by McMurry, Castellion, Ballantine, Hoeger and Peterson, Pearson, 8th Edition, **2017**. (ISBN-13: 9780134665708) *Required*

<u>Modified Mastering Chemistry</u> (Online homework platform that comes bundled with the textbook if you purchase it through the PLNU bookstore; for more information, visit <u>Course Materials.</u>) *Required*

Calculator: Texas Instruments TI-30XA or equivalent. Required

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 4 unit class delivered over 15 weeks. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework. For this course, students will spend an estimated 150 total hours meeting the course learning outcomes.

COURSE SCHEDULE AND ASSIGNMENTS

Note: This schedule is subject to change. Any substantial changes (i.e. changes to anything other than *Details* or *Readings*) will be announced on the *Announcements* page in Canvas, and modified here in the *Syllabus*. Up-to-date reading assignments will also be listed in each Week Overview.

WEEK	DAY	DETAILS	READING/NOTES
1	T 8/31	Course Introduction	• Syllabus
	W 9/1	States of matterClassification of Matter	 δ1.2 δ1.3-1.5
	F 9/3	Scientific measurementsUnit conversions & density	 δ1.6-1.9 δ1.10, 1.12
		Week 1 Assignment Due	
M 9/6 Labor Day - No class		o class	
2	W 9/8	 Solving unit conversion problems Atoms and subatomic particles 	 δ1.6-1.9, δ1.10, 1.12 δ2.1-2.2
	F 9/10	Isotopes & atomic massThe periodic table	 δ2.3 δ2.4, 2.5
Week 2 Assignm		nent Due	
3	M 9/13	 Quiz 1 Atomic structure	Chapters 1-2.3δ2.6-2.9
	W 9/15	 Ionic Compounds Covalent bonds	Chapter 3δ4.1-4.4

Course schedule

	F 9/17 *asynchronous and/or on Zoom	Drawing Lewis dot structures	 δ4.6, 4.7 	
		Week 3 Assignment Due		
4 V	M 9/20	VSEPR and molecular shapeElectronegativity and polarity	 δ4.8 δ4.9, 4.10 	
	W 9/22	Practice drawing molecules: Lewis structures and VSEPR	Chapter 4	
	F 9/24	Catch up day	TBD	
		Week 4 Assignr	ment Due	
	M 9/27	Exam 1	Chapters 1-4	
5	W 9/29	Balancing chemical equationsTypes of chemical reactions	 δ5.1, 5.2 δ5.3, 5.4 	
	E 10/1	Oxidation & reduction reactions	 δ5.5, 5.6 	
		Week 5 Assignr	ment Due	
	M 10/4	 Moles and molecular weight Solving mass-to-mass conversion problems 	 δ6.1-6.4 	
6	W 10/6	Reaction energy diagramsEquilibria	 δ7.1, 7.5, 7.6 δ7.7-7.9 	
	F 10/8	Solutions & solubilityCalculating concentration	 δ9.1-9.3 δ9.6 	
		Week 6 Assignment Due		
	M 10/11	 Quiz 2 Dilutions	Chapters 5-7δ9.7	
7	W 10/13	 Calculating concentration practice Electrolytes & Osmolarity 	 δ9.6-9.7 δ9.8, 9.10 	
	F 10/15	Acid-base reactionsEquilibrium recap & pKa	 δ10.1-10.2 δ10.3 	
		Week 7 Assignment Due		
8	M 10/18	 pH Predicting acid strength and calculating pH	 δ10.4-10.6 δ10.3-10.6 	

	W 10/20	Catch up day		
	R 10/21	Week 8 Assignment Due		
	F 10/22	Fall Break - No class		
	M 10/25	Exam 2	Chapters 5-7, 9, 10	
9	W 10/27	 Intro to Organic Chemistry: drawing organic structures Isomers 	 δ12.1-12.2, 12.4 δ12.3 	
	F 10/29	Naming alkanesIntermolecular forces	 δ12.6 δ8.2, 12.7 	
		Week 9 Assign	ment Due	
	M 11/1	Organic functional groupsNaming alkenes & alkynes	 δ12.2, flip through 13.8, 14.1, 14.5, 14.7-14.9 δ13.2-13.3 	
10	W 11/3	Isomers, part IINaming alcohols & ethers	 δ13.3 δ14.2, 14.7, 14.9 	
	F 11/5	Intermolecular forces, part IINaming aldehydes & ketones	 δ14.3, review δ8.2 δ15.2 	
		Week 10 Assignment Due		
	M 11/8	 Quiz 3 Oxidation & reduction of organic molecules 	 Chapters 12-14 δ14.4, 15.5, 15.6 	
11	W 11/10	Naming & classifying aminesAcid-base reactions of amines	 δ16.2 δ16.5, 16.6 	
	F 11/12	 Naming carboxylic acid derivatives Acid-base reactions of carboxylic acids 	 δ17.1 δ17.2 	
12	M 11/15	 Formation and hydrolysis of amides and esters Amino acids & peptides 	 δ17.3, 17.4 δ18.3-18.5 	

	W 11/17	 Protein structure Protein function, classes of enzymes 	 δ18.6-18.10 δ18.2, 19.1-19.4 	
	E 11/10	Catch up day	TBD	
		Week 12 Assignment Due		
13	M 11/22	Exam 3	Chapters 12-19	
15	W 11/24 - F 11/26	Thanksgiving Break - No class		
	M 11/29	Chirality & Fischer projectionsIsomers, part III	 δ14.10, 20.2 δ14.10 	
14	W 12/1	Classifying sugarsBiologically important sugars	 δ20.1-20.3 δ20.4, 20.6, 20.7 	
	F 12/3	Types of lipidsMembranes	 δ23.1-23.3, 23.5, 23.6 δ23.7 	
		Week 14 Assignment Due		
	M 12/6	 Quiz 4 Reactions of lipids	 Chapters 20, 23 δ23.4 	
15	W 12/8	Nucleic acidsThe Central Dogma	 δ26.1-26.3 δ26.4 	
	F 12/10	Catch up Day / Exam review		
		Week 15 Assignment Due		
4:30 - 7 pm, Monday, December 13th		Comprehensive Final Exam		

*Online discussions have two due dates. Your first original post is due by Monday at midnight. You should also respond to at least three other students' posts by Wednesday at midnight.

ASSESSMENT AND GRADING

EdPuzzle Videos - Short lecture videos may be provided to introduce the day's topic. The videos will be *based on that day's reading assignment* (which you can find in that week's Overview) and <u>will cover</u> <u>new material</u>. You should complete these EdPuzzles before coming to class. EdPuzzles will be graded for *participation* and *effort*.

In-Class Problems - In-class problems may be distributed (as paper handouts), and/or projected (e.g. on a PowerPoint slide) to help solidify concepts in that day's lecture. After class, you should upload a copy of your work to Canvas to verify participation and effort.

Assignments - Problems requiring greater thought and reflection will be completed outside of class and will be due each week on Friday. Given the large class size and recognizing the need for rapid feedback, assignments will be *electronic* and provided through Modified Mastering Chemistry. If you bought a new book from the book store you already received access to Modified Mastering in your bundle; alternatively, access to Modified Mastering with the eBook can be purchased online. The Modified Mastering format allows you to check your answer in real time. Note that the interface will only accept homework submissions up to the set due time and date.

Quizzes - Periodically, on Mondays, there will be in-class quizzes in two parts. First, you will have ~10 minutes to complete the quiz on your own (for an *individual* score). Then, you'll have the opportunity to repeat the quiz in your groups (for a *group* score). Your final score will be a combination of your individual and group scores.

Exams - There will be three midterm exams (one hour each, in class) and one final (two hours). Despite focusing on recently-covered material, midterm exams are technically *cumulative* and may assume knowledge from earlier in CHE1003.

The final exam is a *comprehensive* standardized multiple choice exam published by the American Chemical Society. See the course schedule for exam dates.

Makeup examinations will be given only for excused absences. In such cases, appropriate documentation must be provided within two working days of the end of the excused absence.

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

Grade distribution		
EdPuzzle Videos & Participation	10%	
Online homework (Mastering Chemistry)	15%	
Quizzes (individual + group)	25%	
Midterm exams	30%	
Final exam (ACS standardized exam)	20%	

Student grades will be posted in the Canvas grade book throughout the course. Letter grades will be assigned at the end of the course based on your percentage of total possible points, according to the following scale:

Grade scale				
Α	В	С	D	F
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F Less than 59
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on <u>State Authorization</u> (https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures) to view which states allow online (distance education) outside of California.

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

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 <u>Academic Policies</u> (http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278) 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 (mailto: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 class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the instructor will issue a written warning of 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 <u>Academic Policies</u> <u>(https://catalog.pointloma.edu/content.php?</u> <u>catoid=46&navoid=2650#Class_Attendance)</u> in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

FOOD PANTRY & housing

Any student who has *difficulty affording groceries or accessing sufficient food to eat every day*, or who lacks a safe and stable place to live and believes this may affect their performance in the course is urged to <u>contact the Dean of Students</u> <u>(https://www.pointloma.edu/offices/residential-life-housing/contact-us)</u>, Dr. Jake Gilbertson, for support. Furthermore, please note that PLNU's on-campus food pantry ("Loma Shares") helps provide food insecure students with weekly food assistance. Loma Shares currently operates Mondays from 11-2pm and Tuesdays from 3-6pm in front of the Arc. Students are welcome to swipe in once a week, with no questions asked, as the PLNU community is working to destigmatize the shame that is often associated with food insecurity. For more information on Loma Shares, please contact Resident Director Jong Yoon (jyoon@pointloma.edu (mailto:jyoon@pointloma.edu)). Finally, if you struggle with food insecurity or unstable housing, please

(mailto:jyoon@pointioma.edu)). Finally, if you struggle with food insecurity or unstable housing, please let me know if you are comfortable in doing so. This will enable me to better understand the hardships you are navigating and to help connect you to available resources.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith. If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the <u>Office of Spiritual</u>
<u>Development</u> (https://www.pointloma.edu/offices/spiritual-development)

USE OF TECHNOLOGY

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the <u>Technology and System Requirements</u>. (https://help.pointloma.edu/TDClient/1808/Portal/KB/ArticleDet?ID=108349) information. Additionally, students are required to have headphone speakers compatible with their computer available to use. If a student is in need of technological resources please contact <u>student-tech-request@pointloma.edu</u> (mailto:student-tech-request@pointloma.edu).

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

ASSIGNMENTS AT-A-GLANCE

The table below lists our assignments and their due dates. Click on any assignment to review it.

Course Summary:

Date	Details	Due
Tue Aug 31, 2021	Week 1 Monday class (https://canvas.pointloma.edu/courses/57176/assignments/684	due by 11:59pm <u>116)</u>
	Week 1 Video 1: Classification of Matter (https://canvas.pointloma.edu/courses/57176/assignments/683 (Section 2-CHE1003)	due by 8:30am <u>187)</u>
Wed Sep 1, 2021	Week 1 Video 1: Classification of Matter (https://canvas.pointloma.edu/courses/57176/assignments/683 (Section 3-CHE1003)	due by 11am <u>187)</u>
	Week 1 Wednesday class (https://canvas.pointloma.edu/courses/57176/assignments/684	due by 11:59pm 117)
Fri Sep 3, 2021	Week 1 Video 2: Scientific Measurements (https://canvas.pointloma.edu/courses/57176/assignments/683) (Section 2-CHE1003)	due by 8:30am <u>216)</u>
	Week 1 Video 2: Scientific Measurements (https://canvas.pointloma.edu/courses/57176/assignments/683 (Section 3-CHE1003)	due by 11am 216)

Date	Details	Due
	<u>Week 1 Assignment</u> (https://canvas.pointloma.edu/courses/57176/assignments/68	due by 11:59pm <u>3185)</u>
	Week 1 Friday class (https://canvas.pointloma.edu/courses/57176/assignments/68-)	due by 11:59pm <u>4118)</u>
	Week 2 Video 1: Atoms and subatomic particles (https://canvas.pointloma.edu/courses/57176/assignments/68 (Section 2-CHE1003)	due by 8:30am <u>3218)</u>
Wed Sep 8, 2021	Week 2 Video 1: Atoms and subatomic particles (https://canvas.pointloma.edu/courses/57176/assignments/68: (Section 3-CHE1003)	due by 11am <u>3218)</u>
	Week 2 Wednesday class (https://canvas.pointloma.edu/courses/57176/assignments/70)	due by 11:59pm <u>5167)</u>
	Week 2 Video 2: Atomic & isotopic mass (https://canvas.pointloma.edu/courses/57176/assignments/68: (Section 2-CHE1003)	due by 8:30am <u>3219)</u>
Fri Sep 10, 2021	Week 2 Video 2: Atomic & isotopic mass (https://canvas.pointloma.edu/courses/57176/assignments/68: (Section 3-CHE1003)	due by 11am <u>3219)</u>
	Week 2 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/68	due by 11:59pm <u>3214)</u>
	<u>Week 2 Friday class</u> (https://canvas.pointloma.edu/courses/57176/assignments/70	due by 11:59pm <u>5168)</u>
Fri Sep 17, 2021	Week 3 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/68	due by 11:59pm <u>3220)</u>
Thu Sep 23, 2021	Week 4 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/68)	due by 11:59pm <u>3225)</u>
Fri Oct 1, 2021	<u> Week 5 Assignment</u> <u> (https://canvas.pointloma.edu/courses/57176/assignments/68: </u>	due by 11:59pm <u>3230)</u>

Date	Details	Due
Fri Oct 8, 2021	Week 6 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm <u>(36)</u>
Fri Oct 15, 2021	Week 7 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm (42)
Thu Oct 21, 2021	Week 8 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm <u>47)</u>
Fri Oct 29, 2021	Week 9 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm <u>51)</u>
Fri Nov 5, 2021	Week 10 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6831	due by 11:59pm 88)
Fri Nov 12, 2021	Week 11 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6831	due by 11:59pm <u>92)</u>
Thu Nov 18, 2021	Week 12 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6831	due by 11:59pm <u>97)</u>
Tue Nov 23, 2021	Week 13 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm <u>(01)</u>
Fri Dec 3, 2021	Week 14 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm (06)
Fri Dec 10, 2021	Week 15 Assignment (https://canvas.pointloma.edu/courses/57176/assignments/6832	due by 11:59pm (11)
Mon Dec 13, 2021	Final Exam (https://canvas.pointloma.edu/courses/57176/assignments/6831	due by 7pm
	Exam 1 (https://canvas.pointloma.edu/courses/57176/assignments/6831	1 <u>80)</u>
	Exam 2 (https://canvas.pointloma.edu/courses/57176/assignments/6831	1 <u>81)</u>
	Exam 3 (https://canvas.pointloma.edu/courses/57176/assignments/6831	<u> 82)</u>

Quiz 1 - group

(https://canvas.pointloma.edu/courses/57176/assignments/705795)

Quiz 1 - independent
 (https://canvas.pointloma.edu/courses/57176/assignments/683215)

Week 10 | Video 1: Amines, part 1 (https://canvas.pointloma.edu/courses/57176/assignments/683189)

Week 10 | Video 2: Amines, part 2 (https://canvas.pointloma.edu/courses/57176/assignments/683190)

Week 10 | Video 3: Aldehydes
 & ketones
 (https://canvas.pointloma.edu/courses/57176/assignments/683191)

Week 11 | Video 1: Carboxylic acid derivatives, part 1 (https://canvas.pointloma.edu/courses/57176/assignments/683194)

Week 11 | Video 2: Carboxylic acid derivatives, part 2 (https://canvas.pointloma.edu/courses/57176/assignments/683195)

Week 11 | Video 3: Reactions
 of carboxylic acid derivatives
 (https://canvas.pointloma.edu/courses/57176/assignments/683196)

Week 12 | Video 1: Amino
 acids & peptides
 (https://canvas.pointloma.edu/courses/57176/assignments/683198)

Week 12 | Video 2: Chirality (https://canvas.pointloma.edu/courses/57176/assignments/683199)

Week 12 | Video 3: Protein
 structure
 (https://canvas.pointloma.edu/courses/57176/assignments/683200)

Details

Due

 Week 13 | Video 1:

 Introduction to Carbohydrates

 (https://canvas.pointloma.edu/courses/57176/assignments/683202)

 Week 13 | Video 2: Drawing

 sugars, part 1

 (https://canvas.pointloma.edu/courses/57176/assignments/683203)

Week 13 | Video 3: Drawing sugars, part 2 (https://canvas.pointloma.edu/courses/57176/assignments/683204)

Week 13 | Video 4: Biologically
 important sugars
 (https://canvas.pointloma.edu/courses/57176/assignments/683205)

Week 14 | Video 1: Intro to lipids, part 1 (https://canvas.pointloma.edu/courses/57176/assignments/683208)

Week 14 | Video 2: Intro to <u>lipids, part 2</u> (https://canvas.pointloma.edu/courses/57176/assignments/683209)

Week 14 | Video 3: Reactions
 of lipids
 (https://canvas.pointloma.edu/courses/57176/assignments/683210)

 <u>Week 15 | Video 1: Nucleic</u> <u>acids</u> (<u>https://canvas.pointloma.edu/courses/57176/assignments/683212)</u>

Week 15 | Video 2: The Central
 Dogma
 (https://canvas.pointloma.edu/courses/57176/assignments/683213)

Week 3 | Video 2: Atomic
 Structure
 (https://canvas.pointloma.edu/courses/57176/assignments/683222)

Week 3 | Video 3: Ionic
 Compounds, part 1
 (https://canvas.pointloma.edu/courses/57176/assignments/683223)

Due

 Week 3 | Video 4: Ionic

 Compounds, part 2

 (https://canvas.pointloma.edu/courses/57176/assignments/683224)

Week 4 | Video 1: Covalent
 Bonds
 (https://canvas.pointloma.edu/courses/57176/assignments/683226)

Week 4 | Video 2: Drawing Lewis Dot Structures (https://canvas.pointloma.edu/courses/57176/assignments/683227)

 Week 4 | Video 3: VSEPR and molecular shape (https://canvas.pointloma.edu/courses/57176/assignments/683228)

Week 4 | Video 4: Electronegativity and Polarity (https://canvas.pointloma.edu/courses/57176/assignments/683229)

Week 5 | Video 1: Balancing
 <u>Chemical Equations</u>
 (https://canvas.pointloma.edu/courses/57176/assignments/683231)

Week 5 | Video 2: Moles and Molecular Weight, part 1 (https://canvas.pointloma.edu/courses/57176/assignments/683232)

Week 5 | Video 3: Moles and Molecular Weight, part 2 (https://canvas.pointloma.edu/courses/57176/assignments/683233)

Week 5 | Video 4: Reaction
 energy diagrams
 (https://canvas.pointloma.edu/courses/57176/assignments/683234)

Week 5 | Video 5: Equilibria (https://canvas.pointloma.edu/courses/57176/assignments/683235)

Week 6 | Video 1: Intermolecular Forces (https://canvas.pointloma.edu/courses/57176/assignments/683238) Week 6 | Video 2: Solutions & solubility (https://canvas.pointloma.edu/courses/57176/assignments/683239)

Week 6 | Video 3:
 Concentration & Dilutions
 (https://canvas.pointloma.edu/courses/57176/assignments/683240)

Week 6 | Video 4: Electrolytes
 & Osmosis
 (https://canvas.pointloma.edu/courses/57176/assignments/683241)

 Week 7 | Video 1: Acid-base

 reactions

 (https://canvas.pointloma.edu/courses/57176/assignments/683243)

Week 7 | Video 2: Equilibrium
 recap & Ka
 (https://canvas.pointloma.edu/courses/57176/assignments/683244)

<u>Week 7 | Video 3: pH</u>
 (<u>https://canvas.pointloma.edu/courses/57176/assignments/683245)</u>

Week 7 | Video 4: Buffers (https://canvas.pointloma.edu/courses/57176/assignments/683246)

Week 8 | Video 1: Intro to Organic Chemistry (https://canvas.pointloma.edu/courses/57176/assignments/683248)

Week 8 | Video 2: Properties of alkanes (https://canvas.pointloma.edu/courses/57176/assignments/683249)

Week 8 | Video 3: Naming alkanes (https://canvas.pointloma.edu/courses/57176/assignments/683250)

Week 9 | Video 1: Alkenes & Alkynes, part 1 (https://canvas.pointloma.edu/courses/57176/assignments/683252)
 Week 9 | Video 2: Alkenes & alkynes, part 2

 (https://canvas.pointloma.edu/courses/57176/assignments/683253)

 Week 9 | Video 3: Alcohols &

 ethers, part 1

 (https://canvas.pointloma.edu/courses/57176/assignments/683254)

 Week 9 | Video 4: Alcohols & ethers, part 2 (https://canvas.pointloma.edu/courses/57176/assignments/683255)