SOUTHERN CALIFORNIA UNIVERSITY OF HEALTH SCIENCES
Accelerated Sciences Division

Syllabus Table of Contents

COURSE INFORMATION

Course Number (Prefix Code): CHEM110
Course Name: Introduction to Chemistry

Course Description: Introduction to Chemistry is intended for students with little to no prior knowledge of chemistry. It provides students with foundational knowledge for additional chemistry classes required in health sciences education. This course covers fundamental Chemistry concepts such as basic atomic theory, classification of matter, chemical equations, chemical reactions, nomenclature, the behavior of electrons, stoichiometry and molecular bonds. Introduction to Chemistry provides students with problem-solving skills necessary for success in General Chemistry classes.

Course Delivery Model(s): Online Interactive, Online

Time Requirement:

Lecture Hours per term:	15
Laboratory Hours per term:	0
Total Hours per term:	15
Course Duration (weeks):	5
Credits:	1

Credit Hour Verification: This list represents the average amount of time a student is expected to spend to successfully complete this course.

	Activity Type	**Online Hrs/wk**
Course Time	Lecture time	2
Academic Engagement	Video Lectures	0
	Supplemental Videos	1
	Adaptive Reading Assignment	2
	Homework	2
	Quizzes	1
	Study time (assessment prep)	4
	Reading (chapter readings, materials research)	3
Total	**For the course per week**	**15**
	For the term	**60**

Prerequisites & Co-requisites: none
Recommended Prerequisites or Co-requisites: MATH 111

This course may be taken again for credit the following number of times (repeatable): 5

LEARNING OUTCOMES, OBJECTIVES, & ALIGNMENT

Student/Course Learning Outcomes (SLOs)
In successfully completing this course, students will be able to:

SLOs
1. Classify matter according to element or compound, atom or ion, pure or mixture, heterogeneous or homogeneous mixture
2. Correctly name compounds to write balanced chemical reactions.
3. Use the periodic table to predict size, states of matter, metallic characteristics, subatomic structure, electronegativity, electron configurations, and ionic charges.
4. Calculate molar mass, density, solution concentration, and energy changes using correct measurements, dimensional analysis, stoichiometry, and gas laws.
5. Describe bonding as ionic or covalent, draw Lewis structures, and use VSEPR to predict simple geometric shapes.

TEXTBOOKS & MATERIALS

Required Textbook(s): Introduction to Chemistry by Richard C. Bauer. ISBN 978-1-266-52798-2.

Learning Management System: Canvas. If a student is unfamiliar with the Canvas learning management system, please visit the manuals and learning guides available in the Canvas Student Guide. It is important that students are comfortable and competent in using this system, as all course material and communication will be done via Canvas.

Navigating Canvas – the Canvas site has a large set of Canvas tutorials and videos for students.

Additional Required Materials:
Students may be required to access course-specific digital resources, software platforms, or learning tools as identified in the course schedule or Canvas course site.

Calculator Requirements (When Applicable):
Certain courses, including Mathematics, Chemistry, and Physics, require the use of a calculator.

- **Chemistry and Physics courses:** Only scientific calculators are permitted during quizzes and examinations.
- **Mathematics courses:** Scientific or graphing calculators may be permitted depending on course-specific requirements. Students must verify approved calculator types with the instructor prior to use.
- Graphing calculators are not permitted in Chemistry or Physics examinations and may be restricted in some Mathematics courses.

Provided Materials: Ebook access which includes all homework and assessments, available through the Canvas learning platform/course page.

TECHNOLOGY & EQUIPMENT REQUIREMENTS

Click here to view the SCU technology requirements

External resources: ALEKS

Browser and Computer Requirements for Canvas: This course requires that students have access to Google Chrome or Microsoft Edge.

Suggestions for completing online coursework: Save work often; this includes backing it up on multiple devices or cloud applications. When submitting final papers on the Canvas learning management system (LMS), ensure that all files have been uploaded properly. Also make sure to keep a hard copy of all papers/projects in case of an unforeseen technological failure or outage.

EVALUATION OF STUDENT LEARNING

Grading scale:

Grade	Percentage Range
A	90% - 100%
B	80% - 89.99%
C	70% - 79.99%
D	60% - 69.99%
F	<60%

Assessments:

Assessment Name	#	Weight	SLO Linkage
Participation	5	15	1-5
Homework	10	25	1-5
Adaptive Assignments	10-15	20	1-5
Quizzes	5	40	1-5
		100%	

Course Topics:

Module	Module Title	Topic	Assessment Activity	SLO
1	Atomic Structure and Properties	Chapter 1: Matter and Energy Chapter 2: Atoms, Ions and the Periodic Table	Homework Participation Module Quiz	1,2,3
2	Understanding Compounds	Chapter 3: Chemical Compounds Chapter 4: Chemical Composition	Homework Participation Module Quiz	2,3
3	Chemical Reactions and Stoichiometry	Chapter 5: Chemical Reactions and Equations Chapter 6: Quantities in Chemical Reactions	Homework Participation Module Quiz	4
4	Electron Configuration and Bonding	Chapter 7: Electron Structure of the Atom Chapter 8: Chemical Bonding	Homework Participation Module Quiz	3, 5
5	Properties of Gases, Liquids, and Solids	Chapter 9: The Gaseous State Chapter 10: The Liquid and Solid States	Homework Participation Module Quiz	1

UNIVERSITY, PROGRAM & COURSE POLICIES

University Policies

All university policies apply to this course and all others. For full policy information please consult the SCU Catalog. Additionally, program policies apply to students in each program as described in the Catalog and in SCU Health Handbook for clinical courses.

Accessibility Services and Accommodations

The Office of Student Services provides support to students with disabilities requiring accommodation in concert with the lead faculty for this course. All students are encouraged to request accommodation as far in advance of when the accommodation will be required to allow the University to process the request and provide approved accommodation. To begin the process please request a consultation with the designated Accessibility Services Officer as soon as possible. Once the Office of Student Services approves the request, the letter of accommodation will be provided to the student and lead faculty member via email. The student should be certain to follow-up with the lead faculty member to plan for the specific accommodation needs for the course. Program requirements cannot be modified to accommodate a disability.

Please see the SCU catalog for details regarding Accessibility Services and Accommodations.

A complete list of University Services is available through MySCU, including:

- Tech Support information
- Tutoring Services
- Veterans Support Services
- Student Advocacy and Accountability resources

Learning Resource Center: Students can use the library's resources which provide students with an excellent collection of books, journals, electronic databases, and websites as well as consult with the librarian to help with the course.

Catalog Authority Statement

This syllabus is intended to provide an overview of course expectations, requirements, and policies. In the event of any conflict between the information contained in this syllabus and the official Southern California University of Health Sciences Catalog, the Catalog shall take precedence as the authoritative source of university policies and procedures.

Students are responsible for reviewing and complying with all policies and requirements published in the University Catalog.

Academic Integrity

Students at this university are expected to maintain the highest degrees of professionalism, a commitment to active learning, and display integrity both in and out of the classroom. Refer to SCU Academic Integrity Policies in the SCU Catalog for more complete information

Attendance

SCU policy defines attendance for all courses and specifies online courses as active, weekly participation in the course as described in the syllabus. Examples of activities could include, but are not limited to:

- Participating in weekly online chats or discussions
- Submitting or completing assignments
- Commenting on other student contributions
- Actively engaging in the course on Canvas and the external assignment platform at least three times per week

See the Academic Policies page in the SCU Catalog for more details on the Attendance Policy.

Drop Date

It is a student's responsibility to determine unenrolling from a course. Refer to the SCU Academic Calendar for dates and deadlines for registration. Refer to SCU Drop Date Policies in the SCU Catalog for more complete information.

Incomplete Policy

Under emergency/special circumstances, students may petition for an incomplete grade. Refer to SCU Incomplete Policies in the SCU Catalog for information

PROGRAM SPECIFIC POLICIES

Course Communication Expectations

The most up-to-date information for this course will always be posted on the Canvas course page. Students are responsible for checking Canvas announcements, Canvas messages, and their SCU email regularly for updates, schedule changes, assignment reminders, or important course information. The instructor may update deadlines, instructions, or course materials as needed, and these changes will be communicated through Canvas.

Communication guidelines during course

- Write in clear, professional language. Avoid texting slang or abbreviations such as "u," "TLDR," or "TBH."

- Do not write entire sentences in **ALL CAPS**, as this appears as yelling.
- Treat classmates and instructors with respect at all times. Personal attacks, rude comments, or inappropriate responses are not acceptable. Any discussion posts that violate this standard will be removed and the student will receive a warning.
- If you disagree with someone's comment, respond respectfully and support your perspective with clear reasoning or examples.
- Before submitting a post or comment, review what you wrote. In online communication, it is easy for messages to be misunderstood when tone and facial expressions are absent.
- Avoid very short responses such as "I agree," "I like it," or "Funny." Instead, explain your reasoning, add another idea, or ask a question that continues the discussion.

Email etiquette

When contacting your instructor or classmates by email:

- Use a clear subject line and include your name and course number.
- Write in complete sentences and maintain a professional tone.
- Be respectful and direct when asking questions.
- Allow reasonable time for a response (typically within 24–48 hours).
- Avoid sending multiple emails about the same question before giving enough time for a reply.
- Professional and respectful communication helps create a productive learning environment for everyone.

Professional behavior in an online course is expected to meet the same standards as behavior in an in-person classroom.

Use of Artificial Intelligence (AI) in Coursework

The use of artificial intelligence (AI) tools in Accelerated Sciences courses is governed by specific guidelines to ensure that student learning objectives are met and that academic integrity is maintained. While AI tools may be useful for learning support, their use must not replace independent student work or compromise the learning process.

Unless otherwise explicitly authorized by the instructor, AI use is permitted or prohibited as follows:

Permitted Use (with Disclosure and Citation):
AI tools may be used to assist with discussion posts or participation activities, including case-based discussions, only when all of the following conditions are met:

- The use of AI tools is clearly disclosed to the instructor
- Any AI-generated content is appropriately cited

- The student reviews, understands, and takes responsibility for the submitted work

Failure to properly disclose and cite AI-assisted work may result in a grade of zero for the assignment.

Prohibited Use:
The use of AI tools is strictly prohibited in the following types of coursework:

- Homework assignments
- Laboratory notebooks
- Laboratory reports
- Quizzes
- Examinations
- Any graded assessment where independent student work is required

Use of AI tools in any prohibited assignment or assessment will be treated as an academic integrity violation.

Academic Integrity and Consequences:
Any use of AI that is inconsistent with this policy constitutes a violation of the University Academic Integrity Code and will be subject to review by the instructor and the Academic Programs leadership within the Accelerated Sciences Division.

If a violation is confirmed, the student may receive:

- A grade of zero on the assignment or assessment
- No opportunity to resubmit the work
- Additional disciplinary action as outlined in the University Catalog, if applicable

Student Responsibility:
Students are responsible for understanding when AI use is permitted and for consulting with the instructor if there is uncertainty regarding acceptable use. Questions regarding this policy may also be directed to the Office of the Director of Accelerated Sciences.

Teaching Methods & Activities

Instructional methods may vary depending on the course delivery model and learning objectives. Courses may include synchronous (live) instruction, asynchronous learning activities, or a combination of both.

Synchronous Instruction:
In courses with scheduled class meeting times, instruction may be delivered in real time by the

instructor. Students are expected to attend scheduled sessions and adhere to course attendance expectations.

Asynchronous Instruction:
In asynchronous courses, students engage with course materials independently yet are expected to meet established deadlines. Instructional materials may include recorded lectures, readings, demonstrations, or other learning resources. Students should anticipate dedicating sufficient time to review course materials and complete required learning activities.

Course Learning Activities

Course learning activities are designed to support student understanding and mastery of course content. Depending on the course, activities may include one or more of the following:

Class Sessions and Content Review:
Instructional time and learning activities focus on topics identified in the course schedule. Students are responsible for reviewing assigned materials prior to scheduled sessions or deadlines. Active participation through questions, discussion, and engagement with course materials is encouraged.

Discussions:
Courses may include structured discussion activities designed to promote engagement with course concepts and collaboration among students. Discussion activities may occur in live sessions or through online discussion boards. Students are expected to participate thoughtfully and respond to instructor prompts and peer contributions as required.

Assignments and Practice Activities:
Courses may include homework assignments, applied exercises, problem-solving tasks, or other practice activities designed to reinforce learning objectives and promote critical thinking.

Quizzes and Knowledge Checks:
Courses may include quizzes or other formative assessments intended to evaluate comprehension of assigned readings and instructional materials.

Applied Activities or Case-Based Learning:
Some courses may include applied learning experiences such as case studies, scenario-based exercises, or real-world problem-solving activities designed to integrate and apply course concepts.

Assignments

All assignments in our courses have weekly deadlines. The most up-to-date deadlines and instructions will always be posted on the Canvas course page.

You must regularly check Canvas announcements, Canvas messages, and your SCU email for updates

or changes. The instructor may update deadlines or assignment instructions as needed.

Failure to complete assignments by the deadline will result in a penalty. Penalties vary depending on the assignment.

Accelerated Sciences Course Recommendations

Students are expected and encouraged to:

- Complete readings before module starts. Skim the chapter before it is covered to become comfortable with some of the terms associated with each topic. Review each chapter after the end of the module to enhance understanding of the material.
- Not wait until the night before homework is due to start the assignment. Understanding concepts will be enhanced if the time is taken to learn them beforehand and later review the material without being rushed.
- Submit all written assignments by the due dates for feedback which will help you to improve your work throughout the course.
- Stay focused by finding an environment to study with few distractions.
- Take consistent notes on all assignments and review them regularly to gain mastery.
- Remember that procrastination in an accelerated course can quickly prove disastrous! Failure to learn foundational principles can make all future material seem nearly incomprehensible, so make sure to budget time wisely over the next five weeks to ensure your success.