

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>COURSE CHANGE REQUEST</b> <b>Undergraduate Programs</b>	UUPC Approval <u>2/26/24</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	<b>Department</b> Chemistry and Biochemistry  <b>College</b> Science	
<b>Current Course Prefix and Number</b> CHM 2045		<b>Current Course Title</b> General Chemistry 1
<i>Syllabus must be attached for ANY changes to current course details. See <u>Template</u>. Please consult and list departments that may be affected by the changes; attach documentation.</i>		
<b>Change title to:</b>  <b>Change prefix</b> From: _____ To: _____ <b>Change course number</b> From: _____ To: _____ <b>Change credits*</b> From: _____ To: _____ <b>Change grading</b> From: _____ To: _____ <b>Change WAC/Gordon Rule status**</b> Add <input type="checkbox"/> Remove <input type="checkbox"/> <b>Change General Education Requirements***</b> Add <input type="checkbox"/> Remove <input type="checkbox"/> <small>*See <u>Definition of a Credit Hour</u>.</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See <u>WAC Guidelines</u>.</small> <small>***GE criteria must be indicated in syllabus and approval attached to this form. See <u>Intellectual Foundations Guidelines</u>.</small>		<b>Change description to:</b>  This course is designed for students pursuing careers in the sciences or who need a more rigorous presentation of chemical concepts than is offered in an introductory course. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the principles of chemistry including atomic theory, electronic and molecular structure, measurement, stoichiometry, bonding, periodicity, thermochemistry, nomenclature, solutions, and the properties of gases.  <b>Change prerequisites/minimum grades to:</b>  <b>Change corequisites to:</b>  <b>Change registration controls to:</b>  Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).
<b>Effective Term/Year for Changes:</b> Fall 2024		<b>Terminate course? Effective Term/Year for Termination:</b>
<b>Faculty Contact/Email/Phone</b> Tito Sempertegui / TSEMPERT@fau.edu / 7-2508		
<b>Approved by</b> Department Chair <u>Andrew Teerth's</u> College Curriculum Chair <u>[Signature]</u> College Dean <u>[Signature]</u> UUPC Chair <u>Korey Sorge</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____		<b>Date</b> 1/26/24 01/26/24 <u>2/11/24</u> <u>2/26/24</u> <u>2/26/24</u>

Email this form and syllabus to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven business days before the UUPC meeting.

## CHM2045 GENERAL CHEMISTRY 1

**Department of Chemistry and Biochemistry**  
**SPRING 2024**  
**3 Credit Hours**

**Contact Information:**

**Instructor:** Dr. Erin Williams

**Office:** PS 301B

**Office Hours:** Tuesdays 11 AM-12 PM and 3:30-4:30 PM

**Phone Number:** 561-297-0304

**Email:** [ewilli93@fau.edu](mailto:ewilli93@fau.edu)

**TA contact information:**

**Jessica Frank (Course Admin)**

[jfrank33@fau.edu](mailto:jfrank33@fau.edu)

**Jay Jebelli (Homework/Quizzes)**

[jjebelli@fau.edu](mailto:jjebelli@fau.edu)

## COURSE DESCRIPTION

This course is designed for students pursuing careers in the sciences or who need a more rigorous presentation of chemical concepts than is offered in an introductory course. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the principles of chemistry including atomic theory, electronic and molecular structure, measurement, stoichiometry, bonding, periodicity, thermochemistry, nomenclature, solutions, and the properties of gases.

## INSTRUCTIONAL METHOD

In-Person. There is no remote option for this course.

## COURSE PREREQUISITES

In order to enroll in CHM 2045, students have to be currently enrolled or have previously taken one of the following mathematics courses:

- MAC 1105: College Algebra
- MAC 1114: Trigonometry
- MAC 1140: Precalculus Algebra
- MAC 1147: Precalculus Algebra and Trigonometry
- MAC 2233: Methods of Calculus
- MAC 2253: Calculus for Engineers 1
- MAC 2311: Calculus with Analytical Geometry

## COURSE OBJECTIVES

- Students will apply the law of conservation of matter and energy.
- Students will implement rules of significant numbers to all measurements.
- Students will explain the fundamental properties of matter including but not limited to atomic and electronic structure, and periodicity.
- Students will apply IUPAC rules of nomenclature.
- Students will predict molecular geometry and properties from bonding theories.
- Students will predict and explain the products of chemical reactions (e.g. acid-base, oxidation-reduction, precipitation, dissociation).

## COURSE DELIVERY MODE

This is a Primarily Classroom course. Lectures are held Tuesday and Thursday. All exams are held on Monday at 7:10 PM. We use FAU's learning management system, Canvas. You must log into Canvas with your FAU ID and Password to access the materials and assignments in this course. If you do not know your FAU ID or Password, [contact OIT for help](#). The course is organized in CANVAS into modules with due dates. The course begins with the Start Here module, which will familiarize you with the organization and navigation of the course. You will open a new learning module to access the assigned reading materials, homework, quizzes, and other relevant materials for each subsequent module.

## TIME COMMITMENT PER CREDIT HOUR

This course has 3 credit hours. For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour.

## REQUIRED TEXTS & MATERIALS

In this course, you will need the following materials:

1. Cengage Unlimited grants you access to Kotz/Treichel/Townsend/Treichel's Chemistry & Chemical Reactivity, 10th Edition. (ISBN 9781337399074)
2. I-clicker
3. A hard copy of the workbook (incomplete course notes) at the FAU bookstore (ISBN 9780357048689)

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YOUR RECOMMENDED/OPTIONAL TEXTBOOK(S) INCLUDE:

\*You can obtain a hard copy of the textbook for a small surcharge with a Cengage Unlimited subscription. You could buy a hard copy of the text (ISBN 9781337399074). You could even buy a previous edition for less on Amazon

**Note:** Cengage unlimited is required for CHM 2046.

- To connect your Cengage unlimited account to canvas and access all Cengage resources directly click Cengage Unlimited dashboard and log into your Cengage account.

## COURSE ASSESSMENTS, ASSIGNMENTS & GRADING POLICY

### GRADING CRITERIA

#### **Owlv2 Online Homework Assignments (15.0%)**

Graded web-based homework problems are to be done using the textbook publisher's OWL system integrated into CANVAS. Registration is required to use the system, using the OWL Access Code through CANVAS. Due dates for each chapter are listed on the homework site and there will be no extensions. Scores on the assignments will be posted on the OWL site and on CANVAS—it may take longer to post on CANVAS.

#### **Self-Check Online Quizzes (15.0%)**

You will have self-check quizzes each module to test your knowledge on the material presented. Quizzes will count as extra credit.

#### **In class participation (10.0%)**

You will have i-clicker questions in class to test your knowledge on the material presented. You are required to attend all classes.

#### **Online test (5.0%)**

There is 1 online course test scheduled for **Monday January 29th at 7:10 PM**

**Class Tests, total (30.0 %)**

There are 3 course tests in classrooms (TBA) **February 19th, March 19th, and April 8th, all at 7:10 PM**

**Final Exam – (25.0 %)**

There is 1 final exam scheduled for **Monday April 29th at 7 PM.**

The instructor will calculate your grade based on the following weighted distribution:

Assessment	Weight (%)
Owlv2 Online Homework Assignments	15.0%
Online test	5.0%
Class Tests	30.0%
Final Exam	25.0%
Self-Check Online Quizzes	15.0%
In-class I-clicker	10.0%
<b>TOTAL:</b>	<b>100.0%</b>

**GRADE SCALE**

Grade	Weight (%)
A	100 % – 90.0 %
A-	< 89.9% – 86.7 %
B+	< 86.6% – 83.3 %
B	< 83.2 % – 80.0 %
B-	< 79.9 % – 76.7 %
C+	< 76.6 % – 73.3 %
C	< 73.2 % – 70.0%
C-	< 69.90 % – 66.7%
D+	< 66.6 % – 63.3%
D	< 63.2 % – 60.0%
D-	< 59.9 % – 56.6%

F	< 56.6 % – 0.0%
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#### LATE ASSIGNMENTS POLICY:

Late work on quizzes will not be accepted. There are no extensions to homework deadlines for full credit. Late homework is -10%.

#### INCOMPLETE GRADES:

This grade is used only when a student has not completed one or two portions of the work assigned to all students as a regular part of the course due to unavoidable circumstances (e.g., illness, death in family, etc.). It is not to be used to allow students to do extra work subsequently in order to raise a grade, or to repeat the whole course for a better grade. Not completing OWL work is not an excuse for requesting an incomplete grade.

#### MAKE-UP POLICY

Any student who does not take an exam at the scheduled time will receive a score of zero on that exam and will not receive an opportunity to take a make-up exam. An exemption from this policy will be considered only for one of the following reasons:

- (1) Medical emergency or problem.
- (2) Death in the immediate family.
- (3) Participation in a FAU-sponsored academic or athletic activity.
- (4) Required appearance in a civil or criminal court.
- (5) Religious holiday

#### INCOMPLETE GRADE POLICY

The University policy states that a student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor but is allowed only if the student is passing the course.

## COURSE POLICIES

### CODE OF ACADEMIC INTEGRITY POLICY STATEMENT

Students at Florida Atlantic University should endeavor to maintain the highest ethical standards. Academic dishonesty is a serious breach of these ethical standards because it interferes with the University mission to provide a high-quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive to the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

### PLAGIARISM

[Plagiarism](#) is unacceptable in the University community. Academic work must be an original work of your own thought, research, or self-expression. When students borrow ideas, wording, or organization from another source, they must acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another's work without identifying the source and trying to pass off such work as one's own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized. This includes all posts, other written and oral presentation assignments.

### COURSE ATTENDANCE POLICY

Since the course is a primarily classroom course with online components, you are required to attend all course lectures, and log to CANVAS **at least three times per week** to ensure you do not miss pertinent postings, messages, or announcements. It is imperative that you meet course deadlines and stay active in class work. If you are experiencing major illness, absences due to University duties, or other large-scale issues, contact the instructor immediately to formulate a resolution.

### SPECIAL COURSE REQUIREMENTS

**Homework Website:** Graded web-based homework problems are to be done using the textbook publisher's OWL system integrated into CANVAS. Registration is required to use the system. Due dates for each chapter are listed on the homework site and there will be no extensions. There is a -10% deduction for lateness. Scores on the assignments will be posted on the OWL site and on CANVAS—it may take longer to post on CANVAS.

## **CLASSROOM ETIQUETTE/DISRUPTIVE BEHAVIOR POLICY STATEMENT**

Disruptive behavior is defined in the FAU Student Code of Conduct as “... activities which interfere with the educational mission within classroom.” Students who disrupt the educational experiences of other students and/or the instructor’s course objectives in a face-to-face or online course are subject to disciplinary action. Such behavior impedes students’ ability to learn or an instructor’s ability to teach. Disruptive behavior may include but is not limited to non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor’s expectations for classroom conduct.

The classroom should be a learning centered environment in which faculty and students are unhindered by disruptive behavior. Faculty members have the authority to manage their classrooms to ensure an environment conducive to learning, therefore:

- Respect your fellow students and your professor
- Contribute to course activities prepared
- Do the OWL homework regularly and by the due dates
- Seek assistance/help as soon as possible
- You are allowed to take pictures for your private use only
- You are allowed to use tablets/laptops for note taking only

For more information, please see the [FAU Office of Student Conduct](#).

## **POLICY ON THE RECORDING OF LECTURES**

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University’s Student Code of Conduct and/or the Code of Academic Integrity.

# COMMUNICATION POLICY

## EXPECTATIONS FOR STUDENTS

### Announcements

You are responsible for reading all announcements posted by either instructor, the course administrator (TA) and the SI leader. Check the course announcements each time you log in.

### Email/Video Conferencing

You are responsible for reading all your course email and responding in a timely manner.

### Course-Related Questions

You can post course-related questions to the FAQ discussion board. This allows other participants with the same question to benefit from the responses. Also, make sure you review this forum prior to posting a question. Someone may have already asked and answered the question in previous posts. **This is not a way of communicating with your instructor.**

## INSTRUCTOR'S PLAN FOR CLASSROOM RESPONSE TIME & FEEDBACK

### Email/Video Conferencing Policy

Except for weekends and holidays, the instructor will typically respond to email (Canvas inbox or FAU email) within 48 hours. **FAU mail is preferred.** You can also use the FAQ discussion board. If you have questions of a personal nature, you should email the instructor.

### Assignment Feedback Policy

The instructor will provide feedback on submitted assignments within one week of the submission date. Some assignments may require a longer review period, which the instructor will communicate to you. For tests, you will have one week after the test grade is posted to challenge either a particular question on the exam or your grade for the exam.

### Course-Related Questions Policy

Except weekends and holidays, the instructor will generally answer questions within 48 hours.

### Electronic Communication Policy

In addition to the University's policy, please consider the following:

- Privacy, confidentiality, and security in all electronic communications.
- All electronic communication resources must be used for the course and in alignment with to the University mission.
- Prohibited use of false identity, false identity pseudonyms, or anonymous (sender's name or electronic identification is hidden).
- Access without consent.
- Disruption of services including introducing computer contaminants (viruses).
- Harassment of any kind.

Please see the Office of Information Technology's policies on [Cyber Security Awareness](#).

## SUPPORT SERVICES & ONLINE RESOURCES

- [Center for eLearning and Student Success](#)
- [Counseling and Psychological Services](#)
- [FAU Libraries](#)
- [Freshmen Academic Advising Services](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Office of International Programs and Study Abroad](#)
- [Office of Undergraduate Research and Inquiry](#)
- [Student Accessibility Services](#)
- [University Center for Excellence in Writing](#)

## FACULTY RIGHTS & RESPONSIBILITIES

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise.

To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the *Student Code of Conduct*.

## SELECTED UNIVERSITY & COLLEGE POLICIES

### Attendance Policy

*Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances, and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.*

### Counseling and Psychological Services (CAPS) Center

*Life as a university student can be challenging physically, mentally, and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>*

### Accessibility Policy Statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations to properly execute coursework due to a disability, must register with Student Accessibility Services (SAS) located in the Boca Raton, Davie, and Jupiter campuses and follow all SAS procedures. For additional information, please consult [Student Accessibility Services](#).

### Contact

- **Boca Raton:** (561) 297-3880  
Fax: (561) 297-2184, TTY: 711
- **Davie:** (954) 236-1222  
Fax: (954) 236-1123, TTY: 711

- **Jupiter:** (561) 799-8721  
Fax: (561) 799-8721, TTY: 711

### **Final Grade Appeal Process**

You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

[Chapter 4 of the University Regulations](#) contains information on the grade appeals process.

### **Religious Accommodation Policy Statement**

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. For further information, please see [Academic Policies and Regulations](#).

### **University Approved Absence Policy Statement**

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. It is your responsibility to notify the instructor at least one week prior to missing any course assignment.

### **Drops/Withdrawals**

You are responsible for completing the process of dropping or withdrawing from a course. Please click on the following link for more information on dropping and/or withdrawing from a course. Please consult the [FAU Registrar Office](#) for more information.

## **Supplementary/recommended readings**

### **SUPPLEMENTAL INSTRUCTION (SI)**

We are pleased to announce a FREE support service is being provided to ALL students in General Chemistry this semester -Supplemental Instruction (SI). SI is a program that utilizes peer-assisted study sessions. Sessions are led by an "SI Leader," a student who previously earned an A in the course. The leader will not re-lecture or give his/her class notes. The leader will not do homework or thinking for the student. The leader will help students make good use of study time and allow students to share knowledge and figure things out together. The leader will share the strategies he/she used to be successful in the course. The leader's job is to help students think about the lectures and the textbooks, and then put it all together into some kind of perspective during SI sessions so students can learn more efficiently. Your SI Leader this semester will introduce him or herself in class.

\* \* \*

**The instructors reserve the right to adjust this syllabus as necessary.**

## Course Topical Outline

<u>Date</u>	<u>Reading</u>	<u>Assignment-due date</u>
01/09, 01/11	<u>Chapter 1</u>	HW 1- 1/19  Quiz 1- 1/21  HW 2- 1/19  Quiz 2- 1/21
01/16, 01/18	Chapter 2  Sections 1-5	HW 3- 1/26  Quiz 3- 1/28  Quiz 4- 1/28
01/23, 01/25	Chapter 2  Sections 6-10	HW 4- 1/26  Quiz 5- 1/28  Quiz 6- 1/28  <b>Online test 1/29 7:10 PM</b>
01/30, 02/01  And  02/06	Chapter 3  *no Section 3.7*	HW 5- 2/09  Quiz 7- 2/04  Quiz 8- 2/04  Quiz 9- 2/11  Quiz 10- 2/11
02/06, 02/08	Chapter 4  Sections 1-4	HW 6- 2/16  Quiz 11- 2/18  Quiz 12- 2/18
02/13-02/15	Chapter 4  Sections 5-6  *no Sections 4.7 or 4.8*	HW 7- 2/16  Quiz 13- 2/18  Quiz 14- 2/18

		<b>Test 2, in class, 2/19 7:10 PM</b>
02/20, 02/22	Chapter 6	HW 8- 2/23 Quiz 15- 2/25
02/27, 02/29	Chapter 6	HW 9- 3/01 Quiz 16- 3/01 Quiz 17- 3/01
03/04-03/08	SPRING BREAK	
03/12, 03/15	Chapter 7	HW 10- 3/16 Quiz 18- 3/18 Quiz 19- 3/18 <b>Test 3, in class, 3/19 7:10 PM</b>
03/19, 03/21	Chapter 8 Sections 1-2	HW 11- 3/22 Quiz 20- 3/24
03/26, 03/28	Chapter 8 Sections 3-4	HW 12- 3/29 Quiz 21- 3/31
04/02, 04/04	Chapter 8 Sections 5-9	HW 13- 4/05 HW 14- 4/05 Quiz 22- 4/07 <b>Test 4, in class, 4/08 7:10 PM</b>
04/09, 04/11	Chapter 9 Sections 1-2	HW 15- 4/12 Quiz 23- 4/14
04/16, 04/18	Chapter 5 Sections 1-3 Chapter 10	HW 16 part 1 – 4/19 HW 16 part 2 – 4/19

	Sections 1-3	Quiz 24 – 4/20
04/29		<b>Final Exam 7 PM</b>

# Science and Natural World Syllabus Description

## Intellectual Foundation (General Education) Program Outcomes.

Scientific principles are behind what we find in nature and in natural occurrences. Scientific issues, such as those dealing with stem-cell research, cloning and global warming, are hotly debated by policy makers. Courses that meet this requirement share the goal of seeking to understand patterns and principles behind phenomena and occurrences, both in the inorganic world and in the living world. They typically fall within either the physical sciences (astronomy, physics, chemistry, and the earth sciences) or the biological sciences.

Students who satisfy the Science and the Natural World requirement will be able to:

- Explain important scientific concepts, principles, and paradigms.
- Explain how principles of scientific inquiry and ethical standards are used to develop and investigate research questions.
- Explain the limits of scientific knowledge and of how scientific knowledge changes.
- Critically evaluate scientific claims, arguments, and methodology.

After completion of the associated lab, the student will be able to:

- Demonstrate and explain how experiments are conducted.
- Analyze resulting data and draw appropriate conclusions from such data.