 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>COURSE CHANGE REQUEST</b> <b>Undergraduate Programs</b>		UUPC Approval <u>11-4-24</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department <u>Chemistry and Biochemistry</u> College <u>Science</u>		
Current Course Prefix and Number <u>CHM 3609</u>		Current Course Title <u>Inorganic Chemistry</u>	
Syllabus must be attached for <b>ANY</b> changes to current course details. See <a href="#">Template</a> . Please consult and list departments that may be affected by the changes; attach documentation.			
<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 <a href="#">Definition of a Credit Hour</a>.</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See <a href="#">WAC Guidelines</a>.</small> <small>***GE criteria must be indicated in syllabus and approval attached to this form. See <a href="#">Intellectual Foundations Guidelines</a>.</small>		<b>Change description to:</b>  This course covers fundamental principles of inorganic chemistry, including periodicity of the elements, main group chemistry, coordination chemistry of d-block transition metals, symmetry and group theory, molecular orbital theory, crystal/ligand field theory, and spectroscopic techniques used to analyze complex electronic structure.  <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> <u>Fall 2024</u>		<b>Terminate course? Effective Term/Year for Termination:</b>	
Faculty Contact/Email/Phone <u>Tito Sempertegui / tsempert@fau.edu / 561-297-2508</u>			
<b>Approved by</b> Department Chair <u>Andrew Terent's</u> College Curriculum Chair <u>[Signature]</u> College Dean <u>[Signature]</u> UUPC Chair <u>Korey Sorges</u> Undergraduate Studies Dean <u>Dan Maceroff</u> UFS President _____ Provost _____		<b>Date</b> <u>9-27-24</u> <u>10/25/24</u> <u>10-24-24</u> <u>11-4-24</u> <u>11-4-24</u> _____ _____	

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



FLORIDA ATLANTIC UNIVERSITY

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**CHM 3609-001 10725**

**Inorganic Chemistry**

**Date:** Tuesday, Thursday 9:30 AM - 10:50 AM

**Building:** General Classroom South Boca **Room:** 111

**3 Credit(s)**

**Spring 2024 - 1 Full Term**

## Instructor Information

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Zhu-Lin Sam Xie

**Email:** xiez@fau.edu

**Office:** PS-309

**Office Hours:** Thursday, 1:30 pm - 2:30 pm

**Phone:** 561-297-3641 **Course**

## Description

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This course covers fundamental principles of inorganic chemistry, including periodicity of the elements, main group chemistry, coordination chemistry of d-block transition metals, symmetry and group theory, molecular orbital theory, crystal/ligand field theory, and spectroscopic techniques used to analyze complex electronic structure.

## Prerequisites/Corequisites

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**Prerequisite(s):** The following course:

- CHM 2210 Graduate / Undergraduate (Minimum Grade of D-)

**Corequisite(s):**

Subject	Course Number
CHM	3609L

**Required Texts/Materials**

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**Pearson eText for Inorganic Chemistry -- Instant Access Pearson+ Single Title Subscription, 4-Month Term**

**ISBN:** 9780137518425

**Publisher:** Pearson+ Subscriptions

**Edition:** 5th

**Inorganic Chemistry**

**ISBN:** 9780133558944

**Publisher:** Pearson Lifetime eBooks

**Edition:** 5th

**Recommended Readings and Materials**

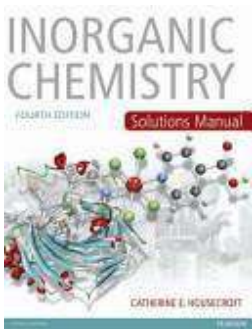
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**Inorganic Chemistry**

**ISBN:** 9780273742760

**Authors:** Catherine E. Housecroft, A. G. Sharpe

**Publication Date:** 2012-01-01



**Course Objectives/Student Learning Outcomes**

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The aim of this course is for students to develop core knowledge and conceptual understanding of the fundamental principles of inorganic chemistry, including atomic and molecular structures, group theory, molecular orbital theory, reactivity, and mechanisms of inorganic compounds. Students should be able to apply the theoretical principles to solve questions in coordination chemistry, organometallic chemistry, bioinorganic chemistry, main group chemistry and solid-state chemistry, and connect inorganic chemistry to real-world applications, such as catalysis, sensor development, energy conversion, materials, electronics.

## Faculty Rights and Responsibilities

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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 [University Regulation 4.007](#).

## Disability Policy

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In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at [www.fau.edu/sas/](http://www.fau.edu/sas/).

## Course Evaluation Method

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Your grades will be based on exams, quizzes and homework assignments, and attendance as described below:

Mid-term exams: 40%

Final exam: 40%

homework: 10% Quizzes:

5%

Attendance: 5%

Exams: The class will meet 25 times during the semester. Three mid-term exams and one final exam will be administered in the following schedule:

Mid-term 1, Thursday, February 1st.

Mid-term 2, Thursday, February 29th.

Mid-term 3, Tuesday, April 2nd.

Final Exam, Thursday, April 25th (7:45 am to 10:15 am)

Mid-term exams are non-cumulative and 80 min in duration. The Final Exam is cumulative (i.e., comprehensive) and 150 min in duration. The dates of mid-term exams are subject to change. Any changes will be announced via Canvas and/or email by the Professor. Your lowest mid-term exam score will be dropped.

Homework Assignments: Homework problems will be posted on Canvas throughout the semester. Homework questions will not be graded by the professor; however, the scanned copies must still be submitted to Canvas before the deadline to receive completion credit (100 points/homework). Emailed homework will not be accepted. The answer key of each homework will be provided after the deadline for students to correct mistakes in homework. Late submission of homework assignments will incur an immediate -40% penalty and a further -20% for each elapsed 12-hour period thereafter, including weekends. Any homework assignment that is judged to be too untidy and illegible or is left uncompleted will have completion points deducted at the professor's discretion. The submission of different portions of a homework assignment at different times is not allowed.

Quizzes: A series of short quizzes will be given throughout the semester on days which may not be announced beforehand. If you are absent for a quiz, you will not be granted a makeup. Quizzes will be graded.

## **Code of Academic Integrity**

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Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered 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 of 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](#).

## **Attendance Policy Statement**

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Students are expected to attend all 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 nonattendance. 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.

## Religious Accommodation Policy Statement

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In accordance with the 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. University Regulation 2.007, Religious Observances, sets forth this policy for FAU and may be accessed on the FAU website at [www.fau.edu/regulations](http://www.fau.edu/regulations).

Any student who feels aggrieved regarding religious accommodations may present a grievance to the executive director of The Office of Civil Rights and Title IX. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination.

## Time Commitment Per Credit Hour

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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 outof-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

## Course Grading Scale

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Letter Grade	Letter Grade
A	90 - 100%
A-	85 - 89%

B+	80 - 84%
B	75 - 79%
B-	70 - 74%
C+	65 - 69%
C	60 - 64%
C-	55 - 59%
D	50 - 54%
F	below 49%

## Grade Appeal Process

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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.

[University Regulation 4.002](#) of the University Regulations contains information on the grade appeals process

## Policy on Make-up Tests, Late work, and Incompletes

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- Missing homework or quizzes will result in 'zero' points.
- There will be no makeup mid-term exams except in the following cases, where appropriate documentation is provided: 1. Medical emergency or problem; 2. Death in the immediate family; 3. Participation in an FAU-sponsored academic or athletic activity/event; 4. Required appearance in a civil or criminal court; 5. Military obligations. In cases 1 & 2 the student or a family member must notify the Professor of the incident via email within 48 hours of the missed exam. The student will provide documentation and take the makeup exam at the earliest possible time (ordinarily within 1 week of the originally scheduled exam time). In cases 3-5, written documentation of the impending activity must be submitted to the Professor at least 48 hours prior to the scheduled exam time. The student must take the makeup exam within 1 week of the originally scheduled exam time.
- The final exam will be given as scheduled. Students will not be permitted to take the final at a different time.

- Any complaints about the exams should be addressed within 5 days the grades are published in CANVAS. No complaints can be made after this period.
- Incomplete Grade: please refer to the FAU Catalog for the policy on “I” grade.

## **Policy on the Recording of Lectures**

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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.

## **Counseling and Psychological Services (CAPS) Center**

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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/>



## Student Support Services and Online Resources

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- [Center for Learning and Student Success \(CLASS\)](#)
- [Counseling and Psychological Services \(CAPS\)](#)
- [FAU Libraries](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Center for Global Engagement](#)
- [Office of Undergraduate Research and Inquiry \(OURI\)](#)
- [Science Learning Center](#)
- [Speaking Center](#)
- [Student Accessibility Services](#)
- [Student Athlete Success Center \(SASC\)](#)
- [Testing and Certification](#)
- [Test Preparation](#)
- [University Academic Advising Services](#)
- [University Center for Excellence in Writing \(UCEW\)](#)
- [Writing Across the Curriculum \(WAC\)](#)

## Course Topical Outline

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Date		Content	Assigned Readings
1/9 T	L1	Intro: What is Inorganic Chemistry	1
1/11 R	L2	Atom Structures	2
1/16 T	L3	Basics of Coordination Chemistry and the d Block	9
1/18 R	L4	Symmetry and Group Theory	
1/23 T	L5		
1/25 R	L6		4
1/30 T	L7		
2/1 R		Mid-Term Exam 1, 9:30 - 10:50 am; GS 111	

2/6 T	L8	MO Theory	5
2/8 R	L9		
2/13 T	L10	Crystal Field Theory/Ligand Field Theory/Electronic Spectra/Magnetism	10, 11
2/15 R	L11		

2/20 T	L12		
2/22 R	L13		
2/27 T	L14		
2/29 R		Mid-Term Exam 2, 9:30 - 10:50 am; GS 111	
3/5 T		Spring Break	No Class
3/7 R		Spring Break	No Class
3/12 T	L15	Reaction Types and Mechanisms of Complexes	12
3/14 R	L16	Organometallic Chemistry	13
3/19 T	L17		
3/21 R	L18	Organometallic Reaction and Catalysis	14
3/26 T	L19		
3/28 R	L20		
4/2 T		Mid-Term Exam 3, 9:30 - 10:50 am; GS 111	
4/4 R	L21	Bioinorganic Chemistry	16
4/9 T	L22		
4/11 R	L23	Main Group Chemistry	8
4/16 T	L24	Solid State Chemistry	7
4/18 R	L25	Review/catch up	
4/25 R		Final, 7:45 - 10:15 am; GS 111	