



Chem 531 Advanced Inorganic Chemistry
COURSE SYLLABUS: Summer 2024

Instructor: Dr. Bukuo Ni
Office Location: Science 303
Office Hours: Virtual office and by email
Office Phone: 903-886-5382
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Lectures (Web Based Class): Meets 06/03/2024 through 08/08/2024

Required Textbook: "Inorganic Chemistry", Catherine E. Housecroft and Alan G. Sharpe (4th Edition, ISBN 978-0-273-74275-3)

Additional Book for your study of this course:

"Inorganic Chemistry", 5th Edition, Shriver & Atkins, ISBN: 1-4292-1820-7.

Course description: This course covers descriptive chemistry of more interesting elements and compounds and the standard topics in coordination, organometallic, solid-state chemistry, and catalysis and some industrial processes. Prerequisites are sound knowledge of general chemistry and familiarity with organic, physical and analytical chemistry. Regular attendance and active learning are expected. Students' questions and comments are welcome.

Student learning outcomes: At the end of the course, the student will be able; (1) to describe and explain the coordination compounds containing metal as central atom which surrounded by ligands; (2) to understand the stereochemistry of coordination compounds; (3) to classify the type and mechanism involve in coordination compounds reactions; (4) to study the characterization of coordination compounds and its application.

GRADING

Your performance and final grade in the course will be evaluated on the basis of total points earned. The distribution of points will be based on the following: Quiz and homework (20 points), which will be assigned and discussion throughout the semester. Two portion exams and final exam will carry 50 points and 30 points, respectively, with total 80 points. The final letter grade will be based on a standard scale 90-100% A, 80-89% B, 70-79% C, 60-69% D, and below 60% F. The grades may be curved, if warranted.

There will be absolutely no make-ups for exams except extraordinary circumstance (notes required). If you miss an examination, you will be assigned a zero for that assignment. Quiz and homework not submitted on time may receive a grade of zero.

Tentative Schedule

The tentative schedule is subject to change.

<i>Week of</i>	<i>Lecture Topic</i>	<i>Reading</i>
1 Jun 3-7	An introduction to molecular symmetry Acids and Bases	Ch. 3 & 7
2 Jun 10-14	Reduction and oxidation	Ch. 8

3 Jun 17-21	Reduction and oxidation	Ch. 8
4 Jun 24-28	Exam 1 (Jun. 24), and the groups 1&2 metals	Ch. 11&12
5 Jul 1-5	The groups 13, 14 &15 elements	Ch. 13, 14&15
6 Jul 8-12	The groups 16 & 17 elements	Ch. 16 &17
7 Jul 15-19	(Exam 2, July 15) d-Block metal chemistry: general consideration	Ch. 20
8 Jul 22-27	d-Block metal chemistry: coordination complex, and Organometallic compounds of d-block elements	Ch. 21&24
9 Jul 29-Aug 2	d-Block metal complexes: reaction mechanisms	Ch. 26
10 Aug 5-8	Catalysis and some industrial processes and Final comprehensive exam on Aug. 8	Ch. 27

* Please note that this schedule and topics are subject to change

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom Virtual Classroom Requirements:

<https://support.zoom.us/hc/en-us/articles/201362023-Zoom-system-requirements-Windows-macOS-Linux>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#)

<https://inside.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>.

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy, please visit the webpages below.

[Attendance](#),

<https://inside.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty, see the following procedures:

Undergraduate Students Academic Integrity Policy and Form

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Undergraduate Student Academic Dishonesty Form](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

Graduate Students Academic Integrity Policy and Form

[Graduate Student Academic Dishonesty](#)

<https://inside.tamuc.edu/aboutus/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Services
Velma K. Waters Library- Room 162

Phone (903) 886-5930

Fax (903) 468-8148

Email: StudentDisabilityServices@tamuc.edu

Website: <https://www.tamuc.edu/student-disability-services/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health
Counseling Center Services

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel