

# Inorganic Chemistry



Department of Chemistry  
and Biochemistry

CHEM 4365, Fall 2019

## Class Overview

Principles of molecular structure and chemical reactivity of inorganic compounds; coordination chemistry and introduction to ligand field theory, symmetry and group theory; kinetics and mechanisms of inorganic reactions; organometallic compounds; chemistry of nonmetals and physical methods in inorganic chemistry. Prerequisites: CHEM 2322 and CHEM 3352.

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### Days and Times:

Tuesday and Thursdays  
9:00 am – 10:20 am

### Instructor:

Dr. Skye Fortier

### Location:

CCSB G1.0204

### Office:

CCSB 2.0404

### Office Hours:

Wednesdays 9:00 am – 10:00 am,  
and by appointment

### Course Drop Deadline:

November 1, 2019

### Contact information:

747-5195, [asfortier@utep.edu](mailto:asfortier@utep.edu)

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### Textbook:

Inorganic Chemistry, Miessler & Tarr, 4<sup>th</sup>/5<sup>th</sup> edition

### Supplemental Texts:

The following texts are useful references and, from time to time, may be used to supplement Miessler & Tarr. These texts need not be purchased.

Cotton, Chemical Applications of Group Theory

Shriver & Atkins, Inorganic Chemistry

House, Inorganic Chemistry

Cotton & Wilkinson, Advanced Inorganic Chemistry

DeKock & Gray, Chemical Structure and Bonding

Additional literature material may also be provided for review and discussion.

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### Topics and their order of discussion are subject to change, but are likely to include:

- Introduction to Inorganic Chemistry
- Atomic Structure
- Crystal Field Theory
- Ligand Nomenclature and 18e- rule
- Symmetry and Group Theory
- Introduction to Molecular Orbital Theory

†Students are expected to know how to draw Lewis dot structures and must be familiar with VSEPR theory

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**Grading\*:**

Problem Set #1	20%
Midterm Exam	30%
Problem Set #2	20%
Cumulative Final	30%

Your grade in the course is based on your performance on the two Problem Sets and two Exams listed above. No additional work will be assigned for extra credit other than that detailed below.\*

\*Extra Credit: This semester there will be two opportunities to earn additional credit towards your exam grades on the following dates:

- September 27, 2019 – CCSB G.0208 at 2:30pm (*tentative*)
- November 21, 2019 – CCSB G.0208 at 2:30pm (*tentative*)

On these dates, an invited seminar speaker will participate in an hour long Q&A session that is intended for student audiences. Full attendance at each event will earn an additional 10% on each exam, respectively. Specifically, attendance at the September 27<sup>th</sup> event will be credited towards your midterm examination while attendance at the November 21<sup>st</sup> event will be credited on your final examination. Attendance is not mandatory but is highly encouraged.

Time and location are subject to change or cancellation

**Late Assignments:**

Problem Sets will be collected at the beginning of class on the day they are due. Any assignments turned in beyond this point will be considered late and will receive a 10% deduction. An additional 10% will be deducted for each day the assignment is overdue. Late assignments will not be accepted three days past their due date.

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**Class Attendance:**

Attendance is not taken, but it is ill advised to voluntarily miss a lecture. If you have to miss class, please get together with a classmate to catch up on any notes or material that you may have missed. Once you have had an opportunity to review the notes, it would be my pleasure to revisit the material during office hours if you have any questions. However, if you miss a class, I will not repeat the lecture or provide a copy of the class notes.

Class lectures cannot be filmed unless I give explicit written consent in advance. Permission will only be granted in extraordinary circumstances.

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**Missing an Exam:**

If you miss an exam, a valid and documented excuse must be provided (e.g. medical emergency, school field trip or conference attendance, court appearance).

In the case that you are absent due to falling ill, a note from a licensed medical professional (i.e. medical doctor, nurse practitioner, or UTEP Health Center) is required. Otherwise, you must provide compelling evidence of illness or injury, and the decision to make-up the exam will fall at my sole discretion.

If you miss an exam because of a travel issue (e.g. missing your flight or flight cancellation) on a non-UTEP related trip, extensive documentation must be provided demonstrating circumstances beyond your control. You must notify me immediately of your situation. I will evaluate your case and qualification for a make-up exam will be made at my discretion.

It is your responsibility to contact me at the email address listed above to schedule time for a re-take. If you do not contact me at the correct email address to make arrangements within 3 days of the original exam date, a failing grade of 0 will be automatically assigned.

**Make-up exam:**

The make-up exam may mirror the original exam, be slightly altered, or altogether changed in form, format and content at my discretion. In the latter two cases, best efforts will be made to maintain the same level of difficulty, but this is not guaranteed.

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**Special Accommodations:**

If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass). *CASS' Staff are the only individuals who can validate and if need be, authorize accommodations for students with disabilities.*

If you are designated special accommodations by CASS, it is your responsibility to coordinate these exam accommodations between CASS and me. If CASS will proctor the examination, it must be scheduled within 3 days of the exam date. Otherwise, you will not be allowed to take the exam and will receive a failing grade of 0 (unless there is a special exception as written in the "MISSING AN EXAM" section above).