

**Department of Chemistry and Biochemistry**  
**The University of Texas at El Paso**  
Biophysical Chemistry

**CHEM 4335** (CRN 23576)

**Instructors:** Prof. Lela Vuković (CCSB 2.0307)

**Class meetings:** CCSB 1.0202, Tue, Thu from 9 am to 10:20 am

**Email:** [Lvukovic@utep.edu](mailto:Lvukovic@utep.edu)

**Phone:** (915) 747-7551

**Office hours:** Dr. Vukovic will usually be available in office on Thu 10:40 am to 11:40 am. If needing meeting outside of the specified time, please email.

**Course Description:**

This course covers chemical thermodynamics and its applications for discussing equilibria, reactions phase transitions and related bulk chemical phenomena. We will exemplify these principles with applications to the biochemical sciences. We will cover the general material in the first 8 chapters of the Textbook (Parts 1 and 2) and potentially cover some material from Parts 3 and 4 if time allows.

**Textbook:**

Physical Chemistry for The Life Sciences. P. Atkins, J. de Paula, Oxford University Press, Second Edition

Additional reading: Thomas Engel, Philip Reid, 3<sup>rd</sup>. Edition; *Pearson*.

**Grading:**

The grade for this course will be determined by homework (10% - turned in, graded for effort), multiple tests (60% total) and the final exam (30%). Tests will not be cumulative. The Final Exam will build on all the previous material (i.e. will be cumulative). Extra-credit opportunities (total 3% of the grade) may be provided during the semester – helpful for borderline grade cases.

Grading scale (%)

90 - 100: A

75 - 90 : B

50 - 75: C

35 - 50: D

< 35 : F

**Attendance:** strongly recommended, will be taken randomly (extra-credit). **No cell phone or laptop use in in-person classes.**

**Course Drop Policy:** Drop date deadline is March 28<sup>th</sup>, 2024.

All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to month based upon completion data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab.

**Other considerations:** Please turn your cell phone sound off and keep them away during lectures and practices. **Some aspects of the course may be changed, depending on the progress and conditions during the semester.**

**Disability.** If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at (915) 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 <https://www.utep.edu/student-affairs/cass/>

## COVID-19 PRECAUTION STATEMENT

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

Week # / class	Date	Activity	Textbook material
1a	16-Jan	Overview of class, introductions, Lec 1	Fundamentals chapter
1b	18-Jan	Lec 1	Fundamentals chapter
2a	23-Jan	Lec 1	Fundamentals chapter
2b	25-Jan	Lec 1 / problems of Hw 1	Fundamentals chapter
3a	30-Jan	Test 1	
3b	1-Feb	Lec 2	Ch 1
4a	6-Feb	Lec 2	Ch 1
4b	8-Feb	Lec 2	Ch 1
5a	13-Feb	Test 2	
5b	15-Feb	Lec 3	Ch 2
6a	20-Feb	Lec 3	Ch 2
6b	22-Feb	Lec 3	Ch 2
7a	27-Feb	Test 3	
7b	29-Feb	Lec 4	Ch 3
8a	5-Mar	Lec 4	Ch 3
8b	7-Mar	Lec 4	Ch 3
9a	12-Mar	No class - Spring break	
9b	14-Mar	No class - Spring break	
10a	19-Mar	Test 4	
10b	21-Mar	Lec 5	Ch 4
11a	26-Mar	Lec 5	Ch 4
11b	28-Mar	Lec 5	Ch 4
12a	2-Apr	Test 5	
12b	4-Apr	Lec 6	Ch 5
13a	19-Apr	Lec 6	Ch 5
13b	11-Apr	Lec 6	Ch 5
14a	16-Apr	Test 6	
14b	18-Apr	Lec 7	Ch 6
15a	23-Apr	Lec 7	Ch 6
15b	25-Apr	Lec 8	Ch 7 - 8, selected topics
16a	30-Apr	Lec 8	Ch 7 - 8, selected topics
16b	2-May	Lec 8	Ch 7 - 8, selected topics

<b>FINAL</b>	7-May	10:00 am - 12:45 pm	Cumulative Final Exam
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