Objective: Introduction to the fundamentals of thermodynamics and chemical kinetics.

Lectures: MWF 12:30 – 1:20 pm, Dale Hall 0103

Instructor: Dr. Shanteri Singh
Stephenson Life Sciences Research Center 2190
Office Telephone: 325-2088
Office Hours: **MW 1.45 – 3:00 pm @ SLSRC 2190**

Online Course Management: [http://canvas.ou.edu/](http://canvas.ou.edu/)


**Lecture Schedule:**

Chapter 1: The Nature of Physical Chemistry and the Kinetic Theory of Gases.
   Aug 22, 24, 26, 29, 31, Sep 2, **5 (No Class), 7**

Chapter 2: The First Law of Thermodynamics.
   Sep 9, **12 (CH-1 Exam; 12:30-1.20 PM, Dale Hall 103)**, 14, 16, 19, 21, 23, 26,

Chapter 3: The Second and Third Laws of Thermodynamics.
   Sep 28, 30, **Oct 3 (CH-2 Exam; 12:30-1.20 PM, Dale Hall 103)**, 5, 7, 10,

Chapter 4: Chemical Equilibrium.
   Oct 12, 14, 17 (**CH-3 Exam; 12:30-1.20 PM, Dale Hall 103**), 19, 21, 24, 26

Chapter 9: Chemical kinetics I.
   Oct 28, 31 (**CH-4 Exam; 12:30-1.20 PM, Dale Hall 103**), Nov 2, 4, 7, 9, 11, 14
   (**CH-9 Exam; 12:30-1.20 PM, Dale Hall 103**)

Chapter 10: Chemical kinetics II.
   Nov 16, 18, 21, 23, **25 (No Class), 28 (CH-10 Exam; 12:30-1.20 PM, Dale Hall 103)**

Chapter 5, 6: Phases and Phase Equilibria.
   Nov 30 Dec 2, 5, 7, **9 (review)**

**Final:** **Chapter 1, 2, 3, 4, 5, 6, 9, 10 (Dec 12 Monday, 1:30 – 3:30 am)**
Course Grading Scheme:
1. **Homework Assignments (0%)**: Problem sets will be assigned weekly. It is essential that you work all of these problems and understand the course material at a satisfactory level. The problems encountered in the homework assignments will be of comparable difficulty as the problems encountered in the examinations. On occasion, a problem from homework assignments may be used in examinations with minor numerical changes.

2. **Chapter Exams (70% (10% is bonus!))**: Six chapter examinations will be given. Percentage contribute of each examination to the final score is as indicated in the below table. **NO MAKE-UP EXAMINATION WILL BE GIVEN. SO MARK YOUR CALENDAR!** Unless instructed otherwise, you are only allowed to use the information provided on the quiz paper. You must bring your own calculator.

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<tr>
<th>Exams</th>
<th>Date</th>
<th>Chapters</th>
<th>% grade</th>
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<tr>
<td>1</td>
<td>Sep 12 (M)</td>
<td>1</td>
<td>12</td>
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<td>2</td>
<td>Oct 03 (M)</td>
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<td>6</td>
<td>Nov 28 (M)</td>
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3. **Final Exam (40%)**: The final examination will be given on Mon, Dec 12, 1:30 – 3:30 am. It will be a comprehensive two-hour examination over all of the course materials. **NO MAKE-UP FINAL EXAMINATION WILL BE GIVEN.** You are only allowed to use the information provided on the examination paper. You must bring your own calculator.

4. **Final Grade**: The minimum final score for a **GUARANTEE** ‘A’ is 90%; ‘B’ is 75%; ‘C’ is 60% and ‘D’ is 50%. The minimum final score to **CONTEND** for an ‘A’ is 85%, ‘B’ is 70%, and ‘C’ is 55%. A final grade of ‘F’ will be automatically assigned if the final score is less than 40%.

5. **Grading Errors**: All grading mistakes have to be resolved within two days after the examinations are returned to the students. Grading mistakes found in the final examination have to be resolved immediately with the instructor.

*Solutions to all examinations will be posted on the web within a week after they are graded.*
Accommodation Policy: Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me as soon as possible so that we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities. The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the instructor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 405/325-3852 or TDD only 405/325-4173.

Codes and Policies of Behavior Policy: Each student should acquaint his or her self with the University codes, policies, and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination based on physical handicap. Students engaging in academic misconduct (including cheating, plagiarism, and any other action that may improperly affect evaluation) will be subject to sanctions in accordance with the Norman Campus Academic Misconduct Code. Dr. Singh routinely recommends "F" for the course and expulsion from the University for all such violations.

Holidays: It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required classwork that may fall on religious holidays. Students who plan to observe a religious holiday should notify Dr. Singh as soon as possible in order to make appropriate arrangements for classwork or rescheduling of examinations.

Disclaimer: I reserve the right to change by addition and/or subtraction any and/or all materials contained in this syllabus. This includes, but is not limited to, course content, assignments, scheduled dates, and fraction(s) of the final grade assigned to individual items within the course. Although your attendance at the lecture is not required, you are responsible for any announcements made in class, including changes in the quiz and examination schedule, course content, assignments, scheduled dates, and fraction(s) of the grade assigned to individual items within the course. If changes become necessary, I will announce them as early as possible.

Last update: August 20, 2016