

OGLALA LAKOTA COLLEGE
SPRING 2014
COURSE SYLLABUS FOR CHEM 243 General Chemistry II

Location: He Sapa

Time: Lecture: THURSDAY, 1pm - 4pm

Instructor: Deig Sandoval, Ph.D.

Office Hours: Tuesday 10:00 AM–12:00 PM

How To Contact Me: deig@olc.edu

Online Registration: Not needed

Make this web address one of your favorites or add it as an icon on your desktop. If you work from a center computer, you need this address to get online. Write it down, maybe even in your textbook.

1. Register with your OLC e-mail address.
2. Enter the registration code from your textbook.

Go to the student tutorials and learn how to navigate the website. Then take the “Wileyplus” online exam under “Assignments”.

If you do not know how to get to your OLC e-mail, please ask your counselor or center personnel **today**. You can also go to the OLC website, click on “Tuxedo” (an e-mail exchange software) in the task bar at the top, and register your account; there is also a tutorial for Tuxedo on the OLC website.

Course Description: This is an advanced course in inorganic chemistry. Topics include: phase changes and properties of gases, liquids and solutions, reaction kinetics, equilibrium equations (including acid-base interactions and pH, oxidation-reduction reactions, and nuclear reactions.

Prerequisites: General Chemistry I and Lab (Chem. 233/231)

Required Textbooks: Introduction to Chemistry-Atoms First, 1th Edition; Authors: Mark Alton Bishop, Chiral Publishing Company, 2009, Monterey, CA, USA .You will need to buy a new book with an **online registration code**. If you already have a registration code from last semester, you should be able to register with that code.

Other Materials: Scientific calculator, paper or 3-hole notebook, ruler, and pencil.

Descriptive Reading Load: Grade12 reading level; one to two chapters every week.

Types and Amounts of Writing Expected: Assignments and essay questions must be written in complete sentences. Simply copying sentences from the textbook constitutes plagiarism and will not be accepted. Copying from the textbook or other students' results in full nullification of any work submitted!

Lakota Perspective Provided Through: Students and instructor will treat each other with respect. Lakota values such as **patience**, **respect**, and **honor** will be maintained. Students will aid the instructor with the inclusion of the Lakota perspective.

Course Objectives:

- To understand the chemical and physical behavior of gases and liquids
- To calculate pressure, temperature and volume changes of gases according to the common gas laws
- To quantitatively predict behavior of common ions in solutions according to:
 - Acid-base reactions and pH
 - Equilibrium reactions and constants
 - Redox reactions
- To write net ionic equations
- To balance ionic redox equations
- To understand the nature and behavior of radioactive elements

Course Requirements:

Attendance: You must attend all scheduled classes. You are also expected to be punctual and to stay to the end of the class period.

There are no reinstatements once the student is dropped due to 5 absences, unless there is proof of an error in the attendance. In case that you get dropped by the registrar, there will be not REINSTATEMENTS (taken from OLC 2013-2014 Handbook).

In accordance with OLC policy, you will be dropped from the course if you miss more than three consecutive class periods. You will also be dropped, if you miss more than five class periods during the semester.

Missed exams can only be made up for documented absences like sickness, etc.; the make-up test will be modified and possibly more difficult (since you had more time to prepare) **and has to be taken before the next class session.** It is your responsibility to schedule a make-up exam with the instructor. Being absent also does not relieve you from handing in your assignments on time. **Only one make-up exam can be taken.**

Assignments: There will be seven graded online homework assignments @ **100 points each, due at the assigned date. The assignment will be closed after the due date.**

Exams: There will be three online exams (see attached class schedule); each exam counts for **100 points.**

Lecture Grade:

Assignments	700 pts
<u>Exams</u>	<u>300 pts</u>
	1,000 pts

The following grade scale will be used:

A = 900-1000

B = 800-899

C = 700-799

D = 600-699

F = below 600.

Course Philosophy: You are not studying and learning for the instructor, but for yourself. Grades are important for your academic career; nevertheless, your professional life really begins after you graduate. Understanding the basic principles of science will help you not only in any professional career, but also to understand and appreciate your surroundings and life itself.

But it is up to you. You have to invest your time, at least 4 hours of concentrated reading and 6 hours of problem-solving per week, for homework and exams. You will also have to participate in any threaded discussions and interact with the instructor once the course is migrated more onto the internet. This will take a lot of self-discipline on your time meaning that you have to appropriate enough time of your weekly schedule, sit down in front of the computer and actually do the work.

Tips to Succeed

1. ***Read the chapter to be dealt with before the lecture, and, at least, before you try to do your homework or take an exam. Then it will be much easier for you to follow the lecture and to ask questions about the material that you did not understand. Do not just “read” your textbook. You need to take notes and solve the example problems.***

In your notebook:

- a) ***Comprehend new concepts in your own words.***
- b) ***Define new terms (words) in your own words.***

A large part of the exams will be essay questions. Be sure that you read through the “Chapter Review” at the end of each chapter and that you can define the “Key Terms” (in full, comprehensible sentences). You should also be able to answer all “Review Questions”, even the ones that are not assigned to the homework. Look through all the worked-out examples of each chapter. It will help you to write them down into your notebook. Work the “practice” problem following the examples (answers to those are given at the very end of each chapter, after the questions and exercises).

3. ***When you do your homework assignments, go back through the chapter and read it carefully; all the answers are there. For “paired exercises” problems, only odd-numbered problems count for homework credit. Nevertheless, it is important that you also look at the following even-numbered problem, which is very similar. Answers to even-numbered exercises are given in appendix V.***
4. ***Actively take part in the class, especially when problems are worked on during lecture or online discussions. This will help you solve similar problems in your homework, quizzes, and exams.***

6. Know how to use your calculator, especially how to work with logarithmic numbers. If you feel uncomfortable with math, work through the appendices I, II and III in the textbook and use the online resources on the course website.

If you have a disability and are in need of assistance to successfully complete this class please contact the OLC Coordinator of Support Services, at 455-6040.

TENTATIVE CLASS SCHEDULE

Week 1	Th. Jan 23	Chap. 11: Items, 1 and 2. Pages 459-470
Week 2	Th. Jan 30	Chap 11: Items, 3 and 4. Pages 459-470
Week 3	Th. Feb 6	Chap 12: Items, 1, 2 and 3. Pages 509-523
Week 4	Th. Feb 13	Chap 13: Items, 1 and 2. Pages 449-460
Week 5	Th. Feb 20	Chap 13 continued: 3 and 4. Pages 464-470
Week 6	Th. Feb 27	Chap 7: Items, 1 and 2. Pages 299-307
Week 7	Th. Mar 6	Chap 7: Items, 3 and 4. Pages 312-321
Week 8	Th. Mar 13	Chap 8: Items, 1 and 2. Pages 339-346
Week 8	Th. Mar 20	Chap 8 continued: Items, 3 and 4. Pages 348-356
Week 9	Th. Mar 27	Spring Break; No lecture 3-(17-21)-2014
Week 10	Th. Apr 3	Chap 10: Items, 1, 2 and 3. Pages 413-431
Week 11	Th. Apr 10	Chap 9: Items, 1 and 2. Pages 371-377
Week 12	Th. Apr 17	Chap 9 continued: Items, 1 and 2. Pages 371-377
Week 13	Th. Apr 24	Chap 16: Items, 1, 2 and 3. Pages 691-713
Week 14	Th. May 1	Chap 14: Items, 1, 2, 3 and 4. Pages 585-610
Week 15	Th. May 8	Final Exam, Comprehensive.

Homework will be assigned on a separate sheet

Disclaimer: Information contained in this syllabus was, to the best knowledge of the instructor, considered correct and complete when distributed for use at the beginning of the semester. However, this syllabus should not be considered a contract between Oglala Lakota College and any student. The instructor reserves the right to make changes. Students will be informed of any such change.

Lecture Assignments.

<i>Date</i>	<i>Objectives by Chapter</i>	<i>Assignments</i>
Oko Wanci 01/23/2014	Chapter 7, items: 1, 2, 3 and 4. Pages: 299-321	Assigned Exercises: Page 328, exercises 35 and 37. Page 329, exercises 39 and 41. Page 330, exercises 43, 45, 47, 49, 52 and 54. Page 331, exercises 56, 58 and 60. Page 332, exercises 62, 64, 66 and 69. Page 333, exercises 71, 72, 74, 76 and 78. Page 334, exercises 80, 82 and 84. Page 335, exercises 86, 88 and 91. Page 336, exercises 93, 95 and 97. Page 337, exercises 99, 101, 103 and 105.
Oko Nunpa 01/30/2014	Chapter 11, items: 1 and 2. Pages: 459-470	Assigned Exercises: Page 496, exercises 34, 36, 38, 40, 42 and 44. Page 497, exercises 47, 49, 51, 53 and 55. Page 498, exercises 57, 59, 61 and 63.
Oko Yamni 02/06/2014	Chapter 11, items: 3 and 4. Pages: 478-485. Homework assignment for chapter 7, items 1, 2, 3 and 4 is due .	Assigned Exercises: Page 499, exercises 65, 67, 69 and 71. Page 500, exercises 73, 75, 77, 78 and 80. Page 501, exercises: 82 and 85. Page 502, exercises 87, 89, 91 and 93. Page 503, exercises 95. Page 504, exercises 97, 100, 102 and 104. Page 505, exercises 106 and 108. Page 506, exercises 110.
Oko Topa 02/13/2014	Exam # 1. Chapters 7 and 11. Homework assignment for chapter 11, items 1, 2, 3 and 4 is due . To understand chapter 12, items: 1 and 2. Pages 509 to 518	Assigned Exercises: Page 543, exercises 40. Page 544, exercises 42, 443 and 45. Page 545, exercises: 47,49 and 51
Oko Zaptan 02/20/2014	To understand chapter 12, items: 3. Pages 519-523 To understand chapter 13, items: 1 and 2. Pages 549-563. Homework, assignment from chapter 12, items 1 and 2 is due .	Assigned Exercises: Page 545, exercises 52 and 54. Page 546, exercises 57, 59, 61 and 63. Page 547, exercises: 65, 67 and 69. Page 578, exercises: 31. Page 579, exercises: 33, 36 and 38. Page 580, exercises: 40, 42, 44, 47, 49 and 51. Page 581, exercises: 53, 55 and 57.
Oko Sakpe 02/27/2014	To understand chapter 13, items: 3 and 4. Pages 564 to 570 Homework, assignment from chapter 12, items 3 and	Assigned Exercises: Page 582, exercises 59, 61, 63 and 65. Page 583, exercises 67

	chapter 13, items 1 and 2 is due .	
Oko Sakowin 03/06/2014	Exam # 2, Chapters 12 and 13, all items. To understand chapter 8, items: 1, 2 and 3. Pages 339-356. Homework, assignment from chapter 13, items 3 and 4 is due .	Assigned Exercises: Page 364, exercises: 30, 32, 34, 36 and 38. Page 365, exercises 40, 42, 44 and 46. Page 366, exercises 48 and 50. Page , exercises 57, 59,61 and 62
Oko Saglogan 03/13/2014	To understand chapter 8, items: 4. Pages 356- 360. And chapter 10, items 1 and 2. Homework, assignment from chapter 8, items 1, 2, 3 is due .	Assigned Exercises: Page 356, exercises: 53, 55, 57 and 59. Page 367, exercises: 61, 63 and 65.
Oko Napcinyunka 03/20/2014	To understand chapter 10, items: 1, 2 and 3. Pages 413-431. Homework, assignment from chapter 10, items 3 and 4 is due .	Assigned Exercises: Page 442, exercises: 22. Page 443, exercises 24 and 26. Page 444, exercises 28. Page 445, exercises 31. Page 446, exercises 33. Page 447, exercises 35, 38 and 40. Page 448, exercises 42, 44, 46 and 48. Page 449, exercises 50, 52, 54, 56 and 56. Page 450, exercises 58, 60 and 62. Page 451, exercises 64 and 66. Page 452, exercise 68. Page 453, exercises 70 and 72. Page 454, exercises 74, 76 and 78. Page 455, exercises 80, 82, 84 and 86. Page 456, exercises 88, 90 and 92. Page 457, exercises 94, 96 and 98.
Oko Wikcemna 03/27/2014	Exam # 3. Chapters 10 and 8. To understand chapter 9, items: 1 and 2. Pages 371-382. Homework, assignment from chapter 10, items 1, 2 and 3 is due .	Assigned Exercises: Page 398, exercises: 30. Page 399, exercises 32, 34, 36 and 38. Page 400, exercises 40, 42 and 45. Page 401, exercises 47, 49 and 51. Page 402, exercises 53.
Oko Ake Wanci 04/03/2014	To understand chapter 9, items: 3 and 4. Pages 382 to 393. Homework, assignment from chapter 9, items 1 and 2 is due .	Assigned Exercises: Page 402, exercises: 55. Page 403, exercises 57 and 59. Page 404, exercises 61, 62, 63 and 65. Page 405, exercises 67 and 69. Page 406, exercises 71 and 73. Page 407, exercises 75, 77 and 79. Page 408, exercises 81 and 82. Page 409, exercises 85, 87 and 89. Page 410, exercises 91, 93 and 95.
Oko Ake Nunpa 04/10/14	To understand chapter 16, items: 1, 2 and 3. Pages 691 to 713. Homework, assignment from chapter 9, items 3 and 4 is due .	Assigned Exercises: Page 727, exercises: 50, 52, 54, 56, 58, 60 and 62. Page 728, exercises 64, 68 and 73. Page 729, exercises 76, 80 and 84. Assigned Exercises:

		Page 730, exercises: 86, 90, 92 and 94. Page 731, exercises 98, 102, 107 and 113. Page 732, exercises 117, 120, 124, 128, 132 and 136.
Okon Ake Yamni 04/17/2014	Exam # 4, chapters 9 and 16. To understand chapter 14, items: 1, 2, 3 and 4. Pages 585 to 610. Homework, assignment from chapter 16, items 1, 2 and 3 is due .	Assigned Exercises: Page 624, exercises: 33. Page 625, exercises 35. Assigned Exercises: Page 626, exercises: 37, 39 and 43. Page 627, exercises 45, 47 and 50. Assigned Exercises: Page 628, exercises: 52, 54 and 56.
Okon Ake Topa 04/24/2014	Review on chapters 11, 12, 13, and 7, all items. Practice for final exam.	No Assignments
Okon Ake Zaptan 05/1/2014	Review on chapters 8, 10, 9, 16 and 14, all items. Practice for final exam.	No Assignments
Okon Ake Zaptan 05/8/2014	Final Exam. 7, 8, 9, 10, 11, 12, 13 and 16. Comprehensive. Chapters	No Assignments