

**INDIAN RIVER STATE COLLEGE  
GENERAL CHEMISTRY II  
FALL SEMESTER 2014**

**Course Prefix:** CHM 1046

**Instructor:** Mr. Michael P. Jones

**Office:** Science Center (Main campus), Room N-307

**Telephone:** (772) 462-7855

**E-mail Address:** mjones@irsc.edu or angel

**Office Hours:** Available During Posted Hours

**Additional Hours Available by Appointment**

**Lecture:** TR 9:30-10:45-A.M.

**Required Text:** *Chemistry: Matter and Its Changes*, 6<sup>th</sup> Edition, by Jespersen, Brady, & Hyslop

**Additional Requirement:** Scientific Calculator; must have scientific notation (EE or EXP key) and common log (LOG key) and natural log (LN key) capability.

**Course Description:** CHM 1046 is the second semester of a two-course sequence covering general chemistry. This course involves the study of more advanced concepts in general chemistry, including intermolecular attractions, kinetics, equilibrium, acid-base chemistry, thermodynamics, and electrochemistry. Prerequisite for this course are CHM 1045 and CHM 1045L. Corequisite is CHM 1046L.

**Course Objectives:** After completing this course, the student will be able to:

- Follow the scientific method to solve problems
- Use the metric system
- Describe properties of solids and liquids
- Understand molecular forces of attraction
- Describe properties of solutions
- Explain the principles of chemical equilibrium
- Understand chemical kinetics
- Perform thermodynamic calculations
- Describe electrochemical reactions

**Learning Outcomes:** Upon successful completion of this course, the student should be able to apply critical thinking to problem solving in chemistry

**Attendance:** You are **responsible** for all material covered in lecture. For this reason attendance at all lectures is expected. Absences will lower your comprehension of the material and could be a major contributor to a difficulty with the course material. Attendance will be taken during each class period. Attendance is mandatory if indicated by your financial aid or granting agency.

**Class Conduct:** Classes will begin and end on time. To minimize disruptions to others, students must be on time and plan to stay until class is dismissed. A student will be allowed three tardies. Each subsequent time a student is late will result in a three percentage point deduction from the next exam. Please turn off all electronic devices (cell phones, texting devices, etc.) while class is in session. Any student who uses a cell phone to make or answer a call, or send and read text messages or e-mails may be asked to leave and considered to absent from that class. No student has the right to disturb the teaching and learning process.

**Cheating/Plagiarism:** Anyone caught cheating or plagiarizing will get an immediate F for the course and will be reported to the Vice President of Student Affairs.

**Withdrawal from the Course:** The last day to withdraw from the course with a grade of "W" is November 6. After this date, an instructor's withdrawal will only be given for extraordinary circumstances (illness, military commitment, etc.) Please note that **a failing grade is not considered sufficient reason for an instructor's withdrawal.**

**Grades:** Determination of the final grade for the course will be based on hour exams, quizzes and a comprehensive a final exam The distribution will be as follows::

Hour Exams	75 %
Final Exam(comprehensive)	25 %

The final letter grade will be based on the following percentage scale:

A	90-100
B	89-80
C	70-79
D	60-69
F	<60

**Hour Exams:** There will be three one-hour exams given as shown on the schedule. The lowest of the four exams will be dropped. There will be no make-up exams. **Note: The dropped score is in case you get ill on the test day or are unable to take the exam for any other reason. Students must be on time for exams. If a student is more than 10 minutes late, the student will not be allowed to take the exam.**

**Homework Problems:** At the end of each chapter I will recommend that you work certain problems. These problems are not collected or graded.

**Final Exam:** A comprehensive, two-hour final exam will be given covering all lecture material.  
**The final exam cannot be made up.**

**Accessibility Statement:** In compliance with the Rehabilitation Act of 1973, Section 504, and the American Disabilities Act of 1990, professional disability specialists and support at Student Disability Services (SDS) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities. IRSC offers many disability resources at on-campus labs. Students who wish to request an accommodation for a documented disability should contact the SDS at 772-462-7782 or 772-462-7808.

### **Non-Discrimination and Non-Harassment Policy**

Indian River State college is committed to maintaining a fair and respectful employment and educational environment. In accordance with federal, state, and local equal opportunity laws, Indian River State college prohibits discrimination on the basis of race, color, national origin, ethnicity, sex, religion, age, disability, sexual orientation, marital status, veteran status, or genetic information.

## TENTATIVE LECTURE SCHEDULE

<u>Chapter</u>	<u>Subject</u>
12	Intermolecular Attractions
13	Properties of Solutions
14	Chemical Kinetics
15	Chemical Equilibrium
16	Acids and Base: A molecular look
17	Acid-Base Equilibria
18	Solubility & Simultaneous Equilibria
19	Thermodynamics
20	Electrochemistry
21	Nuclear Chemistry

## EXAM SCHEDULE

<u>Exam</u>	<u>Date</u>
Exam #1	Sept 18
Exam #2	Oct 9
Exam #3	Oct 30
Exam #4	Nov 25
Final Exam	Dec 11

## SUGGESTED REVIEW QUESTIONS & PROBLEMS

Chapter	Questions & Problems
12	1-3, 5-12, 16-18, 27, 28, 33 34, 38, 40, 41, 43, 45, 49-52, 57-59, 62-65, 67, 68, 78-80, 83, 85, 87, 91, 93, 97, 99, 101, 107, 119, 121
13	3, 4, 17, 18, 20, 21, 24, 32, 38, 44, 52, 54, 59, 66, 68, 73
14	1, 5, 14, 15, 17-19, 22, 23, 28, 29, 34, 35, 37, 40, 41, 48, 54, 56, 60, 62, 64, 68, 74, 78, 82, 94
15	3, 8, 9, 9, 11, 14, 15, 17, 21, 23, 27, 31, 33, 35, 37, 41, 43, 45, 47, 49, 51, 53, 55, 59, 67, 71
16	1, 2, 4, 6, 7, 8, 11, 14, 18-22, 24, 25, 33, 36, 38, 40, 42, 44, 48,, 52
17	1, 2, 3, 6, 8-19, 22, 24, 25, 28, 30, 42, 44, 46, 48, 50, 52, 54, 56, 62, 64, 66, 68, 70, 74, 90, 92, 100
18	1, 3, 4, 18, 20, 22, 24, 26, 28, 30, 34, 36, 42, 44, 46, 48, 52, 54
19	10, 11, 16, 18, 20, 22-25, 27-29, 34, 36, 42, 70, 74, 76, 80
20	1-5, 8, 10-12, 15-18, 20, 22, 29, 35, 37, 40, 44, 50, 52, 54, 56, 58, 62, 66, 68, 72, 80, 84, 86,
21	7-10, 24, 27, 28, 33, 34, 58, 60, 62, 64, 72, 74, 84, 88