

# Preparing people to lead extraordinary lives

## CHEM 102 – 003: GENERAL CHEMISTRY B Lec/Disc SUMMER SESSION II\_2019 Loyola University Chicago

**Instructor:** Dr. Angela Mahaffey **Phone:** (773) 508-2902 (Office) **Email:** amahaf1@luc.edu

Office Hours: (BVM HALL 907) Wednesdays 4-5pm - by appointment.

**Class Meeting Location and Times:** 

Mundelein Center Rm 205; Mon/Tues/Wed 9-1140am (July 1 – August 7).

**Prerequisites:** CHEM 101 or 105. MATH 118 or equivalent.

**Co-requisite:** Update: CHEM 112 and CHEM 102 are "all or nothing" courses. As such, per the LUC Dept. of Chemistry and Biochemistry, "You cannot drop 102 and stay in 112."

### **Course Description (LOCUS):**

This non-majors course further develops principles from CHEM 101 & requires in-depth integration of concepts. Multiple perspectives of matter will be used to describe/explain characteristics, properties, & relationships across the following topics: liquids & solids, solutions, reaction kinetics, equilibria, acids & bases, reaction thermodynamics, electrochemical reactions.

#### Outcome:

Students will deepen their understanding of foundational concepts of chemistry and advance their skills in scientific problem solving, critical thinking and synthesis of concepts.

### **Required Textbook and Online Source:**

- (1) T.L. Brown et al. (2018). Chemistry: The Central Science (with Mastering Chemistry), 14th ed.
- (2) <u>www.masteringchemistry.com</u> \*Mastering Chemistry site will be used for Homework assignments and Exams. Course ID: <u>MCMAHAFFEYCHEM102003SU2019</u>
- (3) CHEM 102: General Chemistry B (Summer) Discussion Sheets to be provided in class.

### Attendance, Discussion Participation and Exam Policy:

Lecture/Discussion attendance is **Mandatory** for this General Chemistry B course. Participation in Discussion and completion of Discussion worksheets is also a requirement. No Discussion worksheets will be assigned on "Exam Days". Exams will cover previously detailed lecture materials. **Each student must complete his/her own Discussion Sheet and Exam. Violation of either results in automatic loss of ALL possible Discussion points and Exam points.** 

### Academic Honesty ("Integrity") and Student Code of Conduct:

Plagiarism on the part of a student in academic work or dishonest examination behavior will result minimally in the instructor assigning the grade of "F" for the assignment or examination. In addition, all instances of academic dishonesty must be reported to the chairperson of the department involved.

[...]Academic cheating is another serious act that violates academic integrity. Obtaining, distributing, or communicating examination materials prior to the scheduled examination without the consent of the teacher; providing information to or obtaining information from another student during the examination; attempting to change answers after the examination has been submitted; and falsifying medical or other documents to petition for excused absences all are violations of the integrity and honesty standards of the examination process.

### (http://www.luc.edu/academics/catalog/undergrad/reg\_academicintegrity.shtml)

**Student Code of Conduct:** We want to underscore that Loyola's Student Code of Conduct applies equally in face-to-face, online, and community-based instructional spaces. For the complete document, see <a href="https://www.luc.edu/media/lucedu/osccr/pdfs/LUC%20COMMUNITY%20STANDARDS%202018-2019.pdf">https://www.luc.edu/media/lucedu/osccr/pdfs/LUC%20COMMUNITY%20STANDARDS%202018-2019.pdf</a>.

## **Harassment/Bias Reporting**

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias. (http://www.luc.edu/hr/biasreporting.shtml)

#### **Services for Students with Disabilities**

If you require special accommodations for testing procedures, please obtain a completed SSWD form from Services for Students with Disabilities (6339 N. Sheridan Rd., Chicago, IL 60660 · 773.508.3700 (ph) - http://www.luc.edu/sswd/register.shtml)

#### **Tutoring Services**

Loyola University Chicago's Center for Tutoring and Academic Excellence Offers Tutoring Services, details can be found here: <a href="http://luc.edu/tutoring/">http://luc.edu/tutoring/</a> \*Additionally, during the Spring and Fall Semesters LUC's ACS (American Chemical Society) chapter offers tutoring in Flanner Hall (Rm 129) Time and Dates TBD (see Chemistry Office Personnel for updates).

#### **Course Grade & Points Distribution**

Discussion (D.S.)/	+0.5pts. Extra Credit per D.S.
Attendance	(Due day of lecture – in class.)
MASTERING CHEMISTRY (Homework)	Best 5 of 6 (10pts each) = 50pts (10%)
EXAMS	3 x 100pts (60%)
FINAL EXAM	150pts (30%)
TOTAL	500 pts

Letter
Grade
A
A-
B+
В
B-
C+
С
C-
D+
D
*D-
F

### Tentative Lecture/Discussion Schedule and Assignments Dates

WEEK 1 July 2 N.C. Homework (Chp. 14) available 7/3  Chp. 15: Chemical Equilibrium, Discussion Sheets (D.S.) #1-2  *M.C. Homework (Chp. 14) available 7/3  Chp. 15: Chemical Equilibrium, Chp. 16: Acid-Base Equilibria, D.S. #3-4  *M.C. Homework (Chp. 15) available 7/8  *M.C. Homework (Chp. 16) available 7/9  EXAM #1 (M.C.) avail. 9a (7/10, WEDNESDAY) - Chapters 14-16  Chp. 17: Additional Aspects of Aqueous Equilibria, Chp. 18: Chemistry of the Environment, D.S #5-6  *M.C. Homework (Chp. 17) available 7/16  Chp. 19: Chemical Thermodynamics, Chp. 20: Electrochemistry, D.S. #7-8  *M.C. Homework (Chp. 19) available 7/23  EXAM #2 (M.C.) avail. 9a (7/24, WEDNESDAY) - Chapters 17-19  WEEK 5 July 29-31  Chp. 22: Chemistry of Nonmetals, D.S. #9  *M.C. Homework (Chp. 20) available 7/29  EXAM #3 (M.C.) avail. 9a (7/31, WEDNESDAY) - Chapters 20 and 22  Chp. 23: Transition Metals and Coordination Chemistry, D.S. #10  REVIEW  **DEAD LINE for All M.C. Assignments 8/7			Chp. 14: Chemical Kinetics,
*M.C. Homework (Chp. 14) available 7/3  Chp. 15: Chemical Equilibrium, Chp. 16: Acid-Base Equilibria, D.S. #3-4  *M.C. Homework (Chp. 15) available 7/8  *M.C. Homework (Chp. 16) available 7/9  EXAM #1 (M.C.) avail. 9a (7/10, WEDNESDAY) - Chapters 14-16  Chp. 17: Additional Aspects of Aqueous Equilibria, Chp. 18: Chemistry of the Environment, D.S #5-6  *M.C. Homework (Chp. 17) available 7/16  Chp. 19: Chemical Thermodynamics, Chp. 20: Electrochemistry, D.S. #7-8  *M.C. Homework (Chp. 19) available 7/23  EXAM #2 (M.C.) avail. 9a (7/24, WEDNESDAY) - Chapters 17-19  WEEK  July 29-31  Chp. 22: Chemistry of Nonmetals, D.S. #9  *M.C. Homework (Chp. 20) available 7/29  EXAM #3 (M.C.) avail. 9a (7/31, WEDNESDAY) - Chapters 20 and 22  Chp. 23: Transition Metals and Coordination Chemistry, D.S. #10  REVIEW  *DEAD LINE for All M.C. Assignments 8/7		•	-
WEEK 2 July 8-10  Chp. 15: Chemical Equilibrium, Chp. 16: Acid-Base Equilibria, D.S. #3-4  *M.C. Homework (Chp. 15) available 7/8  *M.C. Homework (Chp. 16) available 7/9  EXAM #1 (M.C.) avail. 9a (7/10, WEDNESDAY) – Chapters 14-16  Chp. 17: Additional Aspects of Aqueous Equilibria, Chp. 18: Chemistry of the Environment, D.S #5-6  *M.C. Homework (Chp. 17) available 7/16  Chp. 19: Chemical Thermodynamics, Chp. 20: Electrochemistry, D.S. #7-8  *M.C. Homework (Chp. 19) available 7/23  EXAM #2 (M.C.) avail. 9a (7/24, WEDNESDAY) – Chapters 17-19  WEEK 5  July Chp. 22: Chemistry of Nonmetals, D.S. #9  *M.C. Homework (Chp. 20) available 7/29  EXAM #3 (M.C.) avail. 9a (7/31, WEDNESDAY) – Chapters 20 and 22  Chp. 23: Transition Metals and Coordination Chemistry, D.S. #10  REVIEW  *DEAD LINE for All M.C. Assignments 8/7		1-3	
WEEK 2 July 8-10 Chp. 16: Acid-Base Equilibria, D.S. #3-4  *M.C. Homework (Chp. 15) available 7/8  *M.C. Homework (Chp. 16) available 7/9  EXAM #1 (M.C.) avail. 9a (7/10, WEDNESDAY) - Chapters 14-16  Chp. 17: Additional Aspects of Aqueous Equilibria, Chp. 18: Chemistry of the Environment, D.S #5-6  *M.C. Homework (Chp. 17) available 7/16  Chp. 19: Chemical Thermodynamics, Chp. 20: Electrochemistry, D.S. #7-8  *M.C. Homework (Chp. 19) available 7/23  EXAM #2 (M.C.) avail. 9a (7/24, WEDNESDAY) - Chapters 17-19  WEEK 5 July 29-31 Chp. 22: Chemistry of Nonmetals, D.S. #9  *M.C. Homework (Chp. 20) available 7/29  EXAM #3 (M.C.) avail. 9a (7/31, WEDNESDAY) - Chapters 20 and 22  Chp. 23: Transition Metals and Coordination Chemistry, D.S. #10  REVIEW  *DEADLINE for All M.C. Assignments 8/7			
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WEEK August *DEADLINE for All M.C. Assignments 8/7			EXAM #3 (M.C.) avail. 9a (7/31, WEDNESDAY) – Chapters 20 and 22
WEEK August *DEADLINE for All M.C. Assignments 8/7	WEEK 6	August 5-7	Chp. 23: Transition Metals and Coordination Chemistry, D.S. #10
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<b>1</b>			*DEADLINE for All M.C. Assignments - 8/7
FINAL (PARTS A-B) [COMPLETE BOTH FOR FULL CREDIT]			
(M.C.) avail. 9a (8/7, WEDNESDAY) – CUMULATIVE			

# **IDEA Objective:**

At the end of the Summer Session II semester, you will receive an email with a link for the electronic course evaluation noting the IDEA objectives for this course. Those IDEA objectives are noted online.

## Laptops, Notebooks/Computers, Tablets/iPads, Cell Phones and Recording Devices:

- All laptops, notebooks/computers, tablets/iPads and cellphones (or any categorically befitting electronic) must be muted prior to the beginning of class – and ONLY utilized for the purposes of CHEM 102 or making an emergency/medical related phone call.
- Absolutely NO social media usage or streaming is allowed.
- No audio, photo or video recordings of the class lectures/discussions are allowed.
- Any violation of this policy will result in an automatic failure.

#### It is in the best interest of the student to:

- Take "good" (useful) Lecture Notes.
- Read/Review course material prior to Lecture and Exams.
- Complete Discussion worksheets in class, day of lecture **NO EXCEPTIONS.**
- Meet during Office Hours, if more explanation of Lecture/Discussion materials is needed.
- Complete Mastering Chemistry (online) Homework Assignments.
- Review Key Equations and Terms (suggestion: create personal study guides).