

# Chem 102-001/ Fall 2019/ Loyola University Chicago/ Syllabus/ A. Fitch

**Lecture:** MWF 9:20-10:10 am Life Science Room 142

**Discussion:** You must attend the section for which you are registered as rooms are assigned on capacity by the college  
Chem 102-002 Tuesday 8:30-9:20 am Flanner Hall Room 105  
Chem 102-003 Tuesday 10:00-10:50 am Flanner Hall Room 7  
Chem 102-004 Tuesday 11:30-12:20 pm Flanner Hall Room 7

**Instructor** Dr. Alanah Fitch

- **Office** Flanner Hall 418
- **Office Hours:** 1:00-2:00, MF; Th 1:00-2:00
- **Email** To receive a response use your Loyola email account and send to afitch@luc.edu with only Chem 102 in subject line. Other email titles may not be answered. Emails will be answered within 3 days. Collective emails will be sent to the class via Sakai (to your Loyola account). Emails are NOT answered over the weekend.

## Description:

- A study of chemical principles and generalizations
  - a. Quantify relationships between variables controlling chemical systems.
  - b. Solve quantitative multistep problems combining multiple concepts within the systems.
  - c. Differentiate among closely related factors, categorize problem types, & select appropriate tools to solve these problems. Apply chemical principles to explain natural phenomena.
- We will look at
  - a. States of matter
  - b. Intermolecular forces and solution chemistry
  - c. Chemical kinetics
  - d. Chemical equilibrium acid and base chemistry
  - e. Chemical thermodynamics
  - f. Electrochemistry
- You should learn to apply and evaluate these concepts as a means of applying chemical principles to solve societally important problems.
  - a. Critical thinking about these concepts will be evaluated in terms of
  - b. The fate of lead, Pb, in our current world.

**Text:** The textbook/eText is Required for class (*Chemistry The Central Science*, Brown et al, 14<sup>th</sup> edition); the student guide and solutions manual are Optional. Any on-line learning course is optional.

**Class attendance** and active participation is expected of all students; **there are no make-up classes or assignments.** You are responsible for all material presented handed out, or recommended. If you miss a class for any reason, contact a classmate promptly for notes and topics covered. Prepare for lecture by reading ahead in the textbook and working end of the chapter problems.

**No early exams, no make-ups, no exceptions.**

**No early discussion problems out of discussion section, no make-ups, no exceptions**

## Sakai will be used to post

- Syllabus
- Study guides and advice
- Announcements
- Lecture power points. Those power points are **!!!!subject to change!!!!!!** Final ppt should be cross compared with your lecture notes. The power points are best used as ppt, as re-reading as a ppt. Downloading may result in overlapping images.
- **No grades are posted on Sakai. You, as responsible adults, should be able to add up the scores you are getting and calculate total points. See grading scheme below.**
- Midterm grades will be posted to Locus.
- They will be calculated on possible points to midterm and assigned letter grades as per below.

**Extra Credit:** A chance to obtain extra credit is offered. The magnitude of the extra credit possible is 10 points and therefore is worth doing. Instructions are posted in Sakai.

### Discussion Section

- Goals
  - to foster the establishment of study groups
  - to model how to work problems in a supportive environment
  - to present students with a range of problems consistent with those that will be provided on exams.
- Grading
  - A sheet showing work is proof of attendance, keep it so if you have a concern you can demonstrate it. If not your concern will not count.
  - Discussion will count toward the 24 points possible for the semester.
  - There are 8 mandatory discussion periods. Each is worth 3 points
  - 4 discussions are review sessions.
  - There may be unannounced “mock” exams.
- **BRING YOUR TEXTBOOK TO DISCUSSION FIRST & SUBSEQUENT DAYS AS IT WILL BE THE PRIMARY TOOL USED!!!!!!**

### Exam Tools:

#### 1. Calculator

- a. Each student will need a calculator approved for use on the ACT exam are permitted
- b. All calculator memory must be cleared prior to use on exams
  - i. Calculators cannot be shared between students.
- c. Cell phones are not permitted during the exam
  - i. Cell Phone use is considered dishonest (see below for consequences).

#### 2. Cheat Note Card:

- a. No equation or constants are provided with the exam.
- b. You may construct a “cheat” sheet with pedagogical rational that you organize and hence perform better using this material.
  - i. Therefore, students **must** bring a 3x8 note card (available from Amazon or Staples).
  - ii. **Single sided**
  - iii. Name printed upper right hand corner front side last name first.
  - iv. No worked problems (grade of “0” assigned for worked problems on cheat sheet)
  - v. No completed essays for any essay questions
  - vi. Must be turned in with exam.
  - vii. 3 points deducted for not following these instructions.

#### 3. A periodic table is supplied

#### 4. Scratch paper is supplied

### Exam Content

- Text heavy. (This is why you rent or buy a text!) “A” students do 10 problems/night
  - Selections of problems from discussion (numbers changed)
  - Problems from the discussion that are “inverted”
  - Problems non-worked but at the end of the chapter.
  - Problems from example problems in the text
  - Problems from power points
- Essay on primary “relevance of chemistry” discussed in class.

### Exam Format:

- Exams consist of multiple choice
- Any long answers (calculations or essays) will appear ***at the end*** of the exam
  - Work these on the back of the scantron.

### Exam Grading:

- Grades over 100 may be obtained if there is an extra credit problem
- In the event that the class exam average is below a C grade a curve will be applied to bring the class average to a C
- No score may exceed 100 points in the event of an adjustment such as might occur due to curving.

### Letter grades:

- Letter grades are only assigned to your end of semester total points, not percentages
- Letter grades are not assigned to individual assignments, quizzes or exams.
- **Midterm grade report (scores you have entered in my grade book)** will be either emailed to students or written on the exams returned.
- Total end of semester **points are not rounded up** after calculation.

### Course Grades assigned by total points shown out of 534

- *Scaled to GPA calculations out of 4 established by College*

Grade	College GPA	College %	This class %	This class points	Metric	points	%
				529		3	
A	4	100	95	503	Discussion	24	5
A-	3.67	91.75	92	487	Pb reflection	5	1
B+	3.33	83.25	83	439	Exam 1	100	19
B+	3	75	75	397	Exam 2	100	19
B-	2.67	66.75	67	354	Exam 3	100	19
C+	2.33	58.25	58	307	Exam 4	100	19
C+	2	50	50	265	Final	100	19
C-	1.67	41.75	42	222	Total	529	100
D+	1.33	33.25	33	175	EC	10	2
D-	1	25	25	132			
F	0	0	0	0			

### EXAM Dates (Will not be changed, plan your cumulative study schedule accordingly)

- Exam 1** Wed Sept 18
- Exam 2** Wed Oct 16
- Exam 3** Wed Nov 13
- Exam 4** Fri Dec 6 (last day of semester)

Classes meeting MWF 9:20-10:10 have a

Final Sat Dec 14 1-3 p.m (cannot be changed as per university policy)

**Review sessions outside of class prior to exams may be offered.** Discussion prior to exam is also a review session.

- Review sessions are student driven, do not expect hints on what to expect, types of problems etc.
- Problems that are stumping students will be worked.
- Munchies will be provided.

### Calendar and Scheduled Content

For the College academic calendar please see [www.luc.edu/academics/schedules](http://www.luc.edu/academics/schedules)

A tentative schedule is given here and on Sakai, ***subject to change***. We will cover roughly Chapters 11-17, 19-20 during the semester. We will begin with Chapter 11 on the first day of class, but not all textbook sections will be fully covered, so focus first on the material that is directly covered in lecture and assigned for homework, quizzes and recommended problems.

**READ BOOK SECTIONS BEFORE CLASS (ESPECIALLY DISCUSSION)**

<b>Week</b>	<b>Begins</b>	<b>Chap</b>		<b>Book Section</b>
<b>1</b>	Mon 8/26	Ch 11	Liquids Intermolecular Forces	11.1-2; 11.4-5
<b>2</b>	Mon 9/2 No Class Labor Day			
	<b>Tues 9/3 Class resumes (Discussion)</b>	Ch 12	Solids	12.1-12.5; 12.7
<b>3</b>	Mon 9/9	Ch 13	Properties of Solutions	13.1-13.6
	Tues 9/10 <i>Discussion</i>			
<b>4</b>	Mon 9/16	Ch 14	Chem Kinetics	14.1-14.2
	<b>Tues 9/17 Discussion=Review; Optional</b>			
	Wed 9/18		EXAM 1: Ch 11-13	
<b>5</b>	Mon 9/23	Ch 14	Chem Kinetics	14.3-14.4
	Tues 9/24 <i>Discussion</i>			
<b>6</b>	Mon 9/30	Ch 21	Nuclear Kinetics	21.1-21.2
	Tues 10/1 <i>Discussion</i>			
<b>7</b>	Mon 10/7 Fall Break No Class			
	<b>Tues 10/8 Fall Break No Discussion</b>			
	Wed 10/9 Class resumes	Cha 14/21	Chem and Nuclear Kinetics	21.3 and 14.5-7
<b>8</b>	Mon 10/14	Ch 15	Chem Equilibria	15.1-15.7
	<b>Tues 10/15 Discussion=Review; Optional</b>			
	Wed 10/16		EXAM 2: Ch 14-15&21	
<b>9</b>	Mon 10/21	Ch 16	Acid Base Equilibria	16.1-16.11
	Tues 10/22 <i>Discussion</i>			
	Fri 10/25 <i>Midterm grades due on LOCUS</i>			
<b>10</b>	Mon 10/28	Ch 17	Additional Aspects of Aqueous Equilibria	17.1-17.2
	Tues 10/29 <i>Discussion</i>			
	Fri 10/1 <i>Last day to withdraw with a grade of "W," After this date the penalty grade of "WF" is assigned</i>			
<b>11</b>	Mon 11/4	Ch 17	Additional Aspects of Aqueous Equilibria	17.3-17.6
	Tues 11/5 <i>Discussion</i>			
<b>12</b>	Mon 11/11			
	<b>Tues 9/12 Discussion=Review; Optional</b>			
	Wed 11/13		EXAM 3 Ch 16-17	
<b>13</b>	Mon 11/18	Ch 19	Chem Thermodynamics	19.1-19.4
	Mon 11/18 <i>noon, extra credit paper is due</i>			
	Tues 11/19 <i>Discussion</i>			
	Wed 11/15	Ch 19	Chem Thermodynamics	19.5-19.7
	Tues 11/16 <i>Discussion</i>			
<b>14</b>	Mon 11/25	Ch 20	Electrochemistry	20.1-20.2
	Tues 11/26 No Discussion (Thanksgiving)			
<b>15</b>	Wed 11/27-Fri 11/29 Thanksgiving No Class			
<b>16</b>	Mon 12/2 Class (Last Week)	Ch 20	Electrochemistry	20.4-20.6
	<b>Tues 12/3 Discussion=Review; Optional</b>			
	Fri 12/6		EXAM 4 Ch 19-20	

## Academic Integrity

All students in this course are expected to have read and to abide by the demanding standard of personal honesty, drafted by the College of Arts & Sciences, which can be viewed at:

<http://www.luc.edu/cas/advising/academicintegritystatement/>

A basic mission of a university is to search for and to communicate the truth as it is honestly perceived. A genuine learning community cannot exist unless this demanding standard is a fundamental tenet of the intellectual life of the community. Students of Loyola University Chicago are expected to know, to respect, and to practice this standard of personal honesty.

Academic dishonesty can take several forms, including, but not limited to cheating, plagiarism, copying another student's work, and submitting false documents.

Any instance of dishonesty (including those detailed on the website provided above or in this syllabus) will be reported to The Chair of The Department of Chemistry & Biochemistry who will decide what the next steps may be.

Examples of cheating include, but are not limited to:

- Obtaining, distributing, or communicating examination materials prior to the scheduled examination without the consent of the teacher
- Providing information to another student during an examination
- Obtaining information from another student or any other person during an examination
- Using any material or equipment during an examination without consent of the instructor, or in a manner which is not authorized by the instructor
- Attempting to change answers after the examination has been submitted
- Any other action that, by omission or commission, compromises the integrity of the academic evaluation process

## Students with Disabilities Accommodations

If you have any special needs, please let me know in the first week of classes. The university provides services for students with disabilities. Any student who would like to use any of these university services should contact the Services for Students with Disabilities (SSWD), Sullivan Center, (773) 508-3700. Accommodations are provided by the Services for Students with Disabilities center, after receiving documentation and allowance of a reasonable time-frame for implementation: minimally, one week in advance of an exam. Accommodations cannot be retroactive. Information for students with disabilities is available at:

<https://www.luc.edu/sswd/index.shtml>

## Loyola University Absence Policy for Students in Co-Curricular Activities (including ROTC):

Students missing classes while representing Loyola University Chicago in an official capacity (e.g. intercollegiate athletics, debate team, model government organization) shall be allowed by the faculty member of record to make up any assignments and to receive notes or other written information distributed in the missed classes.

Students should discuss with faculty the potential consequences of missing lectures and the ways in which they can be remedied. Students must provide their instructors with proper documentation (develop standard form on web) describing the reason for and date of the absence.

This documentation must be signed by an appropriate faculty or staff member, and it must be provided as far in advance of the absence as possible. It is the responsibility of the student to make up any assignments. If the student misses an examination, the instructor is required to give the student the opportunity to take the examination at another time.

(<https://www.luc.edu/athletheadvising/attendance.shtml>)

## Accommodations for Religious Reasons

If you have observances of religious holidays that will cause you to miss class or otherwise effect your performance in the class you must alert the instructor ***within 10 calendar days of the first class meeting of the semester*** to request special accommodations, which will be handled on a case by case basis.

### **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.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting/>

### **Course Repeat Rule**

Effective with the Fall 2017 semester, students are allowed only THREE attempts to pass Chemistry courses with a C- or better grade. The three attempts include withdrawals (W).

After the second attempt, the student must secure approval for a third attempt. Students must come to the Chemistry Department, fill out a permission to register form or print it from the Department of Chemistry & Biochemistry website: <http://www.luc.edu/chemistry/forms/> and obtain a signature from the Undergraduate Program Director, Assistant Chairperson, or Chairperson in Chemistry. A copy of this form is then taken to your Academic Advisor in Sullivan to secure final permission for the attempt.