

Syllabus: General Chemistry A (101)

The purpose of this syllabus is to describe the course, resources, and policies. It is meant help all students understand the expectations and requirements for the course, and it should be used as a reference for questions about policies. When updates to the syllabus are made during the term, a new version will be posted electronically, and all students will be notified.

Course Information

Course: Chemistry 101 – General Chemistry A (3 credits: Lecture & Discussion)

Prerequisites: A satisfactory performance on the Loyola math diagnostic test, completion of Math 117 with a grade of C- or better, or the equivalent. A student missing a prerequisite may be withdrawn at any time.

Time Zone: This syllabus lists dates/times using Chicago local time (U.S. Central Time Zone)

Lectures: 12:35 P – 1:25 P Cuneo Hall Room 210

Discussions: You must attend the section for which you registered:

MWF	12:35 P – 1:25 P	CUN 210	Section 015	Lecture
F*	1:40 P – 2:30 P	*FH 007	Section 016	Discussion
F*	2:45 P – 3:35 P	*FH 007	Section 017	Discussion

Course Coordinator: Dr. Patrick L. Daubenmire (pdauben@luc.edu)

Chemistry 101 is a multi-section lecture & discussion course with common content and common outcomes across all sections. This course includes a Final Exam during the Common Final Exam Period as scheduled by the University. The Course Coordinator is responsible for consultation and coordination with instructors regarding policies, exam writing, and grading. Your Section Instructor is responsible for communicating with you regarding all course content and policies and is the first and primary person you should contact with questions about all aspects of the course. As needed, all Section Instructors will consult with the Course Coordinator throughout the semester.

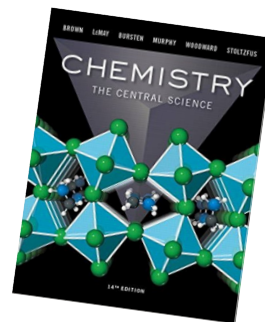
Section Instructor: Willetta Greene Johnson, Ph. D. wgreene@luc.edu

Office: Cudahy Science Hall, Room 322; 8-3537 || **Office Hours:** Wednesday 2:00 P - 3:00 P;
For other times, a Zoom appointment is possible.

Supplemental Instructor (SI): Jacqui Wittman jwittman@luc.edu (details, page 9).

Required Course Materials

- Textbook: *Chemistry The Central Science*, Brown LeMay, et. al., 14th ed.; eText or hard
- Loyola email, Sakai (and integrated tools), Zoom, Gradescope & additional software & online resources.
- Scientific Calculator (non-programmable, non-graphing), e.g, TI-30X
- Additional web-based systems will be used for uploading your work and facilitating feedback and evaluation. Registration will be free but required. Note that the Common Final will be administered and graded with [Gradescope](#).





Recommended Course Materials:

- **Chemistry 101 Course Packet**, authored by the instructor. This useful lecture packet is available at: <https://store.cognella.com/60093-5B-003>.

Useful Course Materials (optional)

- Molecular Model Kit
- Brown LeMay Textbook Solutions Manual, etc.

Copyright/Intellectual Property reminder: Course materials provided by instructors at Loyola, including my materials, may not be shared outside any course without instructor's **written permission**. Content posted without permission will be in violation of Copyright/Intellectual Property laws.

Cell Phone¹ Policy: It is forbidden to video/audio record lecture (except Loyola University staff). ***During exams, cell phone, wireless devices, videos, conference with others and unauthorized materials are strictly forbidden; subject to device confiscation and dismissal from exam.***

Course Content & Learning Outcomes

This course is the first in a 2-term sequence of general chemistry. We focus on building a conceptual understanding of fundamental chemical principles including properties of atoms, molecules, states of matter, and chemical reactions. Students will learn the language of chemistry and develop their skills in scientific problem solving and critical thinking. This will serve as a foundation for further study in chemistry, other sciences and related disciplines.

You will learn to:

- Differentiate types of matter based on their chemical and physical properties (for example, pure substances vs. mixtures, metals vs. nonmetals, ionic vs. covalent vs. metallic, electrolyte vs. nonelectrolyte).
- Use multiple perspectives of matter (macroscopic, particle, symbolic levels) to qualitatively describe and explain characteristics, properties, and relationships of the following: atomic structure, nuclear chemistry, periodicity, molecular structure, chemical bonding, chemical reactions, thermochemistry, aqueous solutions, gases.
- Quantify relationships between variables controlling chemical systems.
- Solve quantitative multistep problems combining multiple concepts within the systems.
- Differentiate among closely related factors, categorize problem types, and select appropriate tools to solve these problems.
- Apply chemical principles to explain natural phenomena.

SAKAI Connection: The syllabus, homework assignments for the semester, discussions, and discussion answers will be posted at the following website: www.luc.edu, look under LINKS, click on **Sakai**). Students possessing a Loyola email address are able to access this site.

Additional Information: For your convenience, protocol regarding soliciting a recommendation from me is listed on page 13, should you desire one and qualify.

Here's a link to Loyola's Academic calendar: www.luc.edu/academics/schedules

¹ All technology, smart phone, tablets, laptops and similar technology...Violations will be treated as instances of **academic dishonesty** (see page 5)



CHEMISTRY 101 Tentative Schedule of Topics

Week / Day	Topic	Chapter	approx. pages
8/29 – 9/2	Intro, Measurements, Reporting Accuracy Periodic Table Overview / Atomic Model	1	2 – 34 Edition 14
9/5	LABOR DAY		No class
9/7, 9/9	Molecular Representation, Atomic/Formula Weights; Avogadro #; Mole	2	42 – 45; pg 72 = alkanes 48 – 73; pg 70 = name acid
9/12 – 9/16	Empirical Formula, Stoichiometry, Combustion, Limiting Reactant; Theoretical vs. Actual Yield	3 3	82 – 98 98 – 110
9/19 – 9/23	Aqueous Rxns, Net Ionic Rxn, (1) Precipitation	4	122–25,129(net ionic), 126-28
9/23	Discussion Activity will include some review		Handouts MAY or MAY NOT be disseminated. Be present.
9/26 Monday	EXAM 1	1 – 3	No phones/tablets/videos, conference w/ others while taking exam.
9/28 – 9/30	Aqueous Rxns (2) Acid Base Reactions	4	129 –135 (A/B; gas form'n: 136)
10/3 – 10/7	(3) Redox Rxn, Molarity (concentration), Titration	4	137 –140, 144-149, 150-153
10/10 – 10/11	MID-SEMESTER BREAK		
10/12, 10/14	Stoichiometric analyses involving molarities	4	151 – 153 (inset examples)
10/17 – 10/21	Ideal Gas; Molar Mass Density /Stoichiometry; Dalton's Law /Kinetic Theory / Graham's Law, Types of energy transfer, 1 st Law, Enthalpy	10 10 5	396 – 399, 400-407,407-408 410 – 411, 412-415, 415-418 164 – 172
10/21	Discussion Activity will include some review		Optional —see disclaimer above
10/24, 10/26	Thermochemical Reactions; calorimetry Hess's Law; standard enthalpy of formation	5 5	172 – 178, 178-182 184 – 186,186-187 *191-200
10/28 Friday	EXAM 2	4, 10, (5)	Obviously concepts in 5 we "got to" Hopefully not scary!
10/31 –11/4	Light & Matter; Hydrogen Bohr Model	6	214 – 224
November 4	Last day to withdraw w/o penalty Spring Registration starts 11/8		
11/7 – 11/11	Complementarity, Uncertainty Principle & PEP; Orbitals, Quantum #'s; Orbital Diagram, Electron Configuration, Paramagnetism / Diamagnetism	6 6 9	224 – 226, 227 – 235, 236-245 (e ⁻ confign) 377-379
11/14 – 11/18	Periodic Table Trends, Eff. Nuclear Charge; size, EA; Ions, Covalent Bond/Lewis structures ² ; resonance; exceptions;	7 8 9	258-59, 264-66(size);268 (IP); (EA), 309 (EN); 298-302, Lewis Diag.: 315-16,320-25
11/18	Formal Charge, Hybridization; σ , π bonds		317–318 ³ ;354–60; 361-67
11/23 – 11/26	...THANKSGIVING BREAK...		Enjoy!
11/28	Lecture; activities will include review		Optional —see disclaimer above
11/30 Wed.	EXAM 3	5 - 9	5 - 8; *selected topics in Ch 9
12/2	Bond order, Bond overlap	9	354–360, 370-372
12/05 – 12/9	VSEPR & Molecular geometry; how to draw; π bonds, resonance, hybridization, polarity	9	339–350 (VSEPR), 361–366 (hybridization), 309–14 (polarity)
12/15 Thurs.	REVIEW for FINAL		tentatively: FH-133; 1:30-2:45
12/15 Thursday	COMMON FINAL 7:00 P – 9:00 P CST	1–10	COMMON Final: Location and Format TBA

² Optional: Molecular Orbital Theory, Ch. 9, pg. 369-376

³ also appendix in lecture-notes



HOMEWORK⁴ is not graded, but student is strongly encouraged to do it, and to do it well. A parallel assessment is made via weekly discussion assignments comprised of **exam representative** problems. **End-of-Chapter Problems:** Students who are making good progress in the course should be able to solve, independently, most or all of the end-of-chapter problems in the textbook, as well as most discussion problems. Exemplary/interesting problems are listed below as “assigned” problems. There are 20-30 of these per chapter.

CHAPTER	PAGE	PROBLEMS
1	35	1-3, 6, 7, 8, 10, 11, 13, 15, 19, 21, 25 (1 cal = 4.184 J), 31, 32, 35, 39, 42, 43, 45, 47, 49, 51, 54, 55a-c, 57 (for ft ³ to cm ³ : 1 ft ≅ 30.8 cm) 60, 61, 63, 67, 68 a,c ; **79-82
2	76	1 (physics is everywhere), 3, 5—8, 11, 13, 14,19, 23, 25, 27, 29, 31, 35, 39, 41, 45-47, 49, 50, 52, 53 (O = red , C = black , H = white), 55, 57, 59, 63, 67, 69, 71, 73, 77, 79 (some parts ↔ reactions), 99b, 100,105,109,110 ; Ch. 7: 4, p. 290
3	112	1, 3, 7, 9, 11, 13, 15, 19, 21, 23 (formula wt ≅ MM), 25 (a,c,e), 31, 35, 37, 39, 41, 45, 47, 49, 53, 55, 57, 61, 62, 69, 73, 75, 77, 79, 83, 85, 93, 95
4	155	1-3, 5*, 7, 15-17, 23, 25, 27, 29, 31, 33, 35, 39, 43, 45, 47, 51, 53, 59, 63, 65 (BAC = Blood Alcohol Count), 69, 73, 75, 77, 83, 87, 89 (for the truly committed. ^{5 6}), 94
10	425	3, 5-7, 9-11, 27, 28, 33, 37, 39, 41, 43a,b,d; 47-49, 51a, 55, 57, 63, 64, 69, 72 (how many moles of each?), 79, 83, 87, 89 (use 0.285); *17 & *23: ΔP = ρgh; *15 (P = F/A)
5	203	3-5, 7, 9, 11,13,15 (uh,...more physics), 19, 21, 23, 25, 27, 31, 37, 39, 41, 43, 45, 47, 49, 51, 55, 57, 59, 63, 65, 69, 73, 75, 81, 91, 95, 99*, 103**, Ch. 3 (p. 116) 71.
6	250	1-5, 7,11,12,15,17,19, 25, 29: ΔE = $\frac{1.196 \cdot 10^5 \text{ kJ}\cdot\text{nm}}{\text{mol}}$, λ in nm, 37, 41, 43, 45 (similar to λ (nm) 7), 47, 49, 55, 57, 62, 69, 75-76: textbook's condensed electron config'n is my valence e⁻ config'n 78, 79, 86: hc/λ = E photon; energy during CD play = (Power·Δt), 88*, 93, 100**.
7	290	2, 7b, 25, 27, 29, 35, 45-47, 55, 65 a (product = strong base) b (double exchange rxn) c (product = strong acid). d ('bicarbonate formed'), 69, 77, 94, 96; 75 (history), 54** (optional)
8	330	1, 4, 9, 11ab, 13, 14, 17, 19, 31-33, 35, 37, 41, 47,48, 51, 53, 55, 58, 59, 63-65; *45: metals found in ionic AND covalent comp'ds: some <i>metal</i> bonds can be mostly COVALENT
9	386	1, 3a-e, 4, 5, 7, 9a-c,14-17, 21, 25, 27-30, 33a, dipole: 35, 37, 39, 41, 44; 53, 57, 59, 61, 62 (also find # π bonds), 67, 86, 87, 102: C=C π bond energy: 614 kJ/mol. Notes: (1) my parent / orbital geometry ↔ e ⁻ domain geometry), (2) terminology electron domain ↔ my electron pair . (3) electron domain geom. ↔ my orbital geometry

swap underscore for 'orbital box'

⁴ The solutions to homework problems will be placed on 2-hour reserve at the Cudahy Library.

⁵ Interpreted as needed

⁶ Subtract excess mole acid (NaOH calc'n) from mol orig'l SA = am't that reacted w/ Mg(OH)₂, assume 2 OH's released, (true for small conc'ns))

⁷ orb geom (a) thru' (f): AX₂, AX₃E, AX₄E, AX₆, AX₄, AX₂



Examinations: Three 50-minute exams will be given on dates below, also noted in the schedule.

Sept. 26, Oct. 28, Nov. 30

Tentatively, Exams will be administered in-person. The format will be mixed multiple choice and short response. It is hoped that in-person delivery will remain viable throughout entire semester.

Final Exam

The University sets the schedule for all final exams. The common final will be held on:

Thursday December 15th, 7:00 pm

Location will be updated on LOCUS when available.

You will have exactly 2 hours to complete the exam. Additional time will not be granted, even if you start late. There will be no make-up final exams given under any circumstance, and the exam will not be given early, either.

Instructors may not reschedule final exams for a class for another day and/or time during the final exam period. There can be no divergence from the posted schedule of dates for final exams. Individual students who have four (4) final examinations scheduled for the same date may request to have one of those exams rescheduled. If a student reports having four final examinations scheduled for the same date, students should be directed to e-mail a petition to Adam Patricoski, Assistant Dean for Student Academic Affairs, CAS Dean's Office (apatricoski@luc.edu).

Your course grade will be determined from these exams by a procedure elucidated in the next section. **The homework, midterm exams, and Final exam are cumulative; expect subsequent exams to include concepts that have been covered in previous lectures and materials.**

Grading Scheme:

The scores of the three midterms, a common final exam, participation and *selected problems on discussion worksheets* will be used to determine your course grade. IF quizzes are administered, their points will count toward the discussion grade. The highest two midterms will count towards course grade that will be determined by the weighing model and grading scale shown:

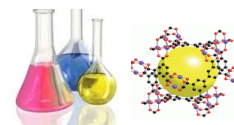
Item	Weight
Midterm Exam 1	25 %
Midterm Exam 2	25 %
Midterm Exam 3	25 %
Lowest midterm exam dropped Exam 1 or 2 or 3	
Discussion Participation/ Quizzes	10 %
Homework Worksheets	15 %
Common Final Exam	25 %

GRADING SCALE

A	≥ 93.0
A-	89.0–92.9
B+	85.0–87.9
B	81.0–84.9
B-	77.0–80.9
C+	73.0–76.9
C	69.0–72.0
C-	65.0–68.9
D	60.0–64.9
F	0.0–59.9



NOTE: (1) midterm to be dropped is determined by instructor at the end of the semester.
 (2) **there is no curve.** (example: 92.9% = **A-**).



Universal Absence Accommodation Policy

The purpose of a universal absence accommodation policy is to account for emergency circumstances (e.g., serious illness, caring for a family member, car accident) that require you to be absent from class, while maintaining fairness in grading for students who attend and complete all in-class graded assignments. We believe that class attendance and participation are essential for your success in this class, and that your health is important to us and our shared community. Please use good judgment and stay home if necessary / prudent for your circumstances.

The following is the universal accommodation policy for in-class graded assignments:

Discussions: Productivity and participation will be noted. Discussions or quizzes missed for any reason cannot be made up.

Homework: Worksheets not done in-class or late assignments for any reason cannot be made up. However, the lowest three grades will be dropped (there are 17-18 discussion worksheets).

Midterm Exams:

The first exam missed for any reason⁸ will be dropped. For instance, say that you took exams 1 and 3 but had to miss exam 2. Then exam 2 is dropped and midterm part of course grade is based upon exams 1 and 3. If an *additional* exam is missed for legitimate reason, that *second absence* can be made up within 48 hours (1 meet) after that scheduled exam. An appropriate proof as to why the exam is missed must be provided. Due to size of enrollment, volume, and pace of work in this course, there can be no exceptions to this policy.

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:

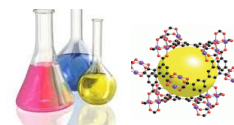
<http://www.luc.edu/cas/advising/academicintegritystatement/>

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. Evidence of cheating in this course will result in, at a minimum, a score of zero (which cannot be dropped from grade calculations) and penalty up to failure of the course. College policies include that instructors will report incidents of academic misconduct to their chairperson as well as to the Assistant Dean for Student Academic Affairs in the CAS Dean's Office. I will report incidents to the Chemistry & Biochemistry Department for further action(s). **This has happened before.**

⁸ Exception: employed representatives of Loyola University Chicago.



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 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

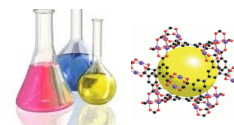
If you have observances of religious holidays that will cause you to miss class or otherwise effect your performance in the class you must alert the instructor within **10 calendar days of the first class meeting of the semester** to request special accommodations, which will be handled on a case-by-case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

Student Accommodations

Loyola University provides reasonable accommodations for students with disabilities. Any student requesting accommodations related to a disability or other condition is required to register with Student Accessibility Center (SAC), located in Sullivan Center, Suite 117. Professors receive the accommodation notification from SAC via Accommodate. Students are encouraged to meet with their professor individually in order to discuss their accommodations. All information will remain confidential. Please note that in this class, software may be used to record class lectures in order to provide equal access to students with disabilities. Students approved for this accommodation use recordings for their personal study only and recordings may not be shared with other people or used in any way against the faculty member, other lecturers, or students whose classroom comments are recorded as part of the class activity. Recordings are deleted at the end of the semester. For more information about registering with SAC or questions about accommodations, please contact SAC at 773-508-3700 or SAC@luc.edu.

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 personally meet and obtain a signature from either 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.



Class Recording & Content Information

In general lecture, class sessions may be recorded. The following is a mandatory statement for all courses in the College of Arts & Sciences (CAS). We will discuss class norms and standards during the first week and continue the discussion as needed throughout the semester.

Privacy Statement

Assuring privacy among faculty and students engaged in online and face-to-face instructional activities helps promote open and robust conversations and mitigates concerns that comments made within the context of the class will be shared beyond the classroom. As such, recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Students will be informed of such recordings by a statement in the syllabus for the course in which they will be recorded. Instructors who wish to make subsequent use of recordings that include student activity may do so only with informed written consent of the students involved or if all student activity is removed from the recording. Recordings including student activity that have been initiated by the instructor may be retained by the instructor only for individual use.

Additional Content, Copyright & Intellectual Property Statement

By default, students may not share any course content outside the class without the informed written consent of the owner of that content. This includes any additional recordings posted by students, materials provided by the instructor, and publisher-provided materials. For example, lectures, quiz/exam questions, book figures/slides, and videos may not be shared online outside the class. In some cases, copyright/IP violations may overlap with breaches of academic integrity. Remember that obtaining consent to share materials is an active process.

Health, Safety, and Well-Being On-Campus

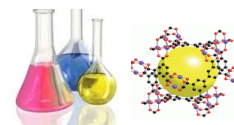
Please be familiar with and adhere to all policies and protocols posted on the *Campus Info & Resources* site: <https://www.luc.edu/healthsafetyandwellbeing/campusinforesources/>

Fall 2022 Classroom Masking Policy

As a Departmental policy, even in the event the University relaxes its universal requirement for indoor mask-wearing during the Fall 2022 semester, it will remain a principle of this class-section that, out of respect for the health of housemates and others in regular contact with members of our community, in this class we wear masks over nose and mouth at all times we are together in the classroom.

Pass/Fail Conversion Deadlines and Audit Policy

A student may request to convert a course into or out of the “Pass/No-Pass” or “Audit” status only within the first two weeks of the semester. For the Fall 2022 semester, students are able to convert a class to “Pass/No-Pass” or “Audit” through Monday, September 12th. Students must submit a request for Pass/No-Pass or Audit to their Academic Advisor.



Day-to-day Course Agenda

Lectures will be presented using some pre-recorded content to be viewed on Panopto (via Sakai) to supplement “live” lectures/discussions. Slides/handouts/links/animations and other additional resources will be shared on Sakai. To help you stay on track, pre-lecture readings are posted on the Sakai Pages for this course. Highly recommended problems from your textbook are found on page 4 of this syllabus. We will not cover every topic in every chapter of the textbook this semester. Focus first on the material that is directly covered in lecture and assigned or recommended. Explore the additional material in the textbook for your own interest and enrichment.

Classroom & Group Work Guidelines

The classroom is a space designed for learning. Honoring our Loyola Jesuit tradition of *cura personalis*, my expectations are that all voices will be heard and appreciated in the classroom, and that we will invite each other to engage while recognizing that contributions can take multiple forms.

Student and Faculty Expectations

Students should take ownership of their learning and to use office and SI sessions as learning resources to help them attain their desired level of achievement in the course. For this course, it is anticipated that the average independent working time (outside of class) required to learn the material in order to achieve a minimal passing grade of C- is **90 minutes to 2 hours per day, every day**. This estimate varies depending on the student’s prior knowledge and ability to master cumulative concepts as the course progresses. What can you expect of me? My primary objectives are to provide you with the tools, environment, encouragement, and support to learn Chemistry. In keeping with the course objectives (syll., page 2), my teaching techniques include the use of pre-lecture reading, active learning, metacognition and collaboration with peers to help you maximize your learning. I expect that all of us will embrace hard work and profit together!

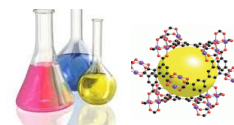
Benefits of Supplemental Instruction

An SI (supplemental instructor) leader is a student that has recently excelled in the course. This semester, our SI is Jacqui Wittman, jwittman@luc.edu. She will conduct additional and regular study sessions. These sessions are open to all, and, while voluntary, they are extremely beneficial for those who regularly attend. Jacqui will provide meeting info in person during the first week of class. Times and locations for the SI session can also be found here: www.luc.edu/tutoring.

Students who attend these interactive sessions find themselves working with peers as they compare notes, demonstrate and discuss pertinent problems and concepts, and share study and test-taking strategies. **Research shows students whom regularly attend sessions have higher grades at the end-of-the-semester and more deeply understand course concepts than those who do not.** Students are asked to arrive with their Loyola ID number, lecture notes, and textbook.

Changes to Syllabus

There may be changes to the syllabus during the semester. ***You are responsible for all syllabus changes made in class whether or not you attend. These updates will also be shared on the Sakai course page.***



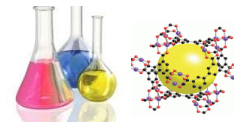
Laboratory:

Chemistry 111, the general chemistry laboratory course, should be taken concurrently with the lecture course in general chemistry. The lecture and the laboratory courses are graded independently. Students should first consult the Chemistry Department bulletin opposite the wall facing the chemistry office for information, or they can contact **Dr. Katrina Banaku**, the administrator of the laboratories.



About the Prof:

I'm a chemical physicist trained in surface science. I am interested in (1) thermodynamics and entropy (2) cooperative systems (swarm behavior); (3) producer, composer, orchestrator, pianist, sequencer, conductor. I have guest conducted with The Chicago Sinfonietta on several occasions (Jan 2023 is next). My work has also been performed by The Cincinnati Symphony Orchestra (2019) and arrangement by Prague Symphony Strings (2021). My vocal ensemble has recorded two compact discs. One of my songs was doubly tracked on a Grammy award winning CD in 2005. This song has been covered by six other groups that include an ensemble from Milan (2017).

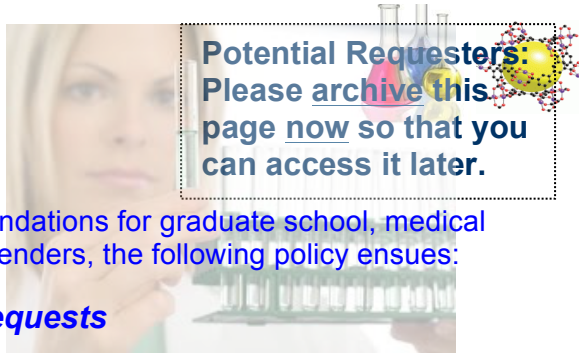


Room Instructions on Exam Days

- 1) Be seated as quickly as you can. Do not try to sit with friends. The exam is only 50 minutes, so excessive delays will cut into exam-taking times.
- 2) Place your student ID conspicuously on your desk or shared table so that attendance may be noted (during exam).
- 3) Have several pencils/pens, eraser, etc. and a calculator in good working order.
- 4) Proctors have been instructed to confiscate the exams of any student using a calculator with its slipcover in place.
- 5) **Read over the entire exam.** You may find a problem in the middle, or at the end, that suits you better to start. The three or so minutes spent glancing over the entire exam will be more than compensated for by the strategy and priorities that you formulate. The recommended order to do problems is:
 - (1) what you know well FIRST
 - (2) what you're sure you can at least start NEXT
 - (3) what you haven't have a clue for LAST

I have tried to arrange problems in a reasonable order, but my perception and the student's will certainly differ from time to time. So, take a few minutes to read over the exam and devise your own strategy.

- 6) When you have concluded, turn in your exam to proctor or instructor. Leave as quietly and as expeditiously as possible as to not disturb other exam takers.
- 7) Normally, midterm exams will be returned within two lecture meets. **Please** don't harangue the Chemistry staff. As a general rule, I do not apprise them of my grading schedule. While I try to return graded exams within 72 hours, please note that the **final examination will take longer than usual to grade**. I promise to grade as swiftly as is possible to maintain accuracy!



Recommendations Protocol

Later in your student career, you may require recommendations for graduate school, medical school, or the like. If I am chosen among your recommenders, the following policy ensues:

1. **Deadline for LOR (letter of recommendation) requests for 2023-2024 cycle: February 1, 2023.**
2. Student must generally possess GPA of 3.5 or above. This is mainly due to volume of requests. However, a student might be considered if she/ he presents a **written explanation** that reveals exceptional circumstances that might account for a lower GPA.
3. Student must provide attached in one email, a document listing his/her correct GPA, contact information, deadline(s), and also all chemistry, biology and physics courses and labs that the student has take—in the following format (or Committee format, if you are applying through committee):
 - a. **GPA**
 - b. reliable, current email and telephone # that student checks *regularly*
 - c. **DEADLINE**
 - d. Table with header: course taken, instructor, grade

Example:

Course	Semester / year	Instructor	Grade
Chemistry 101	Fall /22	Dr. WGJ	B+
Biology 210	Spring /23	Dr. Rodney Dale	A

- e. If applying through Committee, be sure to handle the **signed waiver** with Pre-Health. Send the other items to me (wgreene@luc.edu) in one email.
 - f. If applying “outside the Committee”—see items 5, 6 below, a list of all schools of the applicant and **ALL of their DEADLINES**.
 - g. All cover forms, application packages, envelopes should be in one binder, folder, or otherwise secure containment, with like items paper-clipped together.
4. I'd love to read your personal statements, even rough drafts. It tells me something about you and helps me to shape a recommendation. This article is not required, but I recommend it.
 5. **It is STRONGLY recommended that the student apply through the Loyola Pre-Health Advisory Committee.** Well-regarded by the medical/dental/pharmaceutical community, the Committee's voice of endorsement will increase the merit of the student's application. Their method also assures that the student's personal statement is strong and well written. If the student applies via Committee, s(he) should provide me a cover sheet obtained from the Office of Pre-health (Sullivan Center 262).
 6. **APPLICATIONS OUTSIDE COMMITTEE:** If a student who I can recommend elects to apply apart from the Pre-Health Advisory committee, she/he must perform steps 2-4 and email materials to wgreene@luc.edu. Online LOR uploading protocols (AMCAS, PTCAS, Interfolio, etc.) are **STRONGLY** preferred.
 7. Due to volume of requests, your LOR won't be started until all items in step 3 are fulfilled.
Just in case you need a LOR later: take a picture of this information now or otherwise save.