CHM2047 — One-Semester General Chemistry — Fall 2016

Credits: 4; Prereq: AP, IB, AICE, or dual enrollment chemistry courses yielding credit for CHM2045/L; Coreq: CHM 2047L.

The course is designed for entering (not transfer) students who wish to move more quickly into advanced course work. Topics include electronic structure and bonding, gases, liquids, solids, kinetics, equilibria, acids and bases, thermodynamics, oxidation-reduction, metals and non-metals.

Instructor	Dr. Alexander Angerhofer (Dr. A)
Phone	392 9489 (office, CLB318A) or 392 2123 (lab, CLB303)
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O.H.	T-11, W-10, R-10, and by appointment, CLB318A or CLB313.

TAs			<u>lu</u> , O.H.: tba (CLC*), <u>fl.edu</u> , O.H.: T–10, V		
	William Watson	Adam Schwartz	Christina Parks	Ziqi Wang	Olivia Liseth
Sections	5636	8007	8010	8020	8023
E-mail	willdwat@ufl.edu	aschwartz0628@uf l.edu	ctparks13@ufl.edu	zwang12@ufl.edu	oliseth0418@ufl.e
O.H.	T–9 (CLC*), R–9 (CLC*)	M-7 (CLB313), F-4 (CLC*)	M–10 (Hume [#]), R–7 (CLC [*])	M–9 (Hume [#]), F–7 (CLC [*])	T-7 (CLC*), R-8 (CLC*)

^{*}Chemistry Learning Center, 3rd floor of Keene-Flint Hall Annex, room #258.

[#]Hume Hall room #118.

Class Meeting Time	es T: periods 3+4, R:	periods 3+4, 9:40am	–11:25am in Leigh H	[all 207									
	Discussion Sessions												
5636	8007	8010	8020	8023									
W-5, Lei-104	W-4, Lei-242	W-6, Lei-104	W-3, Tur-2346	W-2, Dau-342									
Holidays	09/05 (Labor Day), 10/14 (Homecoming), 11/11 (Veterans Day), 11/23–25 (Thanksgiving Holiday), 12/8–10 (Dead Week, no classes).												
Class Text	1	Oxtoby, Gillis, Butler, Principles of Modern Chemistry, 8 th Edition, Cengage Learning, Boston/MA. ISBN: 1305079116, on course reserve at Marston Science Library.											
Homework	Homework will be Homework will be		eept during weeks of	during-term exams,.									
Points Earnable	4 progress exams @ 200 pts. each, for 800 pts. total. 1 cumulative final exam (optional) @ 400 pts., for 400 pts total. 10 homeworks @ 60 pts. each, for 600 pts. total. 4 online quizzes @ 50 pts. each, for 200 pts. total. 1 in-class participation grade (learning catalytics) @ 200 pts., for 200 pts. total 1 in-discussion participation grade @ 200 pts., for 200 pts total. Total earnable points are 2,400 pts., or 2,000 pts. without optional final exam.												
Grading Scheme†	With final exam: $A: \ge 2040$ pts. (85. 2040 pts > $A- \ge 19$ 1980 pts > $B+ \ge 19$ 1920 pts > $B \ge 180$ 1800 pts > $B- \ge 17$ 1740 pts > $C+ \ge 16$ 1560 pts > $C^{-\frac{1}{2}} \ge 1$ 1500 pts > $D+ \ge 14$ 1440 pts > $D \ge 132$ 1320 pts > E .	980 pts. (82.5%) 920 pts. (80.0%) 90 pts. (75.0%) 740 pts. (72.5%) 680 pts. (70.0%) 60 pts. (65.0%) 500 pts. (62.5%) 140 pts. (60.0%)	Without final exam A: ≥ 1700 pts. 1700 pts $> A - \geq 16$. 1650 pts $> B + \geq 16$. 1600 pts $> B \geq 1500$. 1500 pts $> B - \geq 14$. 1450 pts $> C + \geq 14$. 1400 pts $> C \geq 1300$. 1300 pts $> C - \geq 12$. 1250 pts $> D + \geq 12$. 1200 pts $> D \geq 1100$. 1100 pts $> E$.	00 pts. 0 pts. 50 pts. 00 pts. 0 pts. 50 pts. 00 pts.									

[†] see https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx for more info on UF grade policies.

[‡] please note that a 'C-' is not considered a passing grade for majors requiring a General Chemistry course.

Course Schedule (tentative):

Date	Day	Chapter	Topic	Reading	
08/23/16	T	4	Disc. of Syllabus and Introduction to Quantum Mechanics, Atomic Structure, Bohr Model, Rydberg,	pp. 124 –	142
08/24/16	W	4	Discussion: The Photoelectric Effect, Line Spectra, de Broglie	pp. 142 –	148
08/25/16	R	4	Heisenberg, Schrödinger Equation, Particle in a Box Model	pp. 148 –	172
08/30/16	Т	5	Atomic Structure, H-Atom, many-electron atoms	рр. 177 –	201
08/31/16	W		Discussion: HW #1 is due		
09/01/16	R	5	electron spin, Aufbau rules, periodic chart, periodic properties	pp. 201 –	215
09/06/16	T	3	Review: Classical Models of Bonding	pp. 52 – 9	98
09/07/16	W		Discussion: HW #2 is due		
09/09/16	R	3	Review: Lewis Structures, VSEPR Theory	pp. 99 –	117
09/13/16	T	6	MO Theory, LCAO, H ₂ ⁺ ion,	рр. 219 –	- 235
09/14/16	W	1 – 5	Discussion: Exam Review, 1st During-Term Exam (during E2-E3 periods, place tba)		
09/15/16	R	6	Simple Diatomics, Orbital Interaction Diagrams	pp. 235 –	252
09/20/16	T	6	Hybridization, VB Theory, Hückel Theory, Aromaticity	pp. 259 –	285
09/21/16	W		Discussion: HW #3 is due		
09/22/16	R	7	Organic Chem., Lewis Structures for organics, isomerism, stereoisomerism, curved arrow notation, conjugation, aromatics	pp. 289 –	304
09/27/16	Т	8	TM bonding, hybridization, coordination chemistry	pp. 325 –	345
09/28/16	W		Discussion: HW #4 is due		
09/29/16	R	8	oxidation numbers, crystal field theory, symmetry, ligand field theory	pp. 345 –	365
10/04/16	Т	8	carbonyl complexes, back bonding, metal-metal bonding		
10/05/16	W		Discussion: HW #5 is due		
10/06/16	R	9	Ideal gas equation, real gases	рр. 370 –	385
10/11/16	Т	9	Kinetic Gas Theory, Equipartition Theorem, motional degrees of freedom, Maxwell distribution	pp. 385 –	408
10/12/16	W	6 – 9	Discussion: Exam Review, 2 nd During-Term Exam (during E2-E3 periods, place tba)		
10/13/16	R	12	1 st Law of Thermodynamics, Heat, Work, State Functions, Enthalpy, Heat Capacity	pp. 480 –	504
10/18/16	T	12	Thermochemistry, Hess' Law	pp. 504 –	- 521
10/19/16	W		Discussion: HW #6 is due		
10/20/16	R	13	2 nd Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity	pp. 526 –	544
10/25/16	Т	13	Carnot Engine, Mathematical Form of the 2 nd Law,	pp. 544 –	- 558
10/26/16	W				
10/26/16	- w R	1/1		nn 562	500
			Chatelier	pp. 563 –	
11/01/16	T	14		pp. 598 –	- 003
11/02/16	W	Heisenberg, Schrödinger Equation, Particle in a Box Model Atomic Structure, H-Atom, many-electron atoms Discussion: HW #1 is due Electron spin, Aufbau rules, periodic chart, periodic properties Review: Classical Models of Bonding Discussion: HW #2 is due Review: Lewis Structures, VSEPR Theory MO Theory, LCAO, Hz ion, Discussion: Exam Review, La Discussion: Exam Review, La Discussion: HW #3 is due Discussion: HW #3 is due Mo Theory, LCAO, Hz ion, Discussion: HW #3 is due Mo Theory, LCAO, Hz ion, Discussion: Exam Review, La Discussion: HW #3 is due Organic Chem., Lewis Structures for organics, isomerism, stereoisomerism, curved arrow notation, conjugation, aromatics The bonding, hybridization, coordination chemistry Discussion: HW #4 is due Review: La Discussion: HW #4 is due Carbonyl complexes, back bonding, metal-metal bonding Discussion: HW #5 is due Discussion: HW #5 is due Midel gas equation, real gases Minetic Gas Theory, Equipartition Theorem, motional degrees of freedom, Maxwell distribution Maxwell distribution Maxwell distribution La Law of Thermodynamics, Heat, Work, State Functions, Enthalpy, Heat Capacity Thermochemistry, Hess' Law Discussion: HW #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: HW #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: HW #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: HW #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: HW #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: HW #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: Hw #6 is due Midel Law of Thermodynamics, Entropy, Statistical and Thermodynamic interpretations, Spontaneity Discussion: Hw #6 is d			472
11/03/16	R		real solutions, Henry's Law, colligative properties		
11/08/16	T			pp. 611 –	635
11/09/16	W	10 – 14	3 rd During-Term Exam (during E2-E3 periods, place tba)		
11/10/16	R	15	Buffer Solutions and Ordering of Acid Strengths	pp. 635 –	661
11/15/16	T	16	Solubility equilibria, precipitation, pH effects	pp. 667 –	689

11/16/16	W		Discussion: HW #9 is due	
11/17/16	R	17	Electrochemistry, Half-Cells, Faraday Law, Nernst Law, pH	pp. 693 – 714
11/22/16	T	17	Applications, Batteries, Fuel Cells, Metallurgy	pp. 715 – 747
11/29/16	T	18	Intro to Chemical Kinetics, Rate Laws, Rxn Mechanisms	pp. 754 – 775
11/30/16	W		Discussion: HW #10 is due	
12/01/16	R	18	Arrhenius Law, Activation, Isotope Effects, Catalysis	pp. 775 – 803
12/06/16	T	19	Nuclear Chemistry	pp. 807 – 836
12/07/16	W	_	Discussion: Exam Review 4th During-Term Exam (during E2-E3 periods, place tba)	
12/13/16	T	1 – 19	Cumulative Final Exam 5:30pm – 7:30pm.	

Office Hour and Class Schedule for CHM2047:

E-3	E-2	E-1	11	10	9	∞	7	6	5	4	3	2	1	Per.		
9:20-10:10	8:20-9:10	7:20-8:10	6:15-7:05	5:10-6:00	4:05-4:55	3:00-3:50	1:55-2:45	12:50-1:40	11:45-12:35p	10:40-11:30	9:35-10:25	8:30-9:20	7:25-8:15	Hour		
				C. Parks	Z. Wang		A. Schwartz	T. Jenkins						Monday		
				HUME#	HUME#		CLB313	CLB313						Bldg/Rm#		
			Dr. A	A. Pastore	W. Watson		O. Liseth			CHM2047	CHM2047			Tuesday	Univ. Address:	NAME:
			CLB313	CLB313	CLC*		CLC*			LEI 207	LEI 207			Bldg/Rm#		CHM2
				Dr. A		T. Jenkins	A. Pastore	8010 Parks	5636 Watson	8007 Schwartz	8020 Wang	8023 Liseth		Wednesday		CHM2047 Class Meetings and Office
				CLB318A		CLB318	CLB318	LEI 104	LEI 104	LEI 242	TUR 2346	DAU 342		Bldg/Rm#		tings and Office
				Dr. A	W. Watson	O. Liseth	C. Parks			CHM2047	CHM2047			Thursday		Hours
				CLB318A	CLC*	CLC*	CLC*			LEI 207	LEI 207			Bldg/Rm#	Univ. Phone:	
						T. Jenkins	Z. Wang			A. Schwartz		A. Pastore		Friday		
						CLB318	CLC*			CLC*		CLB318		Bldg/Rm#		

Further Important Information:

- 1. **Overview and Goals:** CHM2047/2047L is a one-semester General Chemistry program for entering students with strong backgrounds in chemistry, normally reflected by high AP, IB, or AICE chemistry test scores and/or incoming DE credit for General Chemistry. This program allows students to move more quickly into advanced work. The goals of the course are to give an overview of basic chemistry in one semester and to prepare the students for subsequent work (organic, analytical, and physical chemistry).
- 2. **Class Meeting Times:** Since we have double periods on T and R for CHM2047, the meeting times will be organized as follows. We will start 5 minutes late, 9:40am and we will end class 5 minutes early, 11:25am. The ten minutes lost will be recovered by reducing the break time between the 3rd and 4th periods from 15 to 5 minutes. The 5-minute break will be taken whenever the flow of the lecture allows, *i.e.*, may not be exactly in the middle of a two-period session.
- 3. General Chemistry Learning Objectives: The course will provide instruction in the basic concepts, theories, and fundamental terms of chemistry. At the very core of chemistry is the concept of the atom, its structure, and bonding interactions with other atoms. The course therefore takes an 'atoms-first' approach in order to lay a conceptual foundation for the many aspects of 'macroscopic' chemistry. Approximately one third of the course is devoted to atomic and molecular structure and bonding. In later parts of the course the manifold connections between the atomic/molecular structure of compounds and their behavior in chemical reactions under laboratory conditions will be emphasized. This allows the student to comprehend and predict the behavior of chemical systems rather than to memorize a potpourri of diverse facts which is often the case when studying for the AP or similar tests. Major scientific developments will be reviewed and their impacts on society, science, and the environment examined. Focus will be placed on the relevant processes that govern biological and physical systems. With what they learn students will be able to: (1) formulate empirically testable hypotheses relevant to the study of physical and life processes, (2) use logical reasoning skills through scientific criticism and argument, and (3) apply techniques of discovery and critical thinking to predict and evaluate outcomes of experiments. Upon successful completion of CHM2047 each student will:
 - have a working knowledge of the basic concepts, theories, and fundamental terms of Chemistry, and understand the relevant processes that govern chemical systems,
 - grasp the major scientific developments that have led to the current state-of-the-art in the field,
 - be able to assess impacts Chemistry has on society, science, and the environment,
 - be familiar with and capable of using the scientific method when discussing scientific facts as they relate to Chemistry,
 - know how to formulate empirically testable hypotheses derived from the study of physical and chemical processes,
 - use logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to predict and evaluate outcomes of experiments.

To achieve these objectives students are required to participate in all class activities, specifically:

- Regular attendance of lectures (2 double periods per week) in which the course material will be discussed and demonstrated. Lecture attendance requires active participation on the students' part. Large sections of class time will be spent in scientific dialog between teacher and students where they will practice the art of scientific reasoning.
- One period of small group discussions is held each week in which students will discuss and apply the concepts learned in class under the guidance of a teaching assistant. The discussion sessions focus on homework problems and further explore difficult concepts that need additional explanation beyond the lectures. Students are expected to participate actively. They will work out homework problems on the board and participate in the discussion. This will not only give students helpful feedback on their own work but also train their logical reasoning skills through scientific criticism and argument.
- Weekly graded homework assignments typically include between five and ten conceptual and numerical problems that require the student to apply the learned concepts to specific examples. Some of these problems will be worked out using the WebMO interface on the department! web page or other online resources. Problems are taken from different areas of experimental and theoretical chemistry including physical and life processes. Homework problems may also include reading material, typically a topically related original research article requiring the student to summarize and comment on in their own words.
- 4 quizzes and 4 mid-term exams will be administered throughout the semester. Due to time constraints they can not be as detailed and time-intensive as the homework problems. Emphasis is placed on testing the students' reasoning skills and their understanding of the material rather than rote memorization of facts. On their exams, students will receive all pertinent equations. They are also allowed a single letter-sized page with their own hand-written notes to take into the exams. On online quizzes students are allowed to work in groups but will be required to take ownership of their own quiz submission.
- Participation points are available to students throughout the semester and can be earned both in the lectures and the discussion sessions they have answering 'learning catalytics' questions,

- active participation in the class discussion, and through working out problems on the board (for more information see below item #10).
- Approximately 19 weekly office hours are offered by instructor and TAs, conveniently spread out over the whole week. Students are strongly encouraged to seek help and feedback on all concepts and problems encountered in class. While office hour attendance is completely voluntary, it is an important activity that will help solidify students' understanding of the material and make them successful in the course.
- 4. **Math Requirements:** Students are expected to have a solid grasp of pre-calculus algebra and trigonometry, and should either be co-registered for MAC2311 (Calculus 1) or have credit for it. During lectures, concepts from Calculus 1, 2, and 3 may be discussed but will not appear on exams. When derivatives or integrals are mentioned the focus is primarily on their graphical interpretation to aid understanding of chemical or physical concepts. When homework problems require their use, feel free to employ computational solvers such as Wolfram Alpha: http://www.wolframalpha.com/.

5. **Exam Policies:** Four during-term exams will be given (see schedule above). These exams will be

- evening exams. Exam duration will be approximately 2 hours. Making up a missed exam is a serious and exceptionally burdensome problem. Consequently, a makeup exam will require that you have a legitimate excuse, and that you have brought this to the attention of the instructor before the missed exam. Legitimate excuses include sickness or conflicts with regularly scheduled classes or another exam for a higher numbered class or an assembly exam. If you are not sure whether your excuse is valid, talk to the instructor before missing an exam. If you have an emergency that prevents you from letting the instructor know ahead of time, an excused absence and rescheduled make-up exam will be granted after official documentation about your emergency (doctor's notes, etc.) deemed appropriate by your instructor has been presented. The final exam is optional. If a student is happy with his/her grade at the end of the semester (see grading scale without final exam above) he/she may skip the final exam. Since the final exam is cumulative, the instructor reserves the right to consider assigning a letter grade above that which the student would receive based strictly on total points earned (as listed above). This will only take effect if the final exam is taken and the performance on the final exam is significantly above the student's overall performance for the semester, and if the student shows clear improvement in his/her exam grades over the course of the semester. This qualification cannot lower your grade and will depend on the instructor's evaluation of the student's performance on the final exam. A student contending that an exam or quiz has been mis-graded or mis-scored must report this to the TA responsible for grading within one week of receiving the original grade or score. Failure to follow this policy results in no reconsideration of the contended grade or score. For all questions on grades or grading, please consult with the cognizant TA first in person. If this does not resolve the
- 6. **On-line Quizzes:** There will be 4 on-line quizzes (1 quiz = 50 points max.). They will be given through the canvas interface to the class. Quiz duration is generally 60 minutes. For your convenience, the web format will allow for an extended period of time (typically an extended weekend) during which you can take the quiz. Once a quiz has been started the clock starts running and you have to finish it in the allotted time. All quizzes may be taken twice with the best result counting toward your grade.

emailed questions on grades or grading will not be answered.

issue you may talk to the instructor about it. Except for problems with on-line quizzes (see below),

- 7. **Textbook:** The listed textbook is only one of many reference and study tools you should use to learn Chemistry. "Oxtoby, Gillis, Butler, Principles of Modern Chemistry" was chosen because of its combination of scientific rigor and accessibility. Unfortunately, it is also one of the more expensive texts on the market. There is a copy on course reserve at the Marston Science Library. There is no need to bring the textbook to class. Occasionally, problems from the book will be used for homework, quiz, or exam problems. Posted reading assignments ought to be completed before coming to class to allow for better comprehension of the material during lecture.
- 8. Canvas: Access your Canvas e-learning account by clicking on the 'Log-In to E-Learning' link on the web site, http://lss.at.ufl.edu/ where you will have to supply your Gatorlink credentials to log in. Please, do this at your earliest convenience and make yourself familiar. Canvas will be primarily used by TAs and instructor to communicate with the class. Please make sure to monitor the announcements on a regular basis. There may occasionally be assignments on Canvas that need to be completed before class. If you experience technical problems when using Canvas, e.g., during an online quiz, please contact the UFIT helpdesk (http://helpdesk.ufl.edu/, 352-392-4357 option 2 open 24/7, email Learning-support@ufl.edu, or refer to: https://lss.at.ufl.edu/help.shtml).
- 9. **Homework (HW):** Ten HW assignments will be given over the course of the semester. They will normally be published on Canvas by Thursday afternoon and are due on the following Wednesday at the beginning of discussion session. Late HW policy: HW is late if it is not delivered at the beginning of your discussion session to the TA in charge. Each day late will incur a 20% deduction (12 points) of the total points value. Do your HW! By doing HW problems you will collect essential points toward your grade and will be better prepared to deal with problems on exams. Be ready to work out HW problems on the board during discussion sessions. You will earn up to 20 participation points for each HW problem you work out on the board (see item #10 below). You are

expected to work out at least three different HW problems throughout the semester for a total of 60 participation points. The remaining 140 participation points may be earned by active participation in the discussion during the W small group sessions. HW problems come from many different sources, including the instructor's own personal list of problems. Since these will be the hardest problems you will encounter in CHM2047, you may form study groups with other students to work on them. However, simply copying someone else's work is plagiarism and will be treated as such!

- 10. **Participation Grade:** Participation points (up to 400) will be earned through active participation in class and in the small group discussion sessions. 200 points can be earned in W discussion session and 200 points can be earned with 'learning catalytics' in class (see #11).
 - W Discussion Sessions: 60/200 participation points are reserved for working out HW problems on the board during W discussion sessions. The remaining 140/200 points can be earned through active participation which includes, but is not limited to, responding to questions the TA will ask during class/discussion session, asking questions of the TA or of the student working out a HW problem on the board, actively participating in the exam review sessions, working out additional HW problems on the board, etc. Your TA will keep track of your in-class participation points.
 - During Lecture: 200 participation points can be earned by actively participating in class. This is primarily done by using the learning catalytics app on your digital device (smartphone, tablet, notebook PC, *etc.*) to respond to questions asked by the instructor throughout the lectures (see further explanation below under #11).
- 11. LearningCatalytics (LC): In this course, we will use LC for your digital device to respond to the instructor's questions and earn valuable points toward your grade. You will need to purchase access and create a student account on https://learningcatalytics.com/. Follow instructions on that web site, or in the registration document on your Canvas account (click on Files → LC → Get_Started_Flyer_Learning_Catalytics.pdf) to activate your account and link it to our course, CHM2047. When registering make sure to use your full first and last name with correct spelling including capitalization. This is important to correctly link your LC gradebook entry to your course grades on Canvas. Do not register twice! If you have trouble logging in, get in touch with Pearson's help desk online at https://support.pearson.com/getsupport/s/?tabset-dd12d=1. The cost for LC is \$12 for the semester. You are required to bring at least one wifi-enabled digital device to class to use for this activity. If you don't have access to a digital device, please contact the instructor.
- 12. **Video Modules:** will be made available throughout the semester through links posted on Canvas. These modules are designed to aid in the explanation of concepts and will be used for instruction in addition to the classroom lectures. Typically, they should be watched before a topic is covered and announcements to that effect will go out to students ahead of time.
- 13. **Calculators:** You must have your own scientific calculator. Calculators may be used on quizzes and exams but may not be shared. You may **not** use graphing calculators or any calculators that are capable of communication on any exam. Simple inexpensive scientific calculators such as the TI-30 series or the Casio fx-260 are acceptable and sufficient for any problem encountered on exams.
- 14. **Class Attendance:** Regular attendance is essential for your success in this class. However, we will not do roll-calls. Repeated absence in class and discussion session will make it very difficult to earn full participation points. For further information on UF's attendance policies which are in effect for this course, see: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.
- 15. **Study Habits:** The course demands on average 10 12 hours/week of work outside of class. The class will not be taught 'by the book.' It is expected that you read the assigned pages from the textbook (or corresponding chapters in comparable textbooks) and watch assigned video modules in advance before coming to class. The instructor will build on this material and you are expected to be able to follow in-class discussion. The course demands a regular sustained effort throughout the semester. Most importantly, **do not allow yourself to fall behind!** The material builds up and you need to stay ahead of the game. If you find that you are not grasping essential material by reading the textbook and following in-class discussion, **seek help!** Visit your instructor's and/or TA's office hours, talk to other students in your class, compare notes, form a study group, consult other text books, go to the CLC (Chemistry Learning Center) in Keene/Flint Hall, *etc*.
- 16. **Study Groups:** It is highly encouraged to form study groups and meet with them on a weekly basis to discuss course material and to prepare for exams. In this course it is permissible that you work on HW assignments together with your study partners. However, you are responsible to fully understand your own worked-out HW submissions and may not just copy someone else's.
- 17. **Office Hours:** The instructor, five alumn-TAs, and two graduate student TAs offer a total of 19 office hours spread over the whole week. The detailed times and locations are listed on the first page of this syllabus and the table on the third page. This is time we set aside for you. Take advantage of it. Please note that the instructor and all TAs are available to help students in any of the five sections. You are not limited to only the TA assigned to your section.
- 18. **Online Course Evaluation:** Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester. Announcements will be made to students about the specific times when they are open. Summary results of these assessments are

- available to students at https://evaluations.ufl.edu/results/.
- 19. **Students with Disabilities:** Students requiring special accommodations should register with the Dean of Students Office (http://www.dso.ufl.edu/, 352-392-1261) and the Disability Resource Center (DRC, https://www.dso.ufl.edu/drc, 352-392-8565), and present documentation from that office to the instructor.
- 20. **Counseling Services:** The University of Florida provides counseling services for students, staff, and faculty. See http://www.counseling.ufl.edu/cwc/. If you or a friend are in distress, call (352) 392-1575 (available 24/7), email umatter@ufl.edu, or walk in for an emergency consultation during regular service hours (8:00am 5:00pm) at the Radio Road Site, 3190 Radio Rd., or the Peabody Hall Site, on the 4th floor of Peabody Hall, adjacent to Criser Hall. For other hours or weekends, call the Alachua County Crisis Center, (352) 264-6789. For sexual assault recovery services call the Student Health Care Center at (352) 392-1161. For life-threatening emergencies always call 911.

21. Emergency Numbers and Web Sites:

- UFPD (UF Police Department): In case of emergency dial 911. The UF campus police non-emergency number is (352) 392-1111. Their web site: http://www.police.ufl.edu/,
- UF Emergency management: (352) 273-2100. https://emergency.ufl.edu/,
- Infirmary (student health center): (352) 392-1161, http://shcc.ufl.edu/.
- EH&S (Environmental Health & Safety): (352) 392-1591, http://www.ehs.ufl.edu/.
- 22. Other Academic Resources: UF provides several other resources for students, such as
 - Library Support can be obtained here: http://cms.uflib.ufl.edu/ask, where you can find various ways to receive assistance with respect to using the libraries or finding resources.
 - The Career Resource Center is located on level One in the Reitz Union, (352) 392-1601, and provides career assistance and counseling. Refer to http://www.crc.ufl.edu/ for further info.
 - The Teaching Center is located in Broward Hall, call (352) 392-2010 or (352) 392-6420 and provides students with tutoring services and counseling regarding general study skills. Refer to http://teachingcenter.ufl.edu/ for further info. It may also provide employment opportunities as tutors for well qualified students.
 - The Writing Studio is located at 302, Tigert Hall, (352) 846-1138, and provides help with brainstorming, formatting, and writing papers, see: https://writing.ufl.edu/writing-studio/.
 - The Ombuds Office is located at 31 Tigert Hall, (352) 392-1308, and provides students assistance in resolving problems and conflicts that arise in the course of interacting with the University of Florida. By considering problems in an unbiased way, the Ombuds works to achieve a fair resolution and works to protect the rights of all parties involved. For further information go to http://www.ombuds.ufl.edu/ or refer to the official complaints policy here: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.
- 23. **Cell Phone Etiquette:** Please put all cell phones or other electronic devices on "**silent mode**" during all class and discussion periods. Please do not leave the classroom during lecture to make a phone call, use the 5-minute break. Use your cellphone only for 'learning catalytics' acivities while class is in session. Thank you!
- 24. **Facebook Page:** One of the alumn-TAs has set up a closed facebook group for the class here: https://www.facebook.com/groups/590271541134205/. Participation through reading and posting is voluntary but will enhance the class community. Please note that this page is not monitored by the instructor. It is administered by the TAs.
- 25. Honor Code: This class will operate under the policies of the student honor code which can be found at: https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx. The students, instructor, and TAs are honor-bound to comply with the Honors Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks. Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/.

If you have further questions, please contact me. Have a great semester! Sincerely,