CHEM 110 – Introductory Chemistry Lecture Syllabus, Spring 2017

Lecture:  
*Mon, Wed, Fri 9:00-9:50 am in 3140 Wescoe Hall*

Discussions:  
*Wednesdays (Malott 2001) and Thursdays (Malott 1001) from 4:30-5:30 p.m.*

Instructor:  
**Dr. Lisa Sharpe Elles**, 3033 Malott Hall, sharpeelles@ku.edu, 785-864-4494  
*Office Hours: Tues. 1-2 p.m. and Fri. 10-11 a.m. or by appointment (3033 Malott)*

Lecture TA:  
**Nilan Kamathewatta**, B029 Malott Hall, nilan_jayabahu@ku.edu  
*Office Hours: Monday 12-2 p.m. in 6083 Malott*

Lab Director:  
**Dr. Roderick Black**, 2021 Malott Hall, rsblack@ku.edu, 785-864-3481

Lab TAs:  
**Robert Adams**, rma824@ku.edu  
**Galina Bulgakova**, gabulgakova@ku.edu  
**Brittany DeWitt**, bdewitt@ku.edu  
**Mitchell Kerr**, mphilk@ku.edu  
**Angel Shavalier**, ashava13@ku.edu  
*Office hours (in 6083 Malott): Schedule posted on Blackboard*

Description:  
This integrated lecture and laboratory course provides an introduction to basic concepts related to general, organic, and biological chemistry. Suitable for students seeking an introductory course and for students who are majoring in health and allied health fields.

(This course is designed to fulfill the science requirement for non-science majors, and should not be taken by students who require more than one semester of chemistry. Students in the School of Engineering may not take this course for credit. CHEM 110 and CHEM 150 cannot both be taken for credit.)

KU Core:  
This course satisfies KU Core Goal 3 – Natural Sciences (GE3N)

Required Materials:

Textbook:  
*Mastering Chemistry* (online homework) Access Card

Lab Manual:  
The laboratory syllabus, schedule, and protocols will be provided as pdf files on Blackboard. You are responsible for *printing* the correct protocol file, *bringing* it with you to lab, and *reading* the procedure prior to your lab session. During the lab you will fill out the required data sheets with your experimental results and calculations. These sheets along with a written conclusions paragraph will be handed in for credit. More details will be provided on Blackboard in the laboratory syllabus.

Goggles:  
Approved safety goggles are required at all times in the lab. The bookstore sells inexpensive goggles that meet State standards, but the Chemistry Club has much better goggles for sale at a reasonable price.

Clickers:  
iClickers will be used regularly during lectures. You will receive credit based on the frequency of your responses (described below). Register your clicker in Blackboard as soon as possible.

Calculator:  
You will need one of the following non-programmable calculators for quizzes and exams:  
**Texas Instruments 30Xa** or **Casio FX260**. No other calculators will be allowed, and you will receive a zero on any quiz or exam for which you use any other calculator!
Website: The course website is available on Blackboard (http://courseware.ku.edu). All (lecture and laboratory) course announcements and materials will be available here.

Lectures: Lecture attendance is required and will directly affect your performance in the course. You are expected to read the assigned sections of the textbook prior to lecture, ask questions during lecture and discussion sessions, and review the material afterwards. You will get most out of this class, and have the most fun, if you fully participate in all lecture, discussion, and laboratory activities. Don’t hesitate to ask questions, after all, you probably are not the only one who wants to know the answer, so go ahead and ask!

Cell phones, laptops, iPad, or other distractions are prohibited in the classroom. Please silence the alarms and put them away prior to the start of class.

Discussions: The optional informal discussion sessions provide an opportunity to practice working problems and ask questions. Although the discussion sections are optional, your attendance is very strongly encouraged. The lecture TA will give you practice problems, help you solve them as needed, answer questions you have, and help you prepare for and exams.

Recitations: The first 30-45 minutes of every lab period will include a recitation (problem solving) section during which you will be working through problems that will help you better understand the lecture material and prepare you for exams. Your participation is required as part of the required lab time.

Grading: Your final grade in the course will be based on the total accumulation of points throughout the semester and assigned a letter grade (see below scale). If necessary, an appropriate curve will be applied at the end of the semester if deemed necessary by the instructor.

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Clicker Participation (after 10% allowance)</td>
<td>50</td>
</tr>
<tr>
<td>Class Participation (after 10% allowance)</td>
<td>90</td>
</tr>
<tr>
<td>Online Homework (15 x 10 points each)</td>
<td>150</td>
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<tr>
<td>Midterm Exams (3 x 100 points each)</td>
<td>300</td>
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<tr>
<td>Final Exam</td>
<td>150</td>
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<tr>
<td>Lab (13 labs x 20 points each)</td>
<td>260</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>1000 points</strong></td>
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Scale: 1000-900 points = A  
899-800 points = B  
799-700 points = C  
699-600 points = D  
599 points and below = F

Clicker Participation: Clickers will be used during most (or all) lectures. You are responsible for bringing your clickers with you to class every day. The purpose of clicker questions is (1) to encourage you to actively participate in lectures and (2) to provide immediate feedback on the understanding of course concepts. Please answer each question to the best of your ability even though you are not graded on the accuracy of your responses.

An allowance of 10% of the total number of questions will be dropped in order to account for malfunctioning devices, unavoidable absences, and all other potential issues. No other allowances will be made under any circumstances. No bonus points will be given – i.e., the maximum points you can earn is 50 (after the allowance).
You will need to register your clicker in Blackboard in order to receive credit for your responses. Access the iClicker registration page under the Student Tools tab in the course Blackboard site and follow the instructions.

Class Participation (group work):

Periodically throughout the semester we will do in-class activities; worksheets, exercises, or problems, in small self-assembled groups. The purpose of these activities is for the instructor to assess student learning and for the student to be held accountable for keeping up with the reading and lecture material. Some of these activities are tentatively indicated in the syllabus with an asterisk but others will be unannounced in advance. All of the activities will have “participation” credit associated with them, points for completing the activity, as well as credit for the correct answers. The points (see note below) for each of these activities is varied but will not be more than 10 points for any given activity. Although you will be working in groups for these activities, you will be asked to turn in individual work for credit. Therefore, it is in your best interest to be an active participant. This means that you come to each class prepared – read your book, take notes in class, complete homework assignments and practice problems – and you work on (discuss) the activity with your peers.

An allowance of 10% of the total number of questions will be dropped in order to account for unavoidable absences and all other potential issues. No other allowances will be made under any circumstances. No bonus points will be given – i.e., the maximum points you can earn is 90 (after the allowance).

Guidelines for working in groups (This also applies to the laboratory)

Why groups? Many of you will enter professions in which you will need to work with others. Your success relies on the ability to adapt to unique situations and interact with many types of people. I expect all students to help create a safe and supportive classroom environment where we all feel comfortable sharing ideas and contributing thoughts. Small group behavior will be respectful and professional. Those students not following these guidelines will be asked to leave and will receive a zero for the activity that day.

*Points will be normalized if necessary. In other words, if we end up with less or more than 90 total points, a percentage will be used to determine your final score for this category. For example, if there were 120 possible points and you earned 100 of these points (or 83%), your score would be 83% of 90 points or \(0.83 \times 90 = 75\) points.

“Nothing new that is really interesting comes without collaboration” – James Watson

Online Homework:

Weekly homework assignments (10 points each) must be completed online via the Mastering Chemistry website. Working through the assigned problems is critical for understanding the material, and will prepare you for the exams. Assignments will be due at midnight on Thursday, except for exam weeks when the assignments will be due at midnight on Tuesday. You must complete each assignment by the deadline, no late assignments will be accepted under any circumstances.

Exams:

Three midterm exams and a comprehensive final exam will be used to evaluate your understanding of the material. Only approved calculators will be allowed (TI 30Xa or Casio FX260). As listed in the course catalog, the midterm exams are scheduled for Thursday evenings. Please let me know immediately if you have a conflict with any of these times. No make-up exams will be offered. No changes to exam scores will be considered more than one week after they are returned.
Exam I: Thursday, February 16 8-10 p.m. 110 Budig Hall
Exam II: Thursday, March 16 8-10 p.m. 110 Budig Hall
Exam III: Thursday, April 20 8-10 p.m. 110 Budig Hall
Final Exam: Monday, May 8 7:30-10:00 a.m. 3140 Wescoe

Note: Lecture will be cancelled on the Friday following each exam.

Lab Grade: Your attendance in lab is **required every week.** Students missing more than four lab sessions *for any reason* will not be allowed to pass the class. Each lab is worth a total of 20 points, and will consist of a graded pre-lab quiz (5 points) and the lab report (15 points). More information about the lab and lab report will be provided in the Lab syllabus found on Blackboard.

**Lab Safety regulations** are posted on Blackboard. In addition to reviewing these regulations carefully, you must pass an online safety quiz *before* coming to lab for the first time. You will not be allowed to participate (or receive points) in the lab until after you complete the safety quiz with a *perfect score.*

Conduct: **Academic misconduct will not be tolerated.** You are encouraged to discuss practice problems and in-class exercises, and study for quizzes and exams with your classmates and in your groups. However, all graded exams and quizzes must be *your own work,* of your own thinking and effort. In submitting your answers, you explicitly agree that, during the time of the quiz or exam, you have neither given nor received any assistance to or from another student or from any other source not authorized in advance by the instructor. Cell phones are **not permitted** to be out during exams and quizzes. If you have an emergency, see the instructor *before* the exam or quiz begins.

All incidents will be reported, and students found in violation will be punished severely. A student who fails to observe these standards during an in-class exam or quiz will receive zero credit for that exam. Disruptions in the classroom constitute academic misconduct and will be dealt with accordingly.

Students should review the university policy on Academic conduct at: [http://policy.ku.edu/governance/USRR#art2sect6](http://policy.ku.edu/governance/USRR#art2sect6)

Course Materials: Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is are prohibited. On request, the instructor may grant permission for students to audio tape lectures, on the condition that these audio tapes are only used as a study aid by the individual making the recording. Unless explicit permission is obtained from the instructor, recordings of lectures and review sessions may not be modified and must not be transferred or transmitted to any other person, whether or not that individual is enrolled in the course.

Disabilities: The Academic Achievement and Access Center (AAAC) coordinates academic accommodations and services for all eligible KU students with disabilities. If you have a disability for which you wish to request accommodations and have not contacted the AAAC, please do so as soon as possible. They are located in 22 Strong Hall and can be reached at 785-864-4064 (V/TTY). Information about their services can be found at [http://www.access.ku.edu](http://www.access.ku.edu). Please contact me privately regarding your needs in this course.
Religious Observances: Should the examination schedule for this course conflict with your mandated religious observance, please contact me at the beginning of the semester so that we can schedule a make-up exam at a mutually acceptable time. In addition, students will not be penalized for absence from regularly scheduled class activities which conflict with mandated religious observances. Students are responsible for initiating discussion with the instructor to reach a mutually acceptable solution.

Link to policy on test taking, student responsibility and religious observance: http://policy.ku.edu/governance/USRR#art1sect4

Link to policy on attendance evaluation and mandated religious observance: http://policy.ku.edu/governance/USRR#art2sect1

This syllabus is subject to change in the event of extenuating circumstances. Any changes will be announced in-class (when possible) and posted on Blackboard.
CHEM 110 – Introductory Chemistry Laboratory Syllabus, Spring 2017

Lab Instructor (TA): 
Office Hours:

Lab Meeting Time and Section Number:

Lab Meeting Room: 2027 Malott Hall

Lab Director: Dr. Roderick Black, 2021 Malott Hall, rsblack@ku.edu, 785-864-3481

Course Website: CHEM 110 Lecture Site on Blackboard (http://courseware.ku.edu)

Description: This is the laboratory portion of the CHEM 110 integrated lecture and laboratory course. See the CHEM 110 lecture syllabus for additional information.

Required Materials:
Lab Manual: The laboratory syllabus, schedule, and protocols will be provided as pdf files on Blackboard. You are responsible for printing the correct protocol file, bringing it with you to lab, and reading the procedure prior to your lab session. During the lab you will fill out the required data sheets with your experimental results and calculations. These sheets along with a written conclusions paragraph will be handed in for credit the following week.

Goggles: Department-approved safety goggles are required at all times in the lab.

Calculator: You will need one of the following non-programmable calculators for quizzes and calculations: Texas Instruments 30Xa or Casio FX260.

Lab Safety: Safety regulations are posted on Blackboard and are located at the following Web site: http://linus.chem.dept.ku.edu/GenChemLab/safety_regs.htm. In addition to reviewing these regulations carefully, you must pass an online safety quiz before coming to lab for the first time. You will not be allowed to participate (or receive points) in the lab until after you complete the safety quiz with a perfect score.

You must wear appropriate lab attire at all times:

Eye protection: Department-approved full-coverage goggles only.

Shoes: Shoes must cover the entire foot. Open-toed shoes, open-heeled shoes, sandals, or shoes containing holes are not acceptable.

Clothing: Long pants and shirts with sleeves. It is not acceptable to wear shorts of any kind, Capri pants or intermediate-length pants of any kind, or short skirts.

Other safety: It is recommended to have long hair tied back especially when working with open flames.

Eating or drinking or any food items are not allowed in the lab.

Chemicals should not be used for purposes other than those stated in the experiments.

Wastes must be disposed of properly in accordance with instructions.

Students not wearing appropriate clothing will be told to leave the lab, and will not receive any credit for missed work.
In addition to wearing the appropriate attire you are required to come to lab prepared by reading the procedure, including any safety warnings, for all experiments. A lack of preparation could be dangerous to yourself and those around you.

**Attendance:** Your attendance in lab is required *every* week. There are no make-up labs. All unexcused absences will receive a grade of zero; only a documented physician’s excuse, documented school-sponsored event, or documented death of a friend or family member are acceptable excuses. Students missing more than four lab sessions for any reason will not be allowed to pass the class.

At the beginning of each lab period (before the recitation session) you will be given a pre-lab quiz. The quiz may include questions from the lab procedure or related material discussed during lecture. The purpose of the quiz is to check that you have read the assigned lab material ahead of time and to account for your attendance. If you arrive late you will not be given extra time to complete the quiz, and absolutely no make-up quizzes will be allowed.

Students who arrive late may not be permitted to perform the lab experiment, resulting in a grade of zero for that day.

*Please contact your TA or Dr. Black if you have additional questions about any aspect of the lab.*

**Lab Grade:** The laboratory portion of your grade counts for 260 points (26%) of the total course grade. It is in your best interest to attend each lab and turn in all required materials.

Each lab is worth a total of 20 points, and will consist of a graded pre-lab quiz (5 points), completed lab data sheets and observations (10 points), and brief lab conclusion paragraph (5 points). Lab reports (data sheets, observations, example calculations, and conclusions) will be due at the start of lab the following week. Any reports turned in after the pre-lab quiz will lose 10% of points per day.

**Conduct:** *Academic misconduct will not be tolerated.* You will be performing experiments, making measurements, and recording data in groups. However, all graded quizzes and lab reports (sample calculations, questions, and conclusions) must be *your own work,* of your own thinking and effort. Assignments submitted to your TA must be composed in Standard English using your own words. Assignments *may not be copied* from published or online sources of any sort, nor may they be copied from the work of any current or former student. Ignorance of the rules is *not* a valid excuse. If you have any questions about what constitutes plagiarism, consult your instructor and/or this helpful online resource: [https://www.indiana.edu/~istd/](https://www.indiana.edu/~istd/)

Disruptions in the classroom or failure to follow safety guidelines constitute academic misconduct and will be dealt with accordingly.