

CHEMISTRY 106

Laboratory Instructor: _____

Office: _____

Phone: _____

Email: _____

Office Hours: _____

Course Coordinator: Prof Carnetta Skipworth

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Office: KTH 4043

Office Phone #: (270) 745-8741

Office Hours: Posted on office door

Textbook: Purchase the book from the university bookstore. Other avenues take too long to receive. Title: Chem Lab: Experiments in General, Organic, and Biochemistry. Burris & Byrd. 3rd edition. Publisher Kendall/Hunt. Do not purchase a used book, and do not purchase an online book. You must purchase a new book to bring to class (not electronic).

Goggles that form a seal around your eyes are also required.



Course Description: CHEM 106 is a corequisite of CHEM 105 lecture. CHEM 105 has a prerequisite of two years of high school algebra or Math 096. This is the first half of a one-year course predominately for the majors in agriculture, consumer and family sciences, and for non-science majors desiring a full year sequence of chemistry. It DOES NOT count towards a major or minor in chemistry. The CHEM 105 and 106 courses are prerequisites to CHEM 107 and 108.

Course Objectives: Students will learn and follow proper lab and safety procedures. They will be introduced to basic chemistry equipment and demonstrate proper use of the equipment. Students will perform experiments utilizing the material learned in the corequisite lecture and display this knowledge as they perform experiments based on those concepts.

Expectations: You will come to lab having read the lab and having completed the preliminary exercises **due at the beginning** of the laboratory period. You will also have watched the pre-lab video(s) posted to Blackboard before coming to lab. You will obey all safety mandates as outlined in the lab safety contract you must sign to participate in this class. You will also bring your safety goggles, lab manual, and a nonprogrammable scientific calculator to class every week. You will turn in assignments correctly and on time. **Due date extensions will not be easily obtained.**

Safety: Failure to follow these safety rules will lead to dismissal from the laboratory, which will be reflected in your grade.

- **NO** food, drinks, or tobacco products (this includes gum) are permitted in the laboratory.
- You must provide your own protective safety goggles. They should have full surround contact with indirect venting. You can purchase these (\$20) from the Chem Club in OCH G022. The Chem Club accepts only cash or check. Any other goggles must be approved by either your laboratory instructor or Prof Skipworth.

- Footwear should completely cover the foot (no open toed shoes, sandals, or flip-flops)
- All pants or skirts must be full-length and come to the floor. No tank tops or exposed midriffs.
- Electronic devices, such as cell phones, are not to be used during lab.

Safety Goggle Policy and Grades:

Students must wear their safety goggles during lab.

The following penalties will be strictly enforced for failure to wear safety goggles during lab.

1st offense per lab period: warning

2nd offense per lab period: minus 25 points (1/2 of the lab credit for the day)

3rd offense per lab period: minus 50 points (all of the lab credit for the day)

Evaluation:

Exams – There will be two exams worth 100 points each. Please refer to calendar for exam dates and topics. **There will be no make-up exams.** Contact Professor Skipworth and laboratory instructor within 7 calendar days if a true emergency has occurred. You must provide written proof documenting the emergency to Professor Skipworth. A calculator will be necessary to complete the exams. Only non-programmable/non-graphing calculators will be allowed. Loaner calculators will not be available; you are responsible for bringing a working non-programmable/non-graphing calculator to each exam. A copy of the periodic table with symbols, atomic numbers, and atomic masses will be provided with the exam packet. Other pertinent reference material may also be supplied. No notes or aids of any other kind will be allowed.

Pre-laboratory Exercises and Lab Reports - Students are required to complete pre-laboratory exercises and lab reports. Both the pre-laboratory exercises and reports sheets combined are worth 50 points. **Completed pre-laboratory exercises are due when you enter laboratory. No late work will be accepted. Laboratory report sheets are due at the end of the laboratory period in which the exercise is completed** unless otherwise directed by the lab TA. **No late work will be accepted.** Appropriate units must accompany each value and the appropriate number of significant figures must be given. You must clearly show how you obtained your answers to problems and experimental results. If work is absent or not logically presented, then no credit will be given. Pre-lab exercises and reports will only be accepted on the original material from the purchased lab manual at the beginning of the lab period. Remember that you will not be allowed to participate in the lab if you have not completed the pre-laboratory exercise for the week **before** the meeting time of the class.

Quizzes: Students will be given a quiz at the beginning of each laboratory period as specified on the calendar. Quizzes will cover information from pre-lab and lab procedures from lab to be completed that day, information from previous lab, and/or nomenclature. It's important to read the lab and complete the pre-laboratory exercise before coming to lab that day.

Nomenclature: Nomenclature consists of converting chemical formulas to names and vice versa. All answers must be written clearly to receive any credit. Printing is recommended. Vague and ambiguous answers will receive NO credit. There is NO partial credit for answers to nomenclature questions. Spelling counts

Requests for re-evaluation of a grade on an assessment: You have seven (7) calendar days to request a re-evaluation of a grade on an assessment from your lab instructor. All such requests **MUST** be made in person to your instructor. A written statement specifically indicating the

items being requested for re-evaluation must accompany all such requests. The laboratory instructor and course coordinator reserve the right to re-evaluate the entire assessment.

Calculator policy: You will need a basic calculator that will add, subtract, multiply, and divide. YOU CANNOT use your phone, PDA or any/programmable scientific calculator in this class.

Attendance: Attendance is mandatory. Due to the full enrollment of every section of CHEM 106 it will be very difficult for a student to attend another lab section to complete a missed lab. Do not come to class sick. You will be allowed one dropped lab grade over the semester. This dropped grade will include a drop of pre-laboratory exercises, the laboratory report, and the weekly quiz.

Punctuality: Anyone arriving more than 15 minutes after the beginning of the lab meeting time will be marked absent and will not be allowed to complete the lab unless prior arrangements have been made with the laboratory instructor. You will not be able to make up the missed lab resulting in a zero for the week's activities.

Students with disabilities: In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Office for Student Disability Services in Downing University Center, A-200. The phone number is 270-745-5004. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

Grades: Grades will be assigned based on the percent total of points earned. The university grading scale will be used to assign grades (A=90-100%, B =80-89%, C=70-79%, D=60-69%, F=59% and below). I will not curve final course grades. Your course grade will be the grade you earned throughout the semester.

Best 8 of 9 lab sets (pre-lab, report sheet, and quiz) @ 70 pts	560 pts
Nomenclature exercises	160 pts
2 exams @ 100 pts	<u>200 pts</u>
	920 pts

Keeping the Laboratory Organized and Clean: It is your responsibility to clean up your lab area, any sink you used, glassware, hood space, etc. Make sure your area of the lab is organized and clean before turning in your report sheet. Instructor will deduct 10 points from your laboratory grade if you turn in your laboratory report sheet without cleaning up after yourself. The OCH lab is very nice and clean. I expect you to keep it in this pristine nature.

Emailing the Professor:

The TA for your class is your first resource for any issues with this course. Please contact them concerning grading, absences, or questions about the material.

Please feel free to contact me any time. Emails must be in the following format: Subject line must state the class number (106) followed by the section number or lab day/time and one of the following categories: grading, attendance, miscellaneous, appointment, blackboard, homework. Any email not received in this format may not be answered. Anything that can be answered by looking at your syllabus will receive the reply, "see syllabus".

Academic Misconduct (Excerpt from the WKU Student Handbook):

The University expects students to operate with the highest standard of integrity in all facets of the collegiate experience. Broadly defined, academic misconduct is any unethical self-serving action in the performance of an academic activity, deliberate or unintentional, that affords a student an unfair, unearned, or undeserved advantage.

Any incident of cheating will result in the student being assigned an F for the course.

ADA Accommodation: In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

Title IX Discrimination and Harassment: Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at <https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf> and Discrimination and Harassment Policy (#0.2040) at https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf. Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's [Counseling and Testing Center](#) at 270-745-3159.

All students are strongly encouraged to [get the COVID-19 vaccine](#). In accordance with WKU policy, all students must call the WKU COVID-19 Assistance Line at 270-745-2019 within 4 hours of testing positive for COVID-19 or being identified as a close contact to someone who has tested positive. The COVID Assistance Line is available to answer questions regarding any COVID-19 related issue. This guidance is subject to change based on requirements set forth by federal, state, and local public health entities. Please refer to the Healthy on the Hill website for the most current information. www.wku.edu/healthyonthehill

Other syllabus information can be found at <http://www.wku.edu/syllabusinfo/>.

Instructor reserves the right to make changes to the syllabus at any time during the semester.

Chem 106 Schedule Reminder: Pre-laboratory exercises are due at the beginning of lab!

Week #	Dates	Activity	Points and Lab Notes
1	Aug 21 – 25	No Lab	
2	Aug 28 – Sept 1	Orientation, safety, equipment Nomenclature: Symbols and elements, In Class: On Blackboard, watch Nomenclature 1 video <i>Binary Ionic Compounds and Transition Elements</i> and complete note sheet Assigned: Complete Nomenclature Homework 1, memorize 56 elements on marked periodic table found on Blackboard under Lab Information	TA will give you Nomenclature Note Sheet 1
3	Sept 4-8	No Lab – Labor Day	
4	Sept 11-15	Exp 1 Basic Measurement and Determination of Density and Quiz 1. Pre-lab due at the beginning of class. Nomenclature: Homework 1 Due In Class: On Blackboard, watch Nomenclature 2 video <i>Molecular Compounds</i> and complete note sheet Assigned: Complete Nomenclature Homework 2	50 (prelab/report sheet) + 20 (quiz) <i>Lab Notes: Omit prelim ques #2, Report sheet – weigh only 3 times, Omit Trial II.</i> 20 TA will give you Nomenclature Note Sheet 2
5	Sept 18-22	Exp 3 Separation Using Chromatographic Techniques and Quiz 2. Pre-lab due at the beginning of class. Nomenclature: Homework 2 Due In Class: On Blackboard, watch Nomenclature 3 video <i>Polyatomic ions</i> and complete note sheet Assigned: Memorize ion charge sheet & polyatomic ions and complete Homework 3	50 (prelab/report sheet) + 20 (quiz) 20 <i>Lab Notes: Complete pre-lab in book, TA will give you the TLC Lab from Blackboard under Lab Information, complete report sheet found on Blackboard and pages 59-60 in book.</i> TA will give you Nomenclature Note Sheet 3
6	Sept 25 – Sept 29	Exp 2 Elements, Compounds, Mixtures and Quiz 3. Pre-lab due at the beginning of class. Nomenclature: Homework 3 Due In Class: On Blackboard, watch Nomenclature 4 video <i>Acids and Bases and</i> complete note sheet Assigned: Complete Homework 4	50 (prelab/report sheet) + 20 (quiz) 40 TA will give you Nomenclature Note Sheet 4
7	Oct 2-6	No Lab – Fall Break	
8	Oct 9-13	Exp 5 Atomic Emission Spectra and Flame test and Quiz 4. Pre-lab due at the beginning of class. Nomenclature: Homework 4 Due Assigned: Complete Homework 5 (found on Blackboard)	50 (prelab/report sheet) + 20 (quiz) 50

9	Oct 16-20	Midterm, Homework 5 Due Exp 6 Structure of Covalent Molecules and Polyatomic Ions and Quiz 5. Pre-lab due at the beginning of class.	100 (exam) + 30 (hmwk) 50 (prelab/report sheet) + 20 (quiz) <i>Lab Notes: Complete pre-lab in book. Complete report sheet found on Blackboard under Lab Information</i>
10	Oct 23-27	Exp 7 Hydrates and the Determination of Formula of a Hydrate and Quiz 6. Pre-lab due at the beginning of class.	50 (prelab/report sheet) + 20 (quiz) <i>Lab Notes: Omit Trial II</i>
11	Oct 30-Nov 3	Exp 8 Simple Chemical Reactions and Quiz 7. Pre-lab due at the beginning of class.	50 (prelab/report sheet) + 20 (quiz)
12	Nov 6-10	Exp 9 Activity Series of Metals and Quiz 8. Pre-lab due at beginning of class	50 (prelab/report sheet) + 20 (quiz) <i>Lab Notes: Omit #2 on Prelab</i>
13	Nov 13-17	Exp 12 The Combined Gas Law and Dalton's Law and Quiz 9. Pre-lab due at the beginning of class.	50 (prelab/report sheet) + 20 (quiz) <i>Lab Notes: Instructor will provide barometric pressure.</i>
14	Nov 20-24	No lab – Thanksgiving week	
15	Nov 27-Dec 1	Final Exam	100
16	Dec 4-8	No lab	