Syllabus
Biochemistry: Macromolecules
CHE 420 / CHE 5420
And
Biochemistry: Metabolism
CHE 421 / CHE 5421

Instructor Information:

Name: J. Clinton Bailey II, Ph.D.
Office: 416 Math, Chemistry, and Computer Science Building
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Website: http://www.mc.edu/faculty/bailey
My website contains class announcements, current office hours, syllabi, and lecture notes.

Period / Location:

Tuesday; 1:30 – 4:30 p.m.; 401 Hederman Science Building

Catalog Description:

CHE 420 – 5420 Bioanalytical Chemistry Laboratory Credit; 1 sem. hrs.
Prerequisites: CHE 304 and BIO 112 or instructors consent.

This laboratory course covers basic methods utilized in the purification and chemical analysis of biological molecules with applications to medicinal and forensic chemistry.

CHE 421 / 5421 Biophysical Chemistry Laboratory Credit; 1 sem. hrs.
Prerequisites: CHE 304 and BIO 112 or instructors consent.

This laboratory course covers basic methods for the determination of protein and nucleic acid structure, stability and function.

Rationale:

This course is intended for students preparing to further their education in graduate school. Biochemistry furthers the Mission of Mississippi College (See: http://www.mc.edu/about/mission.php) by "stimulating the intellectual development of its students through the liberal arts and sciences" and prepares students for professional study in "specialized fields, including pre-professional and professional programs." Biochemistry laboratory, as a component of the chemistry curriculum, prepares students "to utilize their skills, talents and abilities as they pursue meaningful careers, life-long learning, and service to God and others" as research or industrial chemist, environmentalist, educators, forensic scientist and other areas.

Methods of Instruction: This course provides students with a hands-on, laboratory experience using the techniques of modern biochemistry. Each experiment will begin with a discussion of the theory and application of the technique, followed by conducting an experiment using the technique.

Textbook (Required): None
Pre-laboratory reading assignments and worksheets. Each student is expected to complete the reading assignment listed in the schedule prior to attending lab.

Email Account: All email communication to members of this lab will be sent to their M.C. email account. Please acquire an account and learn to use it.

Tutoring is available for students upon request through your instructor (during office hours) or by contacting Mrs. Reeves in the Chemistry and Biochemistry department office (MCC 415).

Participation: Each student is expected to participate fully in the laboratory exercise. "NO PARASITES OR MOOCHING ALLOWED IN LAB".

Safety Guidelines:

Wear Safety glasses at all times
Wear appropriate protective clothing.
Wash hands with soap and water before leaving the laboratory.
Never eat, drink, smoke, or apply cosmetics in the laboratory.
Horseplay is forbidden.
Unauthorized experiments are forbidden.
Clean all equipment after use.

Cleanliness: The instructor considers cleaning of work areas and equipment to be an integral part of each experiment. Therefore, students are required to leave ALL work areas and equipment clean following each laboratory period. If work areas are left dirty, the instructor reserves the right to deduct points from that day's laboratory grade.

Attendance:

Attendance is expected for every laboratory.

Absence from the Laboratory: As a general policy, make-up labs will NOT be provided. Therefore, missing a lab will result in a grade of zero for that day's work. If a lab session MUST be missed for "reasons beyond your control", substitute work may be arranged but requires PRIOR consent from the instructor. Talk to the instructor as soon as you know you must miss a lab.

Absence from the Final Exam: Attendance for final exam is mandatory. A student that is absent from the final exam will receive a grade of zero. A "make-up" exam may be administered at the professor's discretion.

Withdrawing from this Course:

The last day to withdraw from this course without a grade appearing on the transcript is listed on the College Academic Calendar (http://www.mc.edu/resources/publications/schedules). Withdrawal before this date will result in a W listed on the transcript.

Tuition Refund: To receive a 100% refund of tuition, a student must withdraw from this course by 5:00 p.m. on the date listed on the College Academic Calendar. Following this date, the tuition refund is 0%.

Academic Honesty:

You, as a student at Mississippi College and member of a larger academic community, are expected to be honest. The instructor will not tolerate participation in cheating or plagiarism and will deal harshly with suspected acts of either. The University policy on Academic Honesty (Policy 2.19) as explained in the current edition of the Student Handbook, pp. 36 - 37, http://www.mc.edu/resources/publications/handbook/2009-2010Handbook.pdf will be followed.

Class Disruption:

In the interest of providing everyone an environment conducive to learning, please refrain from disrupting the lab. Students that are disruptive may be asked to leave the laboratory and may receive a zero for that day's assignment. Tardiness and noise from a cell phone are two commonly encountered disruptions that are easy to avoid.

Tardiness: Be on time, Lab begins at 1:30 p.m. on Tuesday.

Cell Phone: Cell phones should be silenced during pre-lab presentations and class discussions.

Evaluation:

Grading: Student progress in mastering course requirements in Bioanalytical Chemistry Laboratory or Biophysical Chemistry Laboratory is measured by

Final Exam Format: The final exam may contain multiple choice, matching, fill in the blank, true or false, short answer, or discussion type questions. Expect application type questions.

Electronic devices: Use or possession of an **unauthorized** electronic device (computer, cell phone, calculator, P.D.A., Blackberry, etc.) during an exam will be considered cheating. During an exam, please securely store your electronic devices in a zipped pocket of a book bag or purse.

Scale: A student's letter grade is based on the percent of total possible points earned during the semester using the scale given below.

Undergraduate (CHE 420 or 421)				Graduate (CHE 5420 or 5421)		
Percentage	Points	Grade		Percentage		
100 – 90.0 %		A		100 – 90.0 %		A
89.9 – 80.0 %		B		89.9 – 86.0 %		B^+
79.9 – 70.0 %		C		85.9 – 80.0 %		B
69.9 = 60.0 %		D		79.9 – 76.0 %		C^+
59.9 – 0 %		F		75.9 – 70.0 %		C
				69.9 – 60.0 %		D
				59.9 – 0 %		F

Graduate Student Paper: Graduate students must prepare a presentation. (50 pts.). See instructions below.

Extra credit is NOT offered in this course.

Distribution of Final Grade: Since a student's grade is available on Banner Web soon after the semester ends, course grades will NOT be posted or distributed. Email inquires concerning grades should originate from your M.C. email account.

ADDITIONAL REQUIREMENTS FOR GRADUATE STUDENTS:

In addition to completing the requirements listed above, students registered for CHE 5418 or 5419 are required to prepare a presentation on a current topic in biochemistry. The topic of the presentation will be determined in consultation with the instructor.

Laboratory Presentation: The presentation should be 10 - 12 minutes long and utilize appropriate visual aids. Deadlines for this project are listed on the lecture schedule.

Special Accommodations:

In order for a student to receive disability accommodations under Section 504 of the Americans with Disabilities Act, he or she must schedule an individual meeting with the Director of Student Counseling Services (SCS) immediately upon recognition of their disability (if their disability is known they must come in before the semester begins or make an appointment immediately upon receipt of their syllabi for the new semester). The student must bring with them written documentation from a medical physician and/or licensed clinician that verifies their disability. If the student has received prior accommodations, they must bring written documentation of those accommodations (example Individualized Education Plan from the school system). Documentation must be current (**within 3 years**). The student must meet with SCS face-to face and also attend two (2) additional follow up meetings (one mid semester before or after midterm examinations and the last one at the end of the semester). Please note that the student may also schedule additional meetings as needed for support through SCS as they work with their professor throughout the semester. Note: Students must come in each semester to complete their Individualized Accommodation Plan (example: MC student completes fall semester IAP plan and even if student is a continuing student for the spring semester they must come in again to complete their spring semester IAP plan).

Student Counseling Services is located in Alumni Hall Room #4 or they may be contacted via email at christia@mc.edu or rward@mc.edu. You may also reach them by phone at 601-925-7790.

The instructor reserves the right to change this syllabus at any time during the semester, to meet the needs of the class.

Last updated on 29 July 2010

ADD

Learning Objectives:

Bioanalytical Chemistry Laboratory CHE 420 / 5420
1.

Biophysical Chemistry Laboratory CHE 421 / 5421
1.