

## Course Information BIOC 455 Spring 2019

**Objective 1:** Students will be able to develop a seeking mentality in the laboratory. Science is a process of discovery and uncovering new knowledge. It is a course goal to equip students with some of the tools to “seek and discover” in Biochemistry. This course emphasizes experimental design, methodology, the further development of good laboratory practices (including safety), and data analysis.

**Objective 2:** Students will be required to problem solve when experimental failure occurs. Troubleshooting is an important component of scientific research in both academia and industry. To do this, students must understand the theory behind the techniques being performed, therefore learning theory is necessary.

**Objective 3:** Students will collaborate with fellow students. Scientists rely heavily upon one another for developing new techniques. It is a course goal that students come to rely on one another for success in this lab and that in the process will develop some lasting relationships.

### REQUIRED MATERIALS

The following items should be available and should be listed correctly at the Illini Union Bookstore (IUB). They *may not* be available and *it is not guaranteed they will be listed correctly* at any other bookstore. Please pay careful attention to dates and editions when purchasing these items. Any items (other than those specifically named below) listed by bookstores as *optional* or *recommended* have not been previously approved by the course faculty.

### REQUIRED TEXTS

1 Biology Lab Notebook (Carbonless). Publisher Stipes

### RECOMMENDED/OPTIONAL TEXTS

1 Experimental Biochemistry, Switzer (ISBN 978-0-7167-3300-3). 3rd Edition. Publisher, W.H. Freeman and Company.

1 Lehninger Principles of Biochemistry, Nelson and Cox (ISBN 978-0-7167-7108-1). 5th or 6th Edition. Publisher, W.H. Freeman and Company.

1 Molecular Cloning, A Laboratory Manual, Green and Sambrook (ISBN 978-193611342-2). 4th Edition. Publisher, Cold Spring Harbor Laboratory Press.

### SECTION CHANGE, ADD AND DROP INFORMATION

Students may use the UI-Integrate Self-Service System to add or change BIOC 455 sections before 5:00 PM, Monday, January 28, 2019.

**Students must at all times attend the laboratory section in which they are currently enrolled.** Students will not be allowed to sit in other sections at other times for any reason without permission from the Course Instructor in 212 Noyes Laboratory or A306 CLSL.

Friday, March 15, 2019 is the last day to drop the course or to elect the Credit/No Credit option. Students may use the UI-Integrate Self-Service System to drop BIOC 455 until this deadline.

To drop the course after the drop deadline, students must petition a dean in their college office and bring petitions to the Course Instructor for completion of attendance and grade information.

To elect the Credit/No Credit option, students must apply in their College Office.

### WHEN BIOC 455 CLASSES BEGIN

BIOC 455 labs begin Monday, January 14 at 1:00 PM (Section A) or Tuesday, January 15 at 1:00 PM (Section B) in 495C Burrill Hall.

### **CONTACTING MCB COURSE PERSONNEL**

MCB course personnel are more than happy to assist students.

Emails to instructors, TAs, or course coordinators will only be answered if they come from an @illinois.edu account. As a student, please remember that when you email a staff member, it is important to include all pertinent information so that we can assist you in the most efficient and effective manner possible. This information includes:

- 2 The course rubric in the subject line
- 3 Your full first and last name
- 4 Your NetID (the first part of your illinois.edu email account)
- 5 Your UIN (9 digit number that you use to register for classes)
- 6 The course that you are concerned about (the course personnel often work with multiple courses)
- 7 Your section letter/number
- 8 The previous email "thread" or previous communicated information pertinent to the situation

Your cooperation will help us respond much more quickly to your concerns.

### **RELIGIOUS OBSERVANCES AND PRACTICES**

Students are required to submit the Request for Accommodation for Religious Observances Form (which can be found at:

[www.odos.illinois.edu/studentassistance/downloads/Religious\\_Observance\\_Accommodation\\_Request\\_Form.docx](http://www.odos.illinois.edu/studentassistance/downloads/Religious_Observance_Accommodation_Request_Form.docx)) to their instructors **and** the Office of the Dean of Students requesting accommodation by the end of the second week of the course. Requests that are not submitted within this time frame may not be granted.

### **DRES ACCOMMODATIONS**

If a student has DRES (Disability Resources and Educational Services) accommodations, documentation must be submitted to course personnel by the end of the second week of class.

If a student believes that they need DRES accommodations, they should contact DRES at [disability@illinois.edu](mailto:disability@illinois.edu).

### **EXAM AND CONFLICT EXAM INFORMATION**

#### **EXAM INSTRUCTIONS**

- 9 There will be two exams, a midterm and a final. The midterm will be on March 11 (Section A) and March 12 (Section B) during your scheduled lab period. The midterm will be a lab practical. The final exam will cover the second half of the semester and will be a written exam. The date/time/location for the final will be announced at a later time.
- 10 Bring your University photo ID, several sharp #2 pencils, and an eraser. You will need a simple, **NON-PROGRAMMABLE** calculator to complete these exams. **NO PROGRAMMABLE CALCULATORS** will be allowed in the exam room.
- 11 Please do not bring to the exam any backpacks, purses, hats, bags, books, notes, papers, clipboards, musical instruments, or *anything* other than the items listed in number 2 above; you will be allowed to enter the exam room with these items, but they will be placed away from student seating during the exam. No one will be monitoring who deposits and collects these personal effects, so thefts and

- mistaken identification of belongings can occur. We urge you not to bring valuables to the exam room. You will be asked to place all jackets/coats completely under the chair in which you are seated. In the case that the floor of the exam room is wet, you will be allowed to place jackets/coats at the front or back of the room during the exam. Cell phones, pagers, ipods, audio equipment, and any other electronic devices must be turned off and placed away from student seating during the exams. The BIOC 455 faculty/staff are not responsible for any of your personal belongings.
- 12 If you are ill or incapacitated on the day of an exam, you are urged to seek assistance at McKinley Health Center or elsewhere as needed, and to miss the exam (a makeup exam will be administered if your absence is excused and time allows). Do not contact your TA. Email ( [lrhurst2@illinois.edu](mailto:lrhurst2@illinois.edu) ) and advise him of your situation. NOTE: If you choose to attend an exam while suffering from illness, and you complete the exam, that exam determines your score.
- 13 If you have an absence of three or more days that includes an exam in this course, you will need to contact the Student Assistance Center (217-333-0050). It is located on the third floor of the Turner Student Services Building. Inform them that you need confirmation of an extended absence from class and provide them with the necessary documentation in order for your absence to be excused.
- 14 Texting, or the use of a cell phone for any purpose during an exam, is prohibited. Doing so may earn you a zero on the exam, or more extreme penalty at the discretion of the instructor.

#### **FINAL EXAM AND CONFLICT FINAL EXAM INFORMATION**

#### **FINAL EXAM INSTRUCTIONS**

- 15 The Final Exam will be administered Date/Time/Location TBA. It will not be cumulative.
- 16 The exam location(s) will be posted on the BIOC 455 Web site by Wednesday, May 1, 2019.
- 17 Bring your University photo ID, several sharp #2 pencils and an eraser. **NO PROGRAMMABLE or GRAPHING CALCULATORS** will be allowed in the exam room.
- 18 Please do not bring to the exam any backpacks, purses, hats, bags, books, notes, papers, clipboards, musical instruments, or *anything* other than the items listed in number 3 above; you will be allowed to enter the exam room with these items, but they will be placed away from student seating during the exam. No one will be monitoring who deposits and collects these personal effects, so thefts and mistaken identification of bags can occur. We urge you not to bring valuables to the exam room. You will be asked to place all jackets/coats completely under the chair in which you are seated. In the case that the floor of the exam room is wet, you will be allowed to place jackets/coats at the front or back of the room during the exam. Cell phones, pagers, ipods, audio equipment, and any other electronic devices must be turned off and placed away from student seating during the exams. The BIOC 455 faculty/staff are not responsible for any of your personal belongings. We strongly suggest you do not bring them to the exam site. The Illini Union Bookstore has lockers available for temporary storage of such items if you are unable to leave them at home prior to an exam.

- 19 In case of illness or personal emergency the day of the final exam, contact the Student Assistance Center (SAC) within the Office of the Dean of Students (see <http://www.odos.uiuc.edu/studentAssistance/index.asp>). Only a dean can excuse a student from a final exam.
- 20 A conflict final exam will be given only for students who have met the requirements stated below "*Conflict Final Exam Instructions*". Complete a Conflict Final Exam Request Form before 5:00 PM on Wednesday, May 1 to arrange a conflict final exam.

### **CONFLICT FINAL EXAM INSTRUCTIONS**

- 2 A Conflict Final Exam will only be given to individuals who find themselves in one of the following situations:

Students with three final exams scheduled within a 24 hour period as defined in Section 3-201, Part A.5 of the *Code of Policies and Regulations Applying to All Students*, which can be found at <http://admin.illinois.edu/policy/code/>.

Students who have another final exam scheduled at the same times as the BIOC 455 Final Exam. The conflicting course's enrollment must be lower than the BIOC 455 enrollment in order for you to take the BIOC 455 conflict final exam. Please see the BIOC 455 Staff in 127 Burrill Hall for enrollment information.

Students who have a verified personal problem, and who have received written permission to take the BIOC 455 conflict final exam from a dean in their college.

- 3 Any student with one or more of the above situations should use the [BIOC 455 Conflict Final Exam Request Form](#) on the BIOC 455 website and submit the form by 5:00 PM Wednesday, May 1, 2019. Students should feel free to contact the BIOC 455 office with questions or concerns about conflict final exams.
- 4 All student requests will be reviewed and students will be contacted as soon as possible via telephone or e-mail regarding the status of their request. Qualified students will be informed of the Conflict Final Exam time and location by Thursday, May 2, 2019 (Reading Day) before 12 PM.
- 5 The Conflict Final Exam date, time, and location will not be determined until all Conflict Finals Requests have been processed (after 5:00 PM, May 1). The Conflict Final may be given at any regular final exam time slot. This means that the conflict Final may be given before or after the regularly scheduled exam.

### **GENERAL INFORMATION & POLICIES OF BIOC 455**

- 21 The course faculty and the TAs are in charge of the orderly conduct of students in lecture and lab and may exclude a student who does not comply with a reasonable request in this regard.
- 22 All students are assumed to have read and understood the *Code Of Policies And Regulations Applying To All Students* and will be expected to act accordingly.  
The *Code* is available online at: [www.admin.illinois.edu/policy/code/](http://www.admin.illinois.edu/policy/code/)
- 23 Concerns over exam grading, lab teaching or grading, and exam or lecture/lab absences should be addressed with Logan Hurst ([lrhurst2@illinois.edu](mailto:lrhurst2@illinois.edu)).
- 24 The deadline for grade corrections on all items is *one week* after corrected items are returned or grades are received.

- 25 Reference letters and recommendation forms are to be submitted to the student's TA, whose evaluation will be reviewed and countersigned by a member of the course faculty.
- 26 The faculty and staff of BIOC 455 are not responsible for any student personal belongings during examinations or class periods.
- 27 Social Media Use:  
Use of any social or electronic media to share information, request information or make confidential information public is prohibited. Any use of this type may earn you a zero or a more extreme penalty at the discretion of the instructor on an assignment or exam.  
Any social media sites created in relation to MCB courses must grant access to course personnel upon request. Failure to provide access will result in a failing grade in the course for the group/site's administrator(s).
- 28 Course Recordings:  
Students are welcome and encouraged to make audio recordings of course lectures.  
The material recorded is intellectual and copyrighted property of the University of Illinois Board of Trustees and may be made for personal use only.  
Video recordings of any kind are strictly prohibited.  
Posting of audio recordings or transcriptions on social or electronic media platforms is strictly prohibited.

#### **ATTENDANCE POLICIES**

- 29 For each laboratory absence, students must complete the [Absence Report Form](#). This form will be automatically forwarded to Logan Hurst immediately upon completion. Note that this form may be completed online from any computer, in case of confining illness. Students are also required to submit supporting documentation to Logan Hurst as specified below.
- 30 Documentation for an absence must include relevant names, times, dates and an explanation of the date(s) and reason(s) for absence. Documentation will not be accepted past one week of the absence in question unless there are extenuating circumstances.
- 31 If an interview requires you to be out of town on the day a lab report is due, the report should be submitted to your TA or Logan Hurst prior to the absence.
- 32 Each lab period will begin promptly at the specified time with important instructions from the teaching assistant. It is therefore vital that students arrive at the designated time in order to prevent confusion on the part of students and duplication of effort on the part of the TAs. In order to discourage tardiness, students will be assessed a penalty of a 10% deduction (of total possible points) if they are more than 10 minutes late to lab. If a student is tardy beyond 30 minutes, they will be considered unexcused and forfeit his/her ability to complete the lab and turn in any assignments. As with absences, excused tardiness must be cleared through Logan Hurst.
- 33 Attendance is also required for the scheduled lectures that take place prior to the start of each lab session. The lectures contain background information as well as important instructions for each day of lab. In addition, there may be two or three instances of in class exercises that will be collected for grading. Experience

has proven that students who attend lecture regularly are more alert in lab, experience fewer mistakes, and complete their tasks in a timely manner.

## **WHAT TO DO IF YOU MUST BE ABSENT**

### **Class Absences:**

- 34 Regular class attendance is expected of all students at the University. ([http://odos.illinois.edu/studentAssistance/absence/revised\\_code.asp](http://odos.illinois.edu/studentAssistance/absence/revised_code.asp))
- 35 The Office of the Dean of Students will only provide informative letters to instructors for protracted illness of 3 or more days, certain emergencies and to be present during the serious illness of immediate family members (parents, legal guardian, spouse/partner, siblings, children, or grandparents). These letters do not excuse you from class but merely provide information for the instructor to consider with regard to excusing the absence and permitting make-up work. Students must request absence letters from the Office of the Dean of Students after the student has returned to class but not more than 10 business days after the last date of absence.
- 36 Absences that may be excused without a letter include circumstances beyond the student's control such as medical treatment, surgery related to prolonged illness or injury, pregnancy, legal matters, citizenship or naturalization processes, or acts of nature which cause destruction to a primary residence or disrupt air travel. All will require documentation.
- 37 Absences that may also be excused without a letter include job, graduate or professional school interviews, though a best effort should be made to schedule these events to minimize class attendance disruption.
- 38 Absences planned for the items listed above must be communicated to your instructor or course coordinator at least two weeks in advance of the absence. Failure to do so may result in the loss of opportunity to reschedule the missed class period and the portion of the grade associated with this class period.
- 39 Absences that will not be excused include family events such as reunions or weddings, or presence during serious illness of extended family members (aunt, uncle, niece, nephew, or cousin).
- 40 Unplanned absences may result in the loss of opportunity to reschedule the missed class period and, therefore, the portion of the grade associated with this class period.
- 41 Absences will be handled according to individual course policy.

### **Exam Absences:**

- 6 If you must miss an exam due to unforeseen circumstances, you are required to contact your instructor or course coordinator within 24 hours of the absence. You will then have 48 hours from the absence in which to submit documentation to your instructor or course coordinator. You must also submit an online Absence Form if one is available on your course website. Course personnel will evaluate documentation and decide whether or not there will be an option to compensate for the missed exam through either a make-up exam or proration. Failure to follow this procedure will result in a zero for the exam.
- 7 If you must miss an exam for job, graduate or professional school interviews, the exam may be prorated. A best effort should be made to schedule these events around exams. You will need to be mindful that only one exam may be prorated in a

semester for any and all absences.

- 8 There will be instances when the student must make an individual choice about their ability to perform on an exam and will need to accept any and all consequences for that choice.
- 9 If the absence is a result of a protracted illness of 3 days or more, you should follow the procedure for obtaining a letter from the Office of the Dean of Students. The request may be made once the student returns to class but not more than 10 business days after the last date of absence.

**Final Exam Absence:**

- 2 If you must miss a final exam due to unforeseen circumstances, you are required to contact your instructor or course coordinator within 24 hours of the absence. You will then have 48 hours from the absence in which to submit documentation to your instructor or course coordinator. You must also submit an online Absence Form if one is available on your course website. Course personnel will evaluate documentation and decide whether or not there will be an option to compensate for the missed exam. Failure to follow this procedure may result in a zero for the exam.
- 3 There will be instances when the student must make an individual choice about their ability to perform on an exam and will need to accept any and all consequences for that choice.
- 4 If the absence is a result of a protracted illness, you should follow the procedure for obtaining a letter from the Office of the Dean of Students. The request may be made once the student recovers but not more than 10 business days after the date of absence.
- 5 Information about final exams can be found in the Student Code:  
<http://studentcode.illinois.edu/>.

**BIOC 455 WEB GRADEBOOK**

The BIOC 455 Gradebook can be accessed directly at:

<https://apps.atlas.illinois.edu/Gradebook/>

Scores on exams and assignments will be available for student review on the BIOC 455 Gradebook. To check your scores, sign into the BIOC 455 website and click on the Gradebook link and follow the instructions presented there. All students are responsible for checking their scores on the Gradebook after each exam/assignment is returned to them. Each student is responsible for reporting possible discrepancies to their TA and if immediate action is not taken, the student is responsible for bringing this to the attention of course staff within one week of receiving their graded paper or exam score. Students are encouraged to keep all graded papers returned to them until after final grades are issued.

**The final deadline for Gradebook corrections is 5:00 PM, Wednesday, May 1, 2019.**

No Gradebook scores will be altered after this deadline so please be certain to check all your scores before this time.

**PRE-LAB HOMEWORKS**

The ability to apply the principles and techniques you learn in lab to new situations is a vital component of this course and pre-lab homework assignments are intended to assist you in this process. In addition, the majority of these questions will relate to, and help prepare you for, their corresponding labs. The goal of these assignments are two-fold: to

ensure that students come to lab prepared and to help you in developing problem solving skills that will be important in answering many of the exam questions. In total, they will be worth 200 points and must be individually completed by each student. Pre-Lab homeworks will be taken after lecture. Exact dates will be indicated on each assignment. Answer keys will be posted at the end of the lab.

### **LAB REPORTS**

All students must record their objectives/data/results in a research-style, bound notebook published by Stipes Publishing. Specifications for each lab report may be found at the bottom of the respective experiment web page. Ultimately, lab reports are to be typed and **are due according to the dates/times found below**. Graphs and charts must be inserted into the electronic document as well as into the original notebook pages. If sample calculations are required, record them within the original notebook pages and simply leave enough space within the typed document to legibly write them in after printing. Alternatively, several word processing programs allow for insertion of simple equations/calculations. Reports will not be graded that are turned in late (i.e. the following business day). Please, staple your report before submitting.

#### **Experiment Protocols:**

Students must make sure to check the website for modifications to the protocol given in the Switzer & Garrity text. Students are expected to have a printed copy of the protocol (or the textbook if there are no modifications) when they come into the lab on the first day of each experiment. Either the TA or the course instructor will check for this at the start of the first lab period. Non-compliance will result in forfeiture of all of the possible points for recording daily experimental objectives (described below).

You **MUST** use blue or black PEN and use **careful** penmanship when writing within your lab notebook. Print if your cursive writing is illegible, or use draftsman-style block capitals. Any illegible entries will be graded as missing and will earn 0 points. The teaching assistants can only evaluate what they can read, and it is not their job to decipher your intentions. Legible notes are critical in any research environment, and this policy will be strictly enforced.

#### **Notebook Organization:**

Begin new assignments at the top of the first available blank page. If more than half of the previous page is blank, draw an X through it.

NEVER leave blank pages.

NEVER begin a new exercise leaving one or more blank pages to complete the previous assignment later. Instead, print "Continued from page \_\_\_\_".

Enter the title, your name, and the date on the first page to be used that day.

For the first meeting of a multi-day lab, an objective should be included containing a broad overview of the entire lab: a brief discussion on the goal/s of the lab, the techniques that will be used and how these techniques will help you accomplish your goal/s. Then, and every lab meeting thereafter, enter a specific experimental objective for that day. Do not state a learning objective. The objective is equivalent to a hypothesis, a statement of the results you expect and the method to be used to obtain those results. This should be done **BEFORE** class. Upon entering the lab, your TA will check to make sure it has been completed and will grade it for completeness during your lab session. Each objective written should be typed for the final lab report. Please do not forget, the original, hand-written copy should also be turned in (containing the grade received from the TA). If not



turned in, the points received will be forfeited.

All pages of the notebook that are used for either recording data or completing the lab report should be signed and dated appropriately. This confirms that the individual student recorded the data or completed the report personally.

As an incentive to maintain a professional research notebook, each lab report score will include additional points for: 1) signing and dating all pages; 2) including the experiment title at the top of each page; and 4) including an objective for EACH day of the experiment. Note that the experimental objective for the day should be recorded in the notebook PRIOR to the start of lab. In order to receive credit for this item, the written objective must be initialed by either the TA or Logan Hurst.

### **Recording Data:**

Never use white correction fluid. Line out mistakes. It may turn out, on second thought, that your mistake was not a mistake, so the original entry should be readable under the single line-out. **The use of white-out will result in a grade of zero for the assignment.**

Record all data and observations directly in the notebook. Students caught recording data in different notebooks or on random sheets of paper for later transcription into the lab notebook will suffer a 10 point deduction on the assignment. Most errors occur during transcription; therefore, data must be recorded directly in the permanent record. The format is flexible in order to accommodate the different types of data to be collected.

**Tables are frequently useful.** Units should be listed in the table headings. It is most convenient to record data values in columns, using multiple columns for multiple trials. If your data is a gel or chromatogram, describe it in words AND tape an image of the gel or chromatogram into your notebook. Attachments may fade or get lost, so a verbal description is required.

Data collected in one partner's notebook should NOT be photocopied and attached in the notebook of the other partner. This is academic laziness and will not be tolerated. Reports submitted with photocopied data will NOT be graded and late penalties WILL be assessed. The full lab report should be completed by each individual student.

Make use of the grid on the page for aligning tables - extra penned lines are distracting.

**All numbers must have units in order to be valid.**

All numbers must have the correct number of significant figures. Any reported value that does not have the correct number of significant figures will be assessed a penalty of 1 point each.

**Graphs must have titles, axes must be labeled, and values must have units.** Graphs should plot the experimentally determined values of the dependent variable on the Y axis (ordinate) versus the predetermined values of the independent variable on the X axis (abscissa). Graphs may be shrunk in size so that more than one graph can be included on a single page of your notebook, but all text and labels of the graphs must be large enough to be easily read.

Another important aspect of BIOC 455 is the opportunity to learn good laboratory practice and carefulness in experimental technique. However, instances may arise when data needs to be borrowed from another group. In these instances, credit must be given to the group providing the data. If credit is not given, the offending group will receive zero points for the data and any results produced from it. Students will not be held accountable for equipment or reagent failure.

### **Data Analysis:**

If analysis is performed on a computer, tape the print-out into your notebook (several pages of print-out may be attached to one notebook page). Show one sample calculation for repetitive calculations (when unsure, show your math). These results should be presented in well-designed tables.

Some multi-day experiments may require that data be analyzed before continuing with the work for the following day. This will be specified in the pre-lab requirements.

If you choose not to include some of your data in your analysis, be sure to justify your choice.

If you analyzed someone else's data, state why yours was insufficient and indicate the source of the data analyzed.

### **Discussion:**

The Discussion section of the report should be the last section of the report. State the conclusions that are supported by the results of the data analysis. These should be related to the experimental objectives. All conclusions must be supported by the evidence of the data. Do not discuss the biological implications of the results; just state each conclusion and the results that are supportive of that conclusion. The word "because" should be used frequently. For example, "The dipeptide unknown A consists of the amino acids His and Pro because the migration of the two spots of the acid hydrolyzed sample were most similar to the migration of the His and Pro standards on the paper chromatogram."

### **Suggest a practical fix if your results were not as expected.**

There are legal reasons for all of the above rules, which are followed in professional labs. Learning to follow them now will greatly assist you in all future research endeavors.

Lab Reports (560 points)

Lab reports will contribute a maximum of 560 total points, with individual values indicated on the Course Syllabus. Details regarding the specific content of each report are provided for each individual experiment on the "Experiment Information" page of the course website.

<b>Lab</b>
Introduction
PCR/Molecular Cloning
Protein Purification
$\beta$ -galactosidase
ELISA
DNA Gel Shift
RBC Membranes

### **INVITED SPEAKER SEMINAR PRESENTATION**

Students will be required to attend a Departmental seminar of an invited speaker (preferably in the biochemistry department, but if there are questions ask Logan) (See the link to the seminar schedule [here](#).) Students may attend this seminar at any point in the semester, but the final presentations will be the April 17/18 and April 22/23. Students should attend a seminar, write a short summary of the work presented, and then give a short 10-15 minute presentation on the biochemical techniques used in the studies.

### **EXAMINATIONS**

The first exam is a lab practical and will be scheduled for Monday, March 11 (Section A)

and Tuesday, March 12 (Section B). The final exam is scheduled during finals week (Date/Time/Location TBA), and is cumulative. Each exam is worth 100 points for a total of 200 points. The first exam answer key will be posted after grading of the exam is complete. In keeping with MCB policy, final exam keys are not posted and final exams will not be returned.

### **COURSE GRADING**

Student grades in BIOC 455 will be based on total of 1000 points. Categories listed below are approximate, but should closely resemble the final distribution.

Lab Practical	100	
Final Exam	100	
Pre-Labs/Homework	200	
Lab Reports	560	
Seminar presentation	40	
Total	1000	points

All point totals are estimates and may be altered slightly throughout the course of the semester.

The point totals contained in the following table represent the use of the plus/minus grading system coupled with a 4.0 grade point system. The grade point values shown for each letter grade have been assigned by the University. Students who earn the points shown below (out of 1000 possible points), will be guaranteed the indicated letter grade. At semester's end, after the final exam, the faculty will analyze the course grade distribution, and may decrease (to accommodate poor class performance on an examination), but will not increase the points needed for each grade.

### **BIOC 455 Standard Grade Scale**

<b>LetterGrade</b>	<b>Point Ranges</b>	<b>Grade Point Value</b>
A+	1000–960	4.000
A	959-930	4.000
A-	929-900	3.667
B+	899-860	3.333
B	859-830	3.000
B-	829-800	2.667
C+	799-760	2.333
C	759-720	2.000
C-	719-680	1.667
D+	679-640	1.333
D	639-600	1.000
D-	599-550	0.667
F	550–0	0.000

### **STATEMENT ON ACADEMIC INTEGRITY**

Science cannot exist without honesty. The faculty and staff of BIOC 455 require students,

as scientists-in-the-making, to hold the highest standards of scientific and academic conduct. Any form of cheating on any graded work in this course is unacceptable, and will be dealt with as outlined below, and in accordance with the University-wide standards in the Code of Policies and Regulations Applying to All Students.

We require that all graded work be entirely your own, and that anything you write using the words of other writers be correctly attributed. Some specific points follow:

On exams, the answers that you turn in for grading must be your own, formulated during the exam from your own understanding of the material and without any supporting information, be it written, verbal or electronic. Copying the work of another student, or allowing another to copy your work, or copying work from any other source, is unacceptable. Since we cannot always monitor you as you complete your work, we must rely upon appearance of your work from which to judge. If the work you submit resembles that of another student or another source too closely, we may conclude that it was not your original work. Always make a conscious effort to complete your work on your own and to protect it from the view of others, in order to ensure that it will be seen as your own. Failure to adhere to these standards, for any portion of an exam, may result in a grade of zero for the entire exam or quiz, for all persons involved. Texting, or the use of a cell phone for any purpose during an exam, is prohibited. Doing so may earn you a zero on the exam, or a more extreme penalty at the discretion of the instructor. Use of any social or electronic media to share information, request information or make confidential information public is prohibited. Any use of this type may earn you a zero on the exam or a more extreme penalty at the discretion of the instructor.

Texting, or the use of a cell phone for any purpose during an exam, is prohibited. Doing so may earn you a zero on the exam, or a more extreme penalty at the discretion of the instructor.

On notebook assignments, worksheets, quizzes, and presentations, the answers that you turn in for grading must be written in your own words, formulated from your own understanding of the material. While you may be working with a partner or two, and the data that you have will be the same, the write-up of this work and data must be uniquely your own. Copying or paraphrasing the work of another student, or allowing another to copy or paraphrase your work, is unacceptable. Since we cannot monitor you as you complete your work, we have only the appearance of your work from which to judge. If the work you submit resembles that of another student too closely, we may conclude that it was not your original work. Always make a conscious effort to complete your work on your own and to protect it from the view of others, in order to ensure that it will be seen as your own. Failure to adhere to these standards may result in a grade of zero for the entire assignment, for all persons involved.

On notebook assignments, if you use a statement taken directly from any book or other publication, including the course textbook or lab manual, you must provide a citation. That is, you must put the text in quotes and put the author of the publication in parentheses after the quotation. Failure to do so will result in zero credit for that answer. Further, using only the words of another author as your entire answer or as the majority of your answer to any question is never sufficient to earn credit. If the majority of your work has been taken directly from a publication, you are likely to receive no credit for the work, since you would not be demonstrating knowledge beyond the ability to copy. Even if you quote another, your answer must be substantially your own words, drawn from

your own understanding of the material.