

# Biology of Organisms I Laboratory/Bio 131 – Summer 2019 Syllabus

**Instructor:** Benjamin Winslow

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**Meeting times:** MWF 9:00-12:00, SENG 331 June 11<sup>th</sup> - July 11<sup>th</sup>

**Course Overview:** Bio 131 serves as the first part of an introduction to biology in a laboratory setting. This course is intended to compliment Bio 121, however enrollment in Bio 121 is not required and grades between the two courses are not directly related. Lab exercises broadly follow topics from lecture, covering cellular biology, heredity, genetics, and evolution.

**Course Goals:** This course aims to achieve three specific goals. First, Students are expected to acquire basic laboratory skills, which can be applied in future courses and research settings (i.e. notebook keeping, report writing, equipment use, etc.). Second, this course aims to reinforce concepts and ideas covered in bio 121. Finally, and most importantly, students should become experienced in the activity of doing science. Most lab activities are written with an emphasis on hypothesis generation experimental design. By the end of the course students should be able to identify and formulate a hypothesis, and design an experiment that can test it.

**Course Materials:** Students will need a notebook for taking notes and recording data during lab exercises. A digital copy of the lab manual will be emailed to each student, and is available from your course instructor upon request. It is the student's responsibility to print out or otherwise bring the relevant chapters for each week of lab.

**Text** – Writing Papers in the Biological Sciences, 6<sup>th</sup> edition (earlier editions are acceptable), by V. McMillan. Available in the UmassD bookstore. FYI – this text is also required for two second year biology curriculum courses, Biology of Cells lab (Bio 234) and Biology of Populations lab (Bio 211).

**Grading:** The course meets 10 times over the course of the semester. Each meeting, 10 points are awarded via grades earned on lab reports, quizzes, or practical exams, for a total of 100 points for the semester. Grading follows a standard rubric: 97-100 = A+, 93-96 = A, 90-92 = A-, 87-89 = B+, 83-86 = B, 80-82 = B-, 77-79 = C+, 73-76 = C, 70-71 = C-, 67-69 = D+, 63-66 = D, 60-62 = D-, >60 = F. Lab reports are worth 7 points, quizzes are worth 3 points, and practical exams are worth 10 points (see schedule below). At each meeting there is either a lab report and a quiz (10 points total), or a practical exam (10 points).

**Policies:**

University policies can be found at:

<http://www.umassd.edu/studentaffairs/studenthandbook/academicregulationsandprocedures/>

## Attendance

- Missing more than 2 labs will result in an **automatic F** for the course.
- Attendance is considered mandatory for this course. Due to the condensed nature of summer classes, no makeups will be available for missed labs.

## Lab reports

- Lab reports are due on specific dates (usually the next class meeting, but not always, see schedule below). Late lab reports will lose 1 point per day late, including weekends, starting on the day they are due.
- Instructions for lab reports will vary throughout the semester. Full lab reports are graded according to a rubric (see the "Expectations for lab reports" handout). Lab reports missing 1 major section will receive a 50% point deduction (see rubric). Lab reports missing 2 or more sections will receive a 0. Partial lab reports will be graded using similar criteria as appropriate.
- Lab reports will be submitted through your lab myCourses website. Reports will be subject to a scan using safeassign software to check for plagiarism. Feedback on lab reports, and all grades, will be communicated through your lab's myCourses website.
- From the UMassD website: "Students should be aware that suspect assignments (e.g., those without drafts, without works cited pages, or with large departures in style) will be submitted to SafeAssign by the instructor for the purpose of detecting possible plagiarism. Submitted assignments will be included in the UMass Dartmouth dedicated databases of assignments. These databases of assignments will be used solely for the purpose of detecting possible plagiarism during the grading process during this term and in the future. Students must provide an electronic copy of their assignment to the instructor for submission to the service when plagiarism is suspected, in order to receive a grade on the assignment and to avoid possible sanctions." Refer to your student handbook or the academic affairs website for potential consequences to academic integrity infractions.
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## Quizzes

- With the exception of the first meeting and during practical exams, quizzes are taken at the beginning of each lab meeting. Quizzes are designed to test your knowledge of the lab you are about to do, so read the lab manual prior to coming to lab.

## Schedule

Date	Topic/Assignment due
Wed 6/12	Lab#1 Introduction to lab/Everyday science (partial report – hypothesis, results, and conclusion)
Fri 6/14	Lab#2 Microscope/Cells (full report)

Lab #1 report due

Mon 6/17

Lab#3 Enzyme function (partial report – hypothesis and results)

Wed 6/19

Lab#4 Respiration (full report)  
Lab #2 report due

Mon 6/24

Lab#5 Lab Report Peer Review (partial report – critical analysis)  
Lab #3 report due

Wed 6/26

Practical Exam  
Lab #4 report due

Fri 6/28

Lab#6 Mitosis/Meiosis (partial report – results and discussion)  
Lab #5 report due

Mon 7/1

Lab#7 DNA (partial report – methods)  
Lab #6 report due

Mon 7/8

Lab#8 Evolution (full report)  
Lab #7 report due

Wed 7/10

Practical Exam  
Lab #8 report due