

Biology 1040 Organismal Biology Lab
Fall Semester 2020
Biology Department, College of Arts and Sciences
Valdosta State University

Instructor: Mr Damion Castellano

Office: Science Building 2025

Office Hours: Any day 9-10 am or by appointment

Phone: Office 333-5769, Biology Dept. Main Office 333-5759

E-mail: dacastellano@valdosta.edu

Room: Science Building 1046

Midterm: October 15, 2020. This is the last day to drop this course and receive a withdrawal grade (W).

Credit Hours: 1

Course Description:

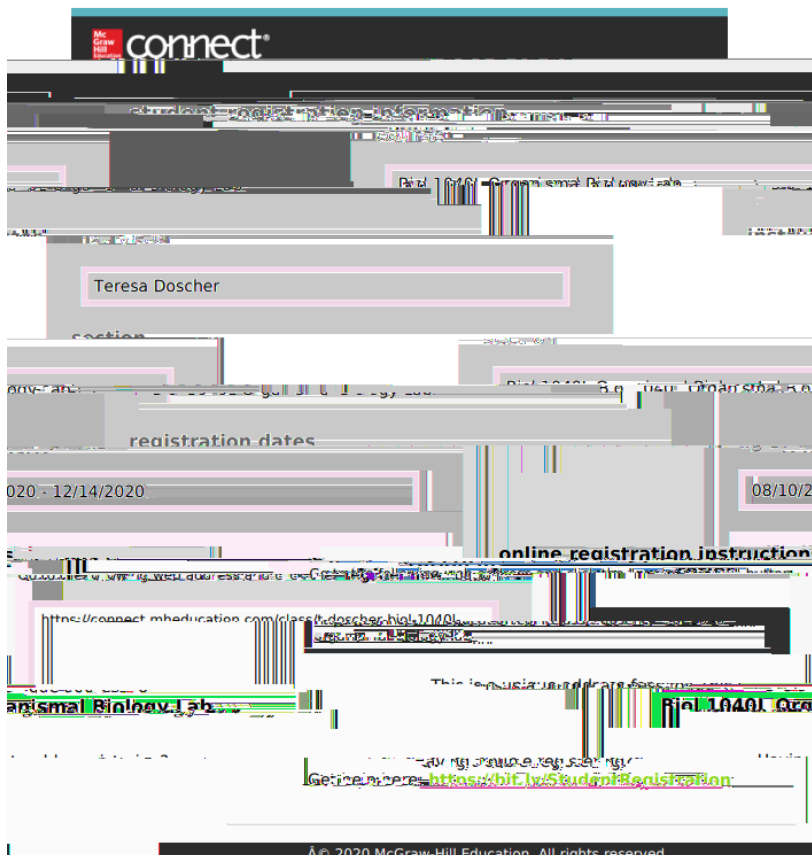
Bio 1040L Organismal Biology Lab

Co-requisite: **Bio 1030.** This course cannot be taken for credit toward the major in biology. A laboratory course to accompany Bio 1030 lecture, emphasizing the structure of multicellular organisms.

Course Objectives: This course is designed to accompany Bio 1030 by presenting exercises that emphasize the processes involved in the development and maintenance of multicellular organisms. The objective of this course is to provide students with a hands-on experience in general biology. Students will participate in the process of scientific inquiry by asking scientific questions, developing hypotheses, predicting outcomes of experiments, collecting and interpreting data and drawing conclusions from the results.

Learning Goal: Students will demonstrate understanding of the physical universe and the nature of science, and they will use scientific methods and/or mathematical reasoning and concepts to solve problems.

Materials: McGraw Hill Connect Online Labs. This can be purchased directly through the company (less expensive) following the directions below or an access card can be purchased through the bookstore.



COVID 19 CHANGES: Due to COVID 19 regulations we are altering the way we teach the non-major labs. Only half of the normal number of students can be in the lab at a time. Therefore, each class will be divided into 2 groups (group A and group B). Each group will attend lab alternating weeks. The weeks that you do not have in-person labs you will have online labs to complete. All of the online labs will be through McGraw Hill Connect. You will be told whether you are in Group A or Group B. Each group has a different schedule at the end of the syllabus.

Attendance: Attendance in lab is mandatory. **As per University policy; a student who misses more than 20% of the scheduled classes of a course will be subject to receiving a FAILING grade in the course. There will only be six in-person labs and 7 sets of online labs**

from the class and possibly dropped from the course. This student will also forfeit any points toward his or her grade from that day and will not be able to make up the lab. Refer to the Undergraduate Catalog for more information.

TEXTING OR USING YOUR PHONE WILL NOT BE TOLERATED DURING CLASS!

Bio 1040 Organismal Lab - Fall 2020 - Room BC 1046

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|----------|---|--|--|----------|--------|
| 8:00 AM | | | | | |
| 8:30 AM | | | | | |
| 9:00 AM | | | | | |
| 9:30 AM | | | | | |
| 10:00 AM | Bio 1040 Lab A Doscher 10 - 11:50 | Bio 1040 Lab G Castellano 10 - 11:50 | Bio 1040 Lab L Burch 10 - 11:50 | | |
| 10:30 AM | | | | | |
| 11:00 AM | | | | | |
| 11:30 AM | | | | | |
| 12:00 PM | | | Bio 1040 Lab M Le 12 - 1:50 | | |
| 12:30 PM | | | | | |
| 1:00 PM | | | | | |
| 1:30 PM | | | | | |
| 2:00 PM | | Bio 1040 Lab I Le 2 - 3:50 | | | |
| 2:30 PM | | | | | |
| 3:00 PM | | | | | |
| 3:30 PM | | | | | |
| 4:00 PM | | | Lab meeting Lab meeting Lab meeting Lab meeting | | |
| 4:30 PM | | | | | |
| 5:00 PM | | | | | |
| 5:30 PM | | | | | |

Faculty

Office Phone #

Office #

Email

GROUP A Biology 1040 Lab Schedule Fall 2020

Week 1 - Introduction, Syllabus, Safety Guidelines

- August 17 - 21**
1. Follow directions for downloading Connect Virtual Labs
 2. Watch the lecture titled Biol 1040 Introduction, syllabus, and safety guidelines on Connect
 3. Complete the following virtual labs listed under "Week 1 Introduction":
 - Virtual Lab Tutorial
 - Lab Safety - Handwashing
 - Lab Safety - Personal Safety

Week 2 & 3 - Biological Macromolecules

August 24 - 28

GROUP B Biology 1040 Lab Schedule Fall 2020

Week 1 - Introduction, Syllabus, Safety Guidelines

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|-----------------------|--|
| August 17 - 21 | 1. Follow directions for downloading Connect Virtual Labs |
| | 2. Watch the lecture titled Biol 1040 Introduction, syllabus, and safety guidelines on Connect |
| | 3. Complete the following virtual labs listed under "Week 1 Introduction": |
| | Virtual Lab Tutorial |
| | Lab Safety - Handwashing |
| | Lab Safety - Personal Safety |

Week 2 & 3 - Biological Macromolecules

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| August 24 - 28 | Complete the following virtual labs listed under "Week 2 & 3 Biological Macromolecules": |
| | Chemical Composition of Cells - Test for Sugars |
| | Chemical Composition of Cells - Test for Starch |
| | Chemical Composition of Cells - Test for Fat |
| | Chemical Composition of Cells - Test for Proteins |
| Aug. 31 - Sept 4 | IN-PERSON LAB - Biological Macromolecules |

NO LABS THE WEEK OF SEPT. 7 - 11 DUE TO LABOR DAY HOLIDAY

Week 4 & 5 - Osmosis

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| Sept. 14 - 18 | Complete the following virtual labs listed under "Week 4 & 5 Osmosis Labs": |
| | Osmosis - Movement of Water Across a Selectively Permeable Membrane |
| | Osmosis - Tonicity in Elodea Cells |
| | Osmosis - Tonicity in Potato Strips |
| | Osmosis - Tonicity in Red Blood Cells |
| Sept. 21 - 25 | IN-PERSON LAB - Osmosis Lab |

Week 6 & 7 - DNA/Genetics

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| Sept. 28 - Oct. 2 | Complete the following virtual labs listed under "Week 6 & 7 Genetics Labs": |
| | Human Genetics - Genetic Inheritance |
| | Mendelian Genetics - Monohybrid Fruit Fly Cross |
| | Mendelian Genetics - Dihybrid Plant Cross |
| Oct. 5 - 9 | IN-PERSON LAB - DNA Isolation and Gel Electrophoresis |

Week 8 & 9- Senses lab

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| Oct. 12 - 16 | Complete the following virtual labs listed under "Week 8 & 9 Senses Labs": |
| | Eye and Vision - Eye Dissection |
| | Eye and Vision - Visual Acuity Test |
| | Eye and Vision - Accommodation of the Lens |
| | Eye and Vision - Color Vision Test |
| | Eye and Vision - Pupillary Reflex Test |
| | Eye and Vision - Convergence Reflex Test |
| Oct. 19 - 23 | IN-PERSON LAB - Senses Lab |

Week 10 & 11 - Metabolism and Photosynthesis labs

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| Oct. 26 - 30 | Complete the following virtual labs listed under "Week 10 & 11 Photosynthesis Labs": |
| | Photosynthesis - Carbon Dioxide Uptake |
| | Photosynthesis - Photosynthetic Pigments |
| | Photosynthesis - Determining Rate in White Light |
| | Photosynthesis - Comparing Green and Blue Light |
| Nov. 2 - 6 | IN-PERSON LAB - Metabolism Lab |

Week 12 & 13 - Cardiovascular labs

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| Nov. 9 - 13 | Complete the following virtual labs listed under "Week 12 & 13 Cardiovascular Labs": |
| | Blood - Blood Typing |
| | Blood - Differential White Blood Cell Count |
| | Cardiovascular Physiology - Pulse Rate |
| | Cardiovascular Physiology - Blood Pressure |
| Nov. 16 - 20 | IN-PERSON LAB - Cardiovascular Lab |