

Affordable Learning Georgia Textbook Transformation Grants

Final Report for Mini-Grants

General Information

Date: 14th Augusta 2020

Grant Round: Fifteen

Grant Number: M096

Institution Name(s): Augusta University

Team Members (Name, Title, Department, Institutions if different, and email address for each):

Soma Mukhopadhyay, Lecturer; smukhopadhyay@augusta.edu

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Department of Biological Sciences, Augusta University

Project Lead: Soma Mukhopadhyay

Course Name(s) and Course Numbers: BIOL 1101 Lab (Fundamentals of Biology Lab)

Final Semester of Project: Summer 2020

If applicable to your project:

Average Number of Students Per Course Section: 24

Number of Course Sections Affected by Implementation of Revised Resources: 10 - 12

Total Number of Students Affected by Implementation of Revised Resources: 240 - 288

1. Project Narrative

Describe the course of your revision or ancillary creation project, including

- *A summary of your project's purpose, plan, and timeline.*

The primary goal of this project was to create an updated Lab Manual for BIOL 1101L – Fundamentals of Biology Laboratory. At Augusta University, BIOL 1101 – Fundamentals of Biology is a course designed for non-science majors. Previously it was a four-credit hour combined course with lecture and lab. From last Fall (2019) the lecture and lab have become separated to allow for increased maximum enrollment in each lecture section and to allow more scheduling flexibility for students.

The existing resources or lab guides for BIOL 1101 Labs were assignment packages for individual labs that were developed by our faculty from Department of Biological Sciences at Augusta University and were provided free to our students through our learning management system (LMS). Those lab assignments required revision and reorganization to adequately support the new standalone laboratory course.

A key focus of this work was to update the lab activities to support the specific student learning outcomes and to ensure consistency across the multiple sections of the course.

Project Timeline:

Phase1: October – December 2019 Collect new resources and begin updating the existing lab assignments

Phase 2: January – April 2020 Develop and create improved assignments with clear SLOs

Phase 3: May – June 2020 Completion of updated resources, create Lab Manual and upload it to be adopted and share

- *The original works, which were revised or added to, with links. For example, if you revised an open textbook, give the title, author, and link.*

Older versions of the labs being revised are in the following folder:

<https://augustauniversity.box.com/s/4shp23wtq2e01dnjvzloxgnamm8ny51k>

- *A narrative description of how the project's plan was carried out.*

There are total of eleven labs which are the part of this Fundamentals of Biology Lab course.

Following revision and updates are being done:

- We started making our plans last fall to update, modify and improve the labs to make it a standalone course. We consulted with our peers and did some literature survey to redesign the labs.
- We put emphasis to clearly state Learning Outcomes for each individual lab component.
- Lab activities were redesigned for some labs and some new activities are added to increase student competencies in the scientific method, lab safety, data analysis, and communication.
- New perspectives based on real-world scenarios are added to make the learning experience more relevant and more applicable for these non-science majors.
- We tried to make a uniform design for each lab assignment by providing same sequence of activities across the course.
- The newly created resource will be free to students through our LMS and adopted by all the faculty teaching at Augusta University.

Lessons learned, including anything you would do differently next time.

- We originally planned that all faculty members teaching the Fundamentals of Biology Lab course will use these newly modified and updated resources. However, due to the current situation with Covid- 19 we had to make some other changes to offer the labs online.
- Though we tried our best to complete this work, we did not get a chance to execute few things which we would like to do in the future. We did not realize the time commitment required to complete this revision work. It was almost close to new transformation from the previous labs.

2. Materials Description

Describe all the materials you have created or revised as part of this project. These descriptions may be used in the [GALILEO Open Learning Materials](#) repository in the official description field.

Please refer to the revision and update section above.

3. Materials Links

If you are hosting your materials in places other than GALILEO Open Learning Materials, please provide these links in this section. Otherwise, leave blank.

- The pdf files of newly designed labs are in a Box folder of Augusta University.
<https://augustauniversity.box.com/s/afv86itukb25y7urym9w07u1uwws709k>
- This resource will also be shared on Galileo under an open educational resource license/creative commons.

4. Future Plans

Describe any planned or actual papers, presentations, publications, or other professional activities that you expect to produce that reflect your work on this project.

- We would like to present our project and work:
 - in faculty forum in our department and/or college
 - Open Educational Conference or National Conference of Experiential Learning.

Describe any plans to revise or add to these materials in the future.

We would like to do the following:

- Revise some labs.
- Add and/or change some graphics

- Make some videos to guide students.
- Modify and/or add some pre-lab questions and activities.
- Collaborate with Instructional designer and/or students to compile all of these labs in a complete lab manual.