**Affordable Learning Georgia Textbook Transformation Grants**

**Final Report for Mini-Grants**

# General Information

Date: 12/21/2018

Grant Round: 10

Grant Number: M4

Institution Name(s): East Georgia State College

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

M.F. Sega – Assistant Professor, [msega@ega.edu](mailto:msega@ega.edu)

D. Chevalier – Biology Department Chair, [dchevalier@ega.edu](mailto:dchevalier@ega.edu)

Project Lead:

Course Name(s) and Course Numbers: Principles of Biology - BIOL 1107

Final Semester of Project: FALL 2018

***If applicable to your project:***

Average Number of Students Per Course Section: 25

Number of Course Sections Affected by Implementation of Revised Resources: 3

Total Number of Students Affected by Implementation of Revised Resources: 75

# 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 purpose was to improve student success by creation of materials to be used with our open educational resources that were made for the ALG 6 grant (i.e. lecture PPT slides based on OpenStax Biology – for majors - textbook).
* In this project, we will create reading guides, videos guides and quizzes to be used by the students to prepare for the class.
* The timeline:
  + Spring 2018 – develop objectives to be reached using these guides 🡺 Drs. Sega & Chevalier
  + Summer 2018 – make the reading guides & quizzes 🡺 M. Sega
  + Fall 2018 – make the videos guides 🡺 D. Chevalier
* *A narrative description of how the project’s plan was carried out.*

The students results on lecture exams were collected and analyzed. As a result, we choose to focus on few chapters and strategized to improve the success using flipped classroom approach: the reading guides will be used to request students to read their chapters before coming to class; then they will watch a short video on a specific topic; student participation will be checked by completion of their quizzes.

* *The original works which were revised or added to, with links.*
  + Chapter 5: The plasma membrane

<https://cnx.org/contents/GFy_h8cu@10.117:oaLwOnAf@2/Introduction>

* Chapter 6: Metabolism

<https://cnx.org/contents/GFy_h8cu@10.117:d9FA8FWC@2/Introduction>

* Chapter 7: Cellular Respiration

<https://cnx.org/contents/GFy_h8cu@10.117:5c-ZscNX@4/Introduction>

# 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*](https://oer.galileo.usg.edu/) *repository in the official description field.*
* Chapter 5 – Membrane:
  + - Reading guide is to be used before the class meets and it covers all the textbook content for chapter 5 – plasma membrane.
    - Video covers only the osmosis process describing: solvent vs. solute, tonicity of solutions, movement of water, examples.
    - Video quiz: intended to check on students viewing the video in its entireness.
* Chapter 6 – Metabolism:
  + Reading guide – guides the students in reading the chapter before the class meets.
  + Video covers the exergonic and endergonic reactions and how these apply to the energy coupling of photosynthesis and cellular respiration.
    - Video quiz: intended to check on students viewing the video in its entireness.
* Chapter 7 – Cellular Respiration:
  + - Reading guide: used to guide students in reading the cell respiration chapter before the class meets. It is pointing out the main ideas of the chapter;
    - Post – quiz cellular respiration: intended to be applied in class once done with the lecture on cell respiration.

# 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.*

# 4. Future Plans

* + The materials will be used in the classroom settings and the results will be compared to the previous semesters (control).
  + The materials will be modified with the goal of improving the student success.
  + The results of this work, if statistically significant, will be used presented at professional conferences.