**Affordable Learning Georgia Affordable Materials Grants  
Continuous Improvement Grants Final Report**

*(or Mini-Grants, for R17 and earlier)*

# General Information

Date: 11/30/2022

Grant Round: 21

Grant Number: M202

Institution Name(s): Fort Valley State University

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

Dawit Aberra, Professor of Mathematics, aberrad@fvsu.edu

Samuel Cartwright, Professor of Mathematics, cartwris@fvsu.edu

Bhavana Burell, Instructor of Mathematics, burellb@fvsu.edu

Fesseha Gebremikael, Assistant Professor, Business Administrational and Economics

Project Lead: Dawit Aberra

Course Name(s) and Course Numbers: Elementary Statistics (MATH 1401)

Final Semester of Project: Fall 2022

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

Average Number of Students Per Course Section: 22

Number of Course Sections Affected by Implementation of Revised Resources: 1-2/semester

Total Number of Students Affected by Implementation of Revised Resources: 45/semester

# 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 of this project was to

1. Use free and open resources available inside **MyOpenMath** ([www.myopenmath.com](http://www.myopenmath.com)) and create new HomeWorks, Test Reviews and Tests replacing the old ones.
2. Ensure that assessments are free of error, algorithmically generated and are designed for instant feedback.
3. Add Power Point Slides that align better with the textbook for each lesson.
4. Strengthen the content of the course by creating new and/or linking more relevant and helpful video examples for each unit and lesson.
5. Create or link the most appropriate applets for lessons (sections) of the course where technology beyond graphing calculator is preferred.

# The following plans have been executed

1. Kickoff meeting within 2 weeks of funding announcement (Aberra, Cartwright, Burell and Gebremikael; about 1 hour).
2. Choose the most appropriate template for the course in MyOpenMath, clearly showing folders for Instructor Information, Course Information, Course Content, and Assessments organized by Chapter and Lessons (Aberra, Cartwright, Burell and Gebremikael; about 2 hours per person)
3. Outlined and agreed on course objectives, course content and materials to be revised. Also revised the syllabus and course timeline as necessary (Aberra, Cartwright, Burell and Gebremikael; about 2 hours per person)
4. Created and linked Homework Assignments, Test Reviews, Tests, Applets and Power Point Slides of Chapters 1 -12 and upload the materials to the template in MyOpenMath (Aberra, Cartwright, Burell and Gebremikael; about 40 hours per person).
5. Reviewed all the completed content and re-edit all content as needed, checking for accuracy and consistency (Aberra, Cartwright, Burell and Gebremikael; will take 3 hours per person)
6. Got approval of IRB and conduct student survey. Still waiting for more students to participate for future further research.
7. Piloted seamless integration between MyOpenMath and D2L (or Canvas/Blackboard, etc). Course cartridge can be exported from MyOpenMath.com via a course ID generated by the system (Dr. Aberra; will help on this).

# Timeline

* **Spring 2022:** Completed **Action Plans 1 – 3 above**
* **Summer 2022:** Completed **Action Plans 4 – 5**. Course was ready at this stage
* **Fall 2022:** Completed **Action Plan 6-7.** Deadline to complete these tasks is November 30, 2022. At this stage, we will have a final report of the project to be submitted.
* *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.*

We revised and improved the work done under the previous grant (Round 10) by replacing older and less helpful materials by new, more relevant and improved free resources to better align with the existing textbook learning goals and objectives. We linked more video examples, and web based applets for each chapter to enhance student learning using technology. We added web-based technology/applets (web calculators) under each chapter and linked power point slides as “Lecture Notes” for each chapter.

Textbook used: [Introductory Statistics from OpenStax, Barbara Illowsky and Susan Dean.](https://openstax.org/details/books/introductory-statistics)

PowerPoint Slides- uploaded from [OpenStax ancillary resource](https://openstax.org/details/books/introductory-statistics?Instructor%20resources)

WebApplets (Web based Interactive Calculators): mostly from [LibreText](https://stats.libretexts.org/Learning_Objects/02%3A_Interactive_Statistics/46%3A__Links_to_the_Calculators)

Video Clips came from various open sources.

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

*Project was excuted exactly as planed with action plans and timelines stated above.*

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

*We were happy that we decided to work on this project as a group. Open Resources to choose from were abundant inside MyOpenMath on which various institutions across the US dedicated their time to create these resources. The quality of resources, such as Question Banks, was amazing!*

# Materials Description

*Describe all the materials you have created or revised as part of this project. These descriptions may be used in the* [OpenALG](https://alg.manifoldapp.org/) *repository description field. Include the* [*open license your materials will be shared under*](https://creativecommons.org/share-your-work/)*—for most materials, this will be an Attribution 4.0 License (CC BY) as required in the Grants Request for Proposals.*

*[ALG] MATH 1401 – a MyOpenMath Course. This work is licensed under a Creative Commons Attribution 4.0 International License (CC-BY). This course is accessible to guests who registered as a student or instructor. The Course ID is: 165797; (leave enrollment key blank)*

# Materials Links

*If you are hosting your materials in places other than OpenALG, please provide these links in this section. Otherwise, leave blank. Note: we cannot access D2L or Canvas links.*

The link to the materials is located at <https://www.myopenmath.com/>. These materials can be imported (as a Cartridge) into other platforms. For example, the materials we used can be imported into D2L, Canvas or Blackboard. Instructions is provide inside myopenmath.org to seamlessly import the resources into D2L and other learning management systems using course ID: 165797.

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

**We were able to make the following presentation based on this course completion**

Aberra, D.; Arora, S.; Burell, B.; Cartwright, S. “Use of Open Educational Resources to manage challenging times at FVSU”, [Abstract of Presentation (Page 35), 29th Annual HBCU Faculty Development Network Conference](https://www.hbcufdn.org/digital-conference-program-booklet), Sheraton Houston Brookhollow Hotel, 3000 N Loop W, Houston, TX, October 20 – 22, 2022

We are also conducting survey which will be used for further research and improvement of the course.

We also have a plan to apply for Continuous Transformation grants for other Mathematics Courses.