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

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

# General Information

Date: 12/20/2020

Grant Round: 15

Grant Number: M105

Institution Name(s): Georgia Gwinnett College

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

Shuting Xu, Associate Professor, Information Technology, Georgia Gwinnett College, sxu@ggc.edu

Shuhua Lai, Professor, Information Technology, Georgia Gwinnett College, slai@ggc.edu

Project Lead: Shuting Xu

Course Name(s) and Course Numbers: ITEC 2130 Web Technologies

Final Semester of Project: Fall 2020

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

Average Number of Students Per Course Section: 28

Number of Course Sections Affected by Implementation of Revised Resources: 2

Total Number of Students Affected by Implementation of Revised Resources: 56

# 1. Project Narrative

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

The goals of the project are to:
1. To revise the current course materials developed for ITEC 2130;
2. To add auxiliary materials, such as the portal web page;
3. To assist potential instructors teach the course more efficiently through the revised and new resources; and
4. To improve student engagement in classroom learning.

Project plan:
1. Make the course materials more instructor friendly.
2. Create real-world scenarios for in-class activities/labs/projects

3. Create extra-credit work for in-class activities/labs/projects.
4. Perform editing on all course materials and correct any coding problems.

Project Timeline:
Fall 2019: Develop real-world scenarios for in-class activities/labs/projects for spring semester and for fall semester. Add comments for instructors in in-class activities.

Spring 2020: Develop extra-credit work for in-class activities, labs and projects.

Summer 2020: Revises project materials for full implementation in fall 2020.

Fall 2020: Make the portal web page for course materials. Conduct survey in classes and analyze survey data. Compose final report.

- *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 the course materials developed for ALG Proposal "Developing No-Cost-to-Students Course Materials for ITEC 2130 (Web Technologies) at GGC" in round 13. The original course materials were hosted at http://algwebtech.altervista.org, and were overwritten by the revised course materials.

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

In Fall 2019, Dr. Xu developed real-world scenarios for in-class activities/labs/projects for spring semester. Dr. Lai developed real-world scenarios for in-class activities/labs/projects for fall semester. Both Dr. Xu and Dr. Lai added comments for instructors in in-class activities.

In Spring 2020, Dr. Xu developed extra-credit work for in-class activities, and Dr. Lai developed extra-credit work for labs and projects. In addition, Dr. Xu piloted the course materials two sections.

In Summer 2020, Dr. Xu and Dr. Lai revised the course materials for full implementation in fall 2020.

In fall 2020, Dr. Xu made the portal web page for course materials. Revised course materials were used in 2 sections of ITEC 2130. Dr. Xu conducted survey in classes and analyzed survey data. Dr. Xu also composed final report.

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

Revising course materials is a recursive work. For the newly designed course materials such as in-class activities/labs/projects, we always revised them after grading them and receiving feedback from students.

It is helpful to keep track of the new version of related textbooks. It can help to decide if the new trend in technologies should be included in the course materials or not.

## 2. Materials Description

All the materials we have created or revised for this project:

1. We added more comments in in-class activities to help instructors teaching the course activities. We also created a portal web page to organize all of the learning materials more efficiently. Previous in-class activities were organized for each class period. On the new portal web page, the course materials are organized in a variety of ways: class-period based, chapter based, or category based (slides/in-class activities/labs/projects).
2. We created real-world scenarios for in-class activities/labs/projects. For example, we asked students to design a Valentine's Day e-card in the spring semester and a Halloween Party poster in the fall semester. Similarly, for in-class activities, we created an animated snowman in the fall semester and a moving sailboat at the beach in the spring semester.
3. We created extra-credit work for in-class activities/labs/projects. For advanced students or students who want to do more practices, we created more in-class activities/labs/projects with different levels of difficulty.
4. We revised all course materials and corrected any coding problems.

## 3. Materials Links

Course materials are hosted at: http://algwebtech.altervista.org. Please contact PI for access credentials.

## 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 will propose a paper to summarize the project and submit the paper to IEEE Integrated STEM Education Conference.

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

  We will keep revising and adding new course materials to incorporate the emerging new technologies and skills in web design and development area.