Affordable Learning Georgia Textbook Transformation Grants
Proposal Form
No-Cost Learning Course Material Development for IT 5302 Introduction to Web Development

Institution Name	Southern Polytechnic State University
Team Members (Name, Title, Department and email address for each)	Guangzhi Zheng, Assistant Professor, Information Technology Department, jackzheng@spsu.edu Zhigang Li, Instructional Design, Adjunct Professor, Information Technology Department, zli24@spsu.edu
Sponsor, Title, Department	Richard Cole, Vice President of Academic Affairs
Course Name, Course Number and Semester Offered (Spring 2015 Required)	IT 5302 Introduction to Web Development, Spring 2015

Average Number of Students in the Course	25	**Number Course sessions per Academic year**	Five (two in springs, two in falls, one in summer)

Award Category (pick one)	☒ No-Cost-to-Students Learning Materials ☐ OpenStax Textbooks ☐ Course Pack Pilots

List the original course materials for students (including title, whether optional or required, & cost for each item)	*Programming the World Wide Web (8th Edition)* *ISBN-13: 978-0133775983,* *Required textbook*	*$134.67 per person* ***Total Cost: $16,833.75 for an average enrollment of 125 students each year***

Projected Per Student Cost	Original: $134.67 After: $0	**Projected Per Student Savings (%)**	100%

1.   PROJECT GOALS

This project aims to replace the costly textbook used in IT 5302 Introduction to Web Development to no-cost-to-students learning materials with equivalent or better content, and achieve similar level of learning effectiveness.

2.   STATEMENT OF PROBLEM

The textbook used in IT 5302 Introduction to Web Development for the past a few years is costly, with about $135 for the latest edition. It also has been published and updated quite frequently, with a new edition coming about every one and half years (1st edition in 2002 and 8th edition in 2014). The content of the book, introductory web development, reflects the fast evolving nature of the web development field. This also impacts its resale value. In short, the cost to own the textbook is high but the value to retain the textbook is low.

On the other side, the learning resources for web development are abundant on the World Wide Web today. Many of these resources are publicly accessible, free, or with an open license to use. The investigators of this proposal highly believe the students can use these no-cost materials to replace the costly textbook and achieve the same learning outcomes.

The goal of the proposed project is to compile or develop completely cost-free learning materials for the introductory web development course. These materials include open and free tutorials, books, videos, labs, test bank, software, and services. Compared to traditional textbooks, these web resources actually have a number of benefits:

1. They are completely free to use.
2. The resources are constantly being updated and always reflect the latest trends and industry development.
3. They are more dynamic and interactive. Going beyond just static text and pictures, the resources are presented in various rich media and interactive technologies, including videos, interactive labs with live feedbacks, online quizzes, etc.
4. They also present different views and alternatives.

3.   TRANSFORMATION ACTION PLAN

The investigators plan the following activities to transform the course to completely use no-cost learning materials:
1. Identifying no cost readings for each learning module. The reading list includes both required readings and additional optional readings. All of these readings are publicly accessible, free to use, or properly licensed.
2. Developing study guides and lecture notes so students can review course content and key learning points.

3. Developing short video tutorial clips to address the most basic skills.
4. Developing all assignments, exercises and lab materials that are at no cost to students to replace the ones in the textbook.
5. Developing all quiz and test questions to replace the textbook.
6. Adopting open source or free software.
7. Updating the syllabus to include major resources and no cost materials.

The investigators plan to get evaluation data and measures from the following sources:

Source	Description
Student performance measures	This data is from the overall class performance based on the grading of student works. Metrics include: • Class average, grades distribution, pass rate for each grading item. • Overall letter grades distribution, pass rate, withdraw rate, and fail rate.
Specific survey on no-cost learning materials.	The survey will be distributed at the end of the semester to collect student feedback. It consists of a mixture of quantitative and qualitative measures including: • Student perception and attitude toward no cost materials • Quantitative ratings of the no cost materials used in this course • Qualitative comments and suggestion
Student evaluation of the instructor	Formal student evaluation of the instructor can also provide information about teaching effectiveness using no cost materials. This evaluation is based on standardize forms for every course.

For each of the measurement, the investigators are going to conduct two levels of analysis:
1. Comparing them to the preset goals. Generally, 75% is the aimed passing rate.
2. Comparing them to those from past sections where costly textbooks were used. The investigators will obtain the data from the sections taught in the past 2 years at least.

4.   TIMELINE

Milestone dates	Milestone
10/31/2014	• Complete course modules redesign to use the no cost

	materials. These include all reading, lecture notes, video clips, exercises, labs, and assignments. The changes are reflected in the learning modeling study guides.
11/30/2014	• Complete course level materials redesign. This includes quizzes, tests, and syllabus.
12/19/2014	• Develop a survey of using the no cost materials to replace textbook. • Deliver the first report.
04/30/2015	• Complete the course offering in the spring semester. • Complete the survey data collection. • Complete student evaluation.
05/31/2015	• Complete data collection and analysis. • Compile final report.

5. BUDGET

The funding mainly compensates the investigator' work and activity beyond normal teaching load in order to successfully complete the project. The workload for each person requires at least about 80 hours of development time and 20 hours of assessment.

Investigator compensation: $5,000 *2 = $10,000

Only open source software will be used in this project thus there is no additional spending on software or equipment purchasing.

6. SUSTAINABILITY PLAN

Dr. Zheng is the department assigned course architect of IT 5302. As a course architect, he develops and maintains the course materials and teaching plans. He also teaches the course at least once a year to make sure all resources are valid and make necessary changes. The co-PI Dr. Li is an adjunct professor who will teach this course in spring 2015. All no-cost materials and resources are highly sustainable in the future offering of this course.

7. REFERENCES & ATTACHMENTS

A letter of support from the VPAA's office is attached.

September 8, 2014

Dr. Guangzhi Zheng and Dr. Zhigang Li
Information Technology Department
Southern Polytechnic State University
1100 S. Marietta Parkway
Marietta, GA 30060

Dear Dr. Zheng and Dr. Li:

It is my pleasure to write a letter in support of the proposal "No Cost Learning Course Material Development for IT 5302 Introduction to Web Development" being submitted to Affordable Learning Georgia Textbook Transformation Grants by our Information Technology Department at Southern Polytechnic State University.

The proposal will aim to replace existing textbooks in a fundamental web development course with no-cost-to-students learning materials. This will essentially lower the cost of college for students and contribute to their retention, progression, and graduation at Southern Polytechnic State University, and potentially benefits all college students as well. The redesign of the course is sustainable to use no-cost-to-students learning materials, as Dr. Zheng is the designated course architect who is responsible for the development and the maintenance of this course.

In conclusion, I fully support the efforts of Dr. Zheng and Dr. Li as they seek this funding. I would like potential funders to be aware that this project has the full support of the Office of the Vice President of Academic Affairs.

Sincerely,

C. Richard Cole, AIA, NCARB
Interim Vice President of Academic Affairs