Grants Collection
Georgia Gwinnett College

UNIVERSITY SYSTEM
OF GEORGIA

Shuting Xu and Shuhua Lai

Web Technologies

Affordable Learning Georgia

Georgia's Virtual Library
GALILEO®
An Initiative of the University System of Georgia

Grants Collection

Affordable Learning Georgia Grants Collections are intended to provide faculty with the frameworks to quickly implement or revise the same materials as a Textbook Transformation Grants team, along with the aims and lessons learned from project teams during the implementation process.

Each collection contains the following materials:

- Linked Syllabus
    - The syllabus should provide the framework for both direct implementation of the grant team's selected and created materials and the adaptation/transformation of these materials.
- Initial Proposal
    - The initial proposal describes the grant project's aims in detail.
- Final Report
    - The final report describes the outcomes of the project and any lessons learned.

Initial Proposal

Application Details

Manage Application: ALG Textbook Transformation Grants

Award Cycle:	Round 9
Internal Submission Deadline:	Sunday, April 30, 2017

Application Title:	316
Application ID:	#001762
Submitter First Name:	Shuting
Submitter Last Name:	Xu
Submitter Title:	Associate Professor
Submitter Email Address:	sxu@ggc.edu
Submitter Phone Number:	678-471-1547
Submitter Campus Role:	Proposal Investigator (Primary or additional)
Applicant First Name:	Shuting
Applicant Last Name:	Xu
Co-Applicant Name:	Shuhua Lai
Applicant Email Address:	sxu@ggc.edu
Applicant Phone Number:	678-471-1547
Primary Appointment Title:	Associate Professor
Institution Name(s):	Georgia Gwinnett College
Submission Date:	Monday, May 1, 2017

Proposal Title:	316
Final Semester of Instruction:	Spring 2018

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

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

Shuhua Lai, Associate Professor, Information Technology, slai@ggc.edu

Sponsor, (Name, Title, Department, Institution):

Tom Mundie, Dean of School of Science and Technology, Georgia Gwinnett College

Course Names, Course Numbers and Semesters Offered:

Web Technologies, ITEC 2130, offered in Spring, Summer and Fall semesters every year.

Average Number of Students per Course Section:	28
Number of Course Sections Affected by Implementation in Academic Year:	9
Total Number of Students Affected by Implementation in Academic Year:	252
List the original course materials for students (including title, whether optional or required, & cost for each item):	Web Development and Design Foundations with HTML5, 8th Edition; ISBN-13: 978-0134322759, Required, $130.80Adobe® Dreamweaver® CS6, 1st Edition, ISBN-13: 978-1-133-52602-5, Required, $75.95.Adobe® Flash® Professional CS6, 1st Edition, ISBN-13: 978-1-133-52600-1, Required, $75.95.
Proposal Categories:	No-Cost-to-Students Learning Materials
Requested Amount of Funding:	$10,800
Original per Student Cost:	$282.70
Post-Proposal Projected Student Cost:	0
Projected Per Student Savings:	$282.70
Projected Total Annual Student Savings:	$71,240.40

Creation and Hosting Platforms Used ("n/a" if none):

We are planning to use the following 2 hosting platforms to share and distribute the No-Cost-to-Students Course Materials. Students can create accounts and use them for free.

Georgia Gwinnett College Brightspace (D2L) (https://ggc.view.usg.edu/d2l/home). This website will be used to post all the course materials, announcements, assignments, and for students to submit homework and take tests and quizzes.
altervista (https://en.altervista.org/). Students can register free accounts on this web site. This web site will be used for students to post their web pages created for homework and projects and host their client-side and server-side programs (D2L does not provide this

function).

Project Goals:

The goals of the project are:

1. Create more focused, project-based course materials.

The current course uses three required textbooks: "Web Development and Design Foundations with HTML5" [1] has 14 chapters, "Adobe® Dreamweaver® CS6" [2] has 10 learning units, and "Adobe® Flash® Professional CS6" [3] has 7 learning units. The course may cover at most half of all the contents in one semester. Many of the chapters and learning units are never touched. As the textbooks are from different publishers, there is no way to make a customized textbook with only selected chapters from each book. The themes for hands-on exercises also varies. In this project, we propose to create project-based teaching and learning course materials for this course with only needed contents. Using the project-based course materials, students can learn how to design their web sites with professional layouts, for example, using CSS to configure color and text, using visual elements and graphics, adding links, tables, forms, multimedia and interactivity, etc. The learning materials we create will cover all the knowledge and skills they need to design a professional web site.

2. Design project-based course materials to improve student success rate.

The exercises from the current textbook are focused only on the skills covered in each chapter and do not provide students with a systematic view of how web sites are designed and implemented from scratch. By using the project-based course materials mentioned above, students will have the opportunity to design and implement a web site on their own step by step. We hope this pedagogical transformation will fill the gap of textbook knowledge and real-world application and in return improve student success rate.

3. Reduce student expenses in textbook purchases to zero dollars.

The cost of three textbooks at college bookstore is $282.70. As explained above, some of the textbook contents are not covered in the course. ITEC2130 Web Technologies is a general education course at Georgia Gwinnett College which is taken by about 250 students annually. Using the zero cost learning materials we propose will lower the cost of college education for students.

4. Share the learning materials with other USG universities and colleges to benefit more students.

We will make the created learning materials freely available to all the USG faculty. They can be used as replacement to their current textbooks or supplement teaching materials.

Statement of Transformation:

Transformation description:

The textbooks used in ITEC2130 Web Technologies at GGC are expensive, which is $280.70 for the three required textbooks. As a matter of fact, most textbooks on information technology are expensive. In addition, due to the fast evolving nature of the web design field, the textbooks used in the proposed course are updated frequently, which negatively impacts their resale value. For example, HTML 5 [4] was published in October 2014 and HTML 5.1 [5] was published in November 2016. On the other side, the learning resources for web technologies 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 will identify, select and adopt/create no-cost materials to replace the costly textbook and achieve the same learning outcomes.

The teaching and learning course materials we propose to create will be project-based. All the knowledge covered by the learning materials will be focused on building students' web site project. Project-based learning (PBL) is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems [6]. It is a style of active learning and inquiry-based learning. A meta-analysis conducted by Purdue University found that when implemented well, PBL can increase long-term retention of material and replicable skill, as well as improve teachers' and students' attitudes towards learning [7]. By using the proposed project-based course materials we hope students will improve class engagement and learning satisfaction, gain experience in working on real-world applications and improve student success rate.

Stakeholders affected by the transformation:

The direct stakeholders affected by the transformation will be approximately 250 traditional and non-traditional undergraduate students annually who are enrolled in the Web Technologies course at GGC.

All the GGC faculty and other faculty in Georgia and across the country who teach a similar web design course may have free access to the course materials. This will in return benefit students state-wide and nation-wide.

The impact of this transformation on stakeholders and course success:

The transformation process will help remove and eliminate the cost of expensive textbooks for students, and provide students with access to course learning materials on the first day of class.

The project-based pedagogical transformation will better engage students in classes as they

know every skill they learn in class will be used to build their designed web sites. This will help to improve course's attendance and retention. And the experience of working on a real-world application will benefit their future career success.

The transformation will also benefit faculty teaching similar courses by providing a solution to lower textbook cost, improve student engagement and success rate.

The transformative impact on the program, department, institutions, access institution, and/or multiple courses:

ITEC2130 Web Technologies is a required course for Information Technology major with Digital Media concentration and also a general education course for all the students at GGC. The successful transformation with zero textbook cost and better course engagement and satisfaction will attract more students to enroll as IT major.

The proposed project-based course materials also strongly support the mission of GGC "It emphasizes the innovative use of technology and active-learning environments to provide students enhanced learning experiences, practical opportunities to apply knowledge..."

The idea of zero textbook cost and project-based learning may inspire more successful course transformation in other areas and disciplines at GGC and USG at large.

Transformation Action Plan:

The identification, review, selection, and adoption/adaptation/creation of the new course materials

The new course materials will be identified and gathered/created based on course objectives and student learning outcomes of the ITEC 2130 Web Technologies course. While some of the course materials can be created by referring to the currently used textbook, most of them will be produced by using publicly available resources since most of the content taught in this course are standard web design applications maintained by nonprofit organizations and open source foundations.

The course and syllabus instructional design/redesign necessary for the transformation.

The course syllabus will be modified for the transformation, for example, course material information, grade distribution, tentative course schedule, etc. The syllabus will be made available in D2L for this course by the PIs. Since the new course materials will be provided on D2L, each topic covered in the course will have a web link in D2L, which contains all the materials relevant to the topic. Also, each course topic will be designed based on learning-by-doing approach to include many examples, tutorials, and handson features that allow students to practice and improve their own web design skills.

The activities expected from each team member and their role(s): subject matter experts, instructional designer, librarian, instructor of record, et al.

Team member: Shuting Xu, Associate Professor of Information Technology, as a subject matter expert and instructional designer, will identify and create new course materials and oversee the entire transformation process. She will select and determine study material for all quizzes, exams and homework assignments/projects, develop handson activities, lab activities, complete and analyze all grade/survey related data for the course.

Team member: Shuhua Lai, Associate Professor of Information Technology, as a subject matter expert and instructional designer, will create new course materials including developing lecture notes/course PPT slides, identifying online free complementary reading materials/tutorials/video clips for each course topic. Also he will set up and maintain the D2L course material for this project.

The plan for providing open access to the new materials.

The new course materials will be hosted in Georgia Gwinnett College Brightspace (D2L) (https://ggc.view.usg.edu/d2l/home) and all students who take this course will have free access to the materials on the first day of class. This website will be used to post all the course materials, announcements, assignments, and for students to submit homework and take tests and quizzes.

We will also use altervista (https://en.altervista.org/). Students can register free accounts on this web site. This web site will be used for students to post their web pages created for homework and projects and host their client-side and server-side programs (D2L does not provide this function).

Quantitative & Qualitative Measures:	Quantitative Measures: The PIs will collect data from all students who take this course using the developed no-cost-to-student course materials. These data includes but not limited to:demographic datamajor area of study,retention rate in the course,passing and failing rate,drop and withdraw rate,percentage of students getting As, Bs, Cs, Ds, Fspercentage of students achieving student learning outcomesThe above data will be collected at the end of the semester and compared with the sections of the ITEC2130 without using the proposed course materials. The comparison result will be used to evaluate the efficacy of the course materials in improving student success.Qualitative Measures: The PIs will also survey our student to understand their experience using the developed no-cost-to-student course material. For example, students will be asked to evaluate the following statement on a 1-5 scale from strongly disagree to strongly agree.The project-based course materials are fun.I like the class activities designed for this course.I like the homework designed for this course.I learned all the knowledge and skills needed to build my web site project.The students will also be asked the following short answer questions:What were the best aspects of using the No-Cost-to-Students Learning Materials?What were the challenges of using the No-Cost-to-Students Learning Materials?Other comments or suggestions about this course?The survey will be conducted at the end of the semester and the data collected will help the PIs to modify and improve the learning materials to be used in the following semesters.

Timeline:

10/31/2017

Complete course modules redesign for the project-based course materials. These include all reading materials, lecture notes, video clips, exercises, labs, and assignments.

11/30/2017

Complete course level materials redesign. This includes quizzes, tests, and syllabus.

12/15/2017

Develop the survey questionnaire used to evaluate the project-based course materials, and deliver the first report.

04/30/2018

Complete the course using the project-based course materials in the spring semester. Conduct survey at the end of the semester.

05/31/2018

Analyze data collected. Finish quantitative and qualitative data analysis. Compile final report.

Budget:

The funding mainly compensates the investigators' work and activities 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.

Compensation for two faculty: $5,000 *2 = $10,000

Travel expense: $800

Total: $10,800

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

Sustainability Plan:

Web Technologies is a general education course at GGC as well as a required course for IT major with Digital Media concentration. There are about 10 sections taught each academic year. We plan to test the no-cost-to-students materials in 4 sections the two PIs teach. It is reasonable to expect that the success of this project will greatly reduce students cost, better prepare and engage students, improve academic performance, and in turn improve retention and success rates in this course. We will then propose to have all sections adopt the no-cost-to-students material approach.

For GGC faculty, all no-cost materials and resources will be made available in D2L and will be shared among all faculty teaching this course. For non-GGC faculty, the materials will be provided freely upon request. In addition, the course materials will be updated periodically by faculty in the Information Technology program reflecting feedback from various sources and newly emerged web design technologies in the industry.

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Georgia Gwinnett
COLLEGE

To: Grant Review Committee

Affordable Learning Georgia, University System of Georgia

Re: Textbook Transformation Grant

Dear Committee,

I am pleased to write this letter to support Dr. Shuting Xu and Dr. Shuhua Lai's application for the ALG Textbook Transformation Grant.

The proposal focuses on the creation of no-cost-to-students learning materials to replace current textbook for our IT required course Web Technology (ITEC 2130). This will lower costs of students taking this course and will most likely increase our retention and success rates in the course.

Drs. Xu and Lai have been teaching ITEC 2130 for a several semesters. They have the knowledge, skills and experiences needed to successfully perform the action plan and meet the obligations of the grant. If awarded the grant, I will work with them to coordinate the distribution of their award and provide necessary resources to facilitate their activities in developing the proposed learning materials.

Please let me know if you have any questions or need additional information.

Sincerely,

Dr. Thomas G. Mundie
Dean, School of Science and Technology
Georgia Gwinnett College

Affordable Learning Georgia Textbook Transformation Grants

Round Nine

For Implementations beginning Summer Semester 2017

Running Through Spring Semester 2018

Proposal Form and Narrative

- *The proposal form and narrative .docx file is for offline drafting and review. Submitters must use the InfoReady Review online form for proposal submission.*

- ***Note: The only way to submit the proposal is through the online form in Georgia Tech's InfoReady Review at:***

  https://gatech.infoready4.com/#competitionDetail/1757803

- *If you are copying and pasting into InfoReady Review from this form, first convert the file to **plain text** and copy/paste from the plain text file.*

  - o *In Word, go to File > Save As… > and change the file format to "Plain Text (.txt)."*

  - o *Copy and paste from the .txt file.*

  - o *Be sure to save both copies in case you are asked to resubmit.*

- *Microsoft Word Document formatting pasted into InfoReady Review will render the reviewer copy unreadable. **If you paste Word-formatted tables into InfoReady Review, you may be asked to resubmit your application if time permits.***

- *Italicized text is provided for your assistance; please do not keep the italicized text in your submitted proposal. Proposals that do not follow the instructions may be returned.*

Submitter Name	Shuting Xu
Submitter Title	Associate Professor
Submitter Email	sxu@ggc.edu

Submitter Phone Number	678-471-1547
Submitter Campus Role	*Proposal Investigator (Primary)*
Applicant Name	*Shuting Xu*
Applicant Email	sxu@ggc.edu
Applicant Phone Number	678-471-1547
Primary Appointment Title	Associate Professor
Institution Name(s)	Georgia Gwinnett College
Team Members	*Shuting Xu, Associate Professor, Information Technology, sxu@ggc.edu* *Shuhua Lai, Associate Professor, Information Technology, slai@ggc.edu*
Sponsor, Title, Department, Institution	*Tom Mundie, Dean of School of Science and Technology, Georgia Gwinnett College*
Proposal Title	Developing Project Based Course Materials for ITEC 2130 Web Technologies
Course Names, Course Numbers and Semesters Offered	*Web Technologies, ITEC 2130, offered in Spring, Summer and Fall semesters every year.*

Final Semester of Instruction	Spring 2018				
Average Number of Students Per Course Section	28	Number of Course Sections Affected by Implementation in Academic Year	9	Total Number of Students Affected by Implementation in Academic Year	252
Award Category (pick one)	☒ No-or-Low-Cost-to-Students Learning Materials ☐ OpenStax Textbooks ☐ Interactive Course-Authoring Tools and Software ☐ Specific Top 100 Undergraduate Courses				
List the original course materials for students (including title, whether optional or required, & cost for each item)	*Web Development and Design Foundations with HTML5, 8th Edition; ISBN-13: 978-0134322759, Required, $130.80* *Adobe® Dreamweaver® CS6, 1st Edition, ISBN-13: 978-1-133-52602-5, Required, $75.95.* *Adobe® Flash® Professional CS6, 1st Edition, ISBN-13: 978-1-133-52600-1, Required, $75.95.*				
Requested Amount of Funding	$10,800				
Original Per Student Cost	$282.70				
Post-Proposal Projected Per Student Cost	0				

Projected Per Student Savings	$282.70
Projected Total Annual Student Savings	*$71,240.40*
Creation and Hosting Platforms Used	*We are planning to use the following 2 hosting platforms to share and distribute the No-Cost-to-Students Course Materials. Students can create accounts and use them for free.* *1. Georgia Gwinnett College Brightspace (D2L) (https://ggc.view.usg.edu/d2l/home). This website will be used to post all the course materials, announcements, assignments, and for students to submit homework and take tests and quizzes.* *2. faltervista (*https://en.altervista.org/*). Students can register free accounts on this web site. This web site will be used for students to post their web pages created for homework and projects and host their client-side and server-side programs (D2L does not provide this function).*

NARRATIVE

1.1   PROJECT GOALS

The goals of the project are:

1. **Create more focused, project-based course materials.**

    The current course uses three required textbooks: "Web Development and Design Foundations with HTML5" [1] has 14 chapters, "Adobe® Dreamweaver® CS6" [2] has 10 learning units, and "Adobe® Flash® Professional CS6" [3] has 7 learning units. The course may cover at most half of all the contents in one semester. Many of the chapters and learning units are never touched. As the textbooks are from different publishers, there is no way to make a customized textbook with only selected chapters from each book. The themes for hands-on exercises also varies. In this project, we propose to create project-based teaching and learning course materials for this course with only needed contents. Using the project-based course materials, students can learn how to design their web sites with professional layouts, for example, using CSS to configure color and text, using visual elements and graphics, adding links, tables, forms, multimedia and interactivity, etc. The learning materials we create will cover all the knowledge and skills they need to design a professional web site.

2. **Design project-based course materials to improve student success rate.**

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3. **Reduce student expenses in textbook purchases to zero dollars**.

    The cost of three textbooks at college bookstore is $282.70. As explained above, some of the textbook contents are not covered in the course. ITEC2130 Web Technologies is a general education course at Georgia Gwinnett College which is taken by about 250 students annually. Using the zero cost learning materials we propose will lower the cost of college education for students.

4. **Share the learning materials with other USG universities and colleges to benefit more students.**

    We will make the created learning materials freely available to all the USG faculty. They can be used as replacement to their current textbooks or supplement teaching materials.

1.2 STATEMENT OF TRANSFORMATION

Transformation description:

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Stakeholders affected by the transformation:
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designed web sites. This will help to improve course's attendance and retention. And the experience of working on a real-world application will benefit their future career success.

The transformation will also benefit faculty teaching similar courses by providing a solution to lower textbook cost, improve student engagement and success rate.

The transformative impact on the program, department, institutions, access institution, and/or multiple courses:

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The idea of zero textbook cost and project-based learning may inspire more successful course transformation in other areas and disciplines at GGC and USG at large.

1.3 TRANSFORMATION ACTION PLAN

The identification, review, selection, and adoption/adaptation/creation of the new course materials

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The activities expected from each team member and their role(s): subject matter experts, instructional designer, librarian, instructor of record, et al.

Team member: Shuting Xu, Associate Professor of Information Technology, as a subject matter expert and instructional designer, will identify and create new course materials and oversee the entire transformation process. She will select and determine study material for all quizzes, exams and homework assignments/projects, develop hands-on activities, lab activities, complete and analyze all grade/survey related data for the course.

Team member: Shuhua Lai, Associate Professor of Information Technology, as a subject matter expert and instructional designer, will create new course materials including developing lecture notes/course PPT slides, identifying online free complementary reading materials/tutorials/video clips for each course topic. Also he will set up and maintain the D2L course material for this project.

The plan for providing open access to the new materials.

The new course materials will be hosted in Georgia Gwinnett College Brightspace (D2L) (https://ggc.view.usg.edu/d2l/home) and all students who take this course will have free access to the materials on the first day of class. This website will be used to post all the course materials, announcements, assignments, and for students to submit homework and take tests and quizzes.

We will also use altervista (https://en.altervista.org/). Students can register free

accounts on this web site. This web site will be used for students to post their web pages created for homework and projects and host their client-side and server-side programs (D2L does not provide this function).

1.4   QUANTITATIVE AND QUALITATIVE MEASURES

Quantitative Measures: The PIs will collect data from all students who take this course using the developed no-cost-to-student course materials. These data includes but not limited to:
- demographic data
- major area of study,
- retention rate in the course,
- passing and failing rate,
- drop and withdraw rate,
- percentage of students getting As, Bs, Cs, Ds, Fs
- percentage of students achieving student learning outcomes

The above data will be collected at the end of the semester and compared with the sections of the ITEC2130 without using the proposed course materials. The comparison result will be used to evaluate the efficacy of the course materials in improving student success.

Qualitative Measures: The PIs will also survey our student to understand their experience using the developed no-cost-to-student course material. For example, students will be asked to evaluate the following statement on a 1-5 scale from strongly disagree to strongly agree.
- The project-based course materials are fun.
- I like the class activities designed for this course.
- I like the homework designed for this course.
- I learned all the knowledge and skills needed to build my web site project.

The students will also be asked the following short answer questions:
- What were the best aspects of using the No-Cost-to-Students Learning Materials?
- What were the challenges of using the No-Cost-to-Students Learning Materials?
- Other comments or suggestions about this course?

The survey will be conducted at the end of the semester and the data collected will help the PIs to modify and improve the learning materials to be used in the following semesters.

1.5 TIMELINE

- 10/31/2017
  Complete course modules redesign for the project-based course materials. These include all reading materials, lecture notes, video clips, exercises, labs, and assignments.

- 11/30/2017
  Complete course level materials redesign. This includes quizzes, tests, and syllabus.

- 12/15/2017
  Develop the survey questionnaire used to evaluate the project-based course materials, and deliver the first report.

- 04/30/2018
  Complete the course using the project-based course materials in the spring semester. Conduct survey at the end of the semester.

- 05/31/2018
  Analyze data collected. Finish quantitative and qualitative data analysis. Compile final report.

1.6 BUDGET

The funding mainly compensates the investigators' work and activities 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.

Compensation for two faculty: $5,000 *2 = $10,000
Travel expense: $800

Total: $10,800

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

1.7 SUSTAINABILITY PLAN

Web Technologies is a general education course at GGC as well as a required course for IT major with Digital Media concentration. There are about 10 sections taught each academic year. We plan to test the no-cost-to-students materials in 4 sections the two PIs teach. It is reasonable to expect that the success of this project will greatly reduce students cost, better prepare and engage students, improve academic performance, and in turn improve retention and success rates in this course. We will then propose to have all sections adopt the no-cost-to-students material approach.

For GGC faculty, all no-cost materials and resources will be made available in D2L and will be shared among all faculty teaching this course. For non-GGC faculty, the materials will be provided freely upon request. In addition, the course materials will be updated periodically by faculty in the Information Technology program reflecting feedback from various sources and newly emerged web design technologies in the industry.

1.8   REFERENCES & ATTACHMENTS

[1] Felke-Morris, T. A. "Web Development and Design Foundations with HTML5", 8th Edition, published by Pearson, 2017.

[2] Bishop, S. "Adobe® Dreamweaver® CS6", 1st Edition, published by Cengage Learning, 2013.

[3] Waxer, B. "Adobe® Flash® Professional CS6", 1st Edition, published by Cengage Learning, 2013.

[4] *"HTML5: A vocabulary and associated APIs for HTML and XHTML"*. *World Wide Web Consortium. 28 October 2014. Retrieved 31 October 2014.*

[5] *"HTML 5.1"*. *World Wide Web Consortium. 1 November 2016. Retrieved 6 January 2017.*

[6] "*Project-Based Learning", Edutopia, March 14, 2016*. Retrieved 2016-03-15

[7] Strobel, J. Barneveld, A. "When is PBL More Effective? A Meta-synthesis of Meta-analyses Comparing PBL to Conventional Classrooms." Interdisciplinary Journal of Problem-Based Learning. Volume 3, Article 4. 2009.

Syllabus

School of Science and Technology

ITEC 2130 Web Technologies, Spring 2018

Instructor Information

Instructor: Shuting Xu

Office: RL3221B

E-mail: sxu@ggc.edu

Cell Phone: 678-471-1547

Communication

The fastest way to connect with me is via GGC email. I am happy to set up a face-to-face meeting with you, when possible. However, we may need to establish a time and place via email or by phone.

At any time you can contact me by email, text message or voicemail on my GGC cell phone. Communications received Monday through Thursday after 5pm EST will be returned by the next day. On the weekend or when I am away from campus (i.e., at a conference), my response may be irregular.

When corresponding by email, I will communicate with you using only your GGC email. You should check your GGC email every day. Emails from other domains (yahoo.com, gmail.com, hotmail.com, etc.) will not receive replies due to the Family Educational Rights and Privacy Act (FERPA).

When you email me you should consider the email as official correspondence. As such, the email should not appear as a text message but should have proper grammar and punctuation.

You should also check your Brightspace (Desire2Learn) course site every day as well.

Technology Covenant

Technology will be used to deliver content, provide resources, assess learning, and facilitate interaction, both within the classroom and in the larger learning community. This covenant provides a general guideline for the course.   I reserve the right to make periodic and/or necessary changes to the covenant, including: technology use and communication channels, in order to accommodate the needs of the class as a whole and fulfill the goals of the course.

Expectations of Students

All students at GGC need to have access to a computer. If you do not have one, computer labs are available on campus.

Students can access the course materials and grades via Brightspace (Desire to Learn).

Students should check GGC email regularly (at least twice a day).

Cell phones should be set on silent and stowed during class.

Laptop computers should remain off, except when they are being used for an in-class activity or for taking notes.

All completed assignments will be submitted through Brightspace (Desire2Learn). Unless otherwise specified, daily assignments must be submitted prior to class time.

Course Information

Class Details
Course Details: ITEC2130 – 04, 4 credit hours

Class Time: MWF 9:30am - 10:45am

Course Location: B1200

Course Details: ITEC2130 – 07, 4 credit hours

Class Time: MWF 8:00am - 9:15am

Course Location: A1910

Course Description
Upon completion of this course, students will be able to: 1.) Design, create and deploy a website; 2.) Design and create web animations; 3.) Describe the social and economic implications of social networking; 4.) Discuss current and emerging web technologies; and 5.) Utilize web technologies for an international environment.

Course Prerequisites
ITEC 1001

Course Resources

Required Textbook
1. This course is supported in part by Affordable Learning Georgia with a Textbook Transformation Grant to develop no-cost-to-student textbook material
2. All the course material used in this course has already been developed or adapted by the grant investigators
3. The course material has been made available in D2L with no cost to every student

Optional Textbook
Web Development and Design Foundations with HTML5

Authors: Terry Felke-Morris

Edition: 8th

ISBN-13: 978-0134322759

ISBN-10: 0134322754

Recommended Texts and Materials

      1. W3C: http://www.w3.org/standards/webdesign/

      2. Lynda online training videos: http://lynda.com

      3. Web hosting: http://en.altervista.org/

      4. Other online resources will be made available as needed by the instructor.

Additional Resources (available in the classroom and at all college computer labs/library)

      1. Adobe® Dreamweaver® CS6

      2. Adobe® Flash® CS6

Course Outcome Goals

Upon completion of this course, students will be able to:

1. Design, create and deploy a website.

2. Design and create web animations.

3. Demonstrate understanding of social and economic implications of social networking.

4. Demonstrate understanding of current and emerging web technologies.

5. Utilize web technologies for an international environment.

Course Requirements and Grading

You can expect to access the course materials and grades via our course in Brightspace (Desire to Learn). Students should check this Brightspace regularly, as course changes will always be announced and recorded on the course site.

Grading Scale

A (Excellent) 90-100

B (Good) 80-89

C (Fair) 70-79

D (Poor) 60-69

F (Failure) 59 and below

Grading Percentages

Grading Category	Percent Weight
Attendance	10%
In-class Activities	30%
Labs	20%
Projects	20%
Tests	10%
Final Exam	10%

Late Work Policy

Every effort should be made to hand all assignments and projects by the due date and time. Later submissions will be accepted, but will receive grade reduction.

Assessment Tools

Tests and quizzes **must be taken in the classroom**. Make up tests and quizzes will only be given due to extraordinary circumstances. Arrangements must be made in advance if an absence is anticipated.

Course Outline/Assessments

Week	Topics	Notes
1	Syllabus; Web site setting up; HTML Basics	
2	HTML Basics	
3	Color and Format using CSS	
4	Visual Elements	
5	Page Layout	
6	More on Links and Layout	
7	More on Links and Layout	
8	Tables	
9	Spring Break	No class, have fun!
10	Forms	
11	Forms	
12	Multimedia	
13	JavaScript	
14	JavaScript	
15	jQuery	
16	Game design	
17	Final exam	

Final Exam Details

The final exam will be given sometime during finals week as specified by the registrar. The date and time of the final exam is set by the registrar and will be posted. The exam schedule cannot be changed at the convenience of the student. You should not plan to be absent anytime during that week. A make-up final exam will only be given in cases of a verifiable excused absence.

Course Expectations

Attendance

- Class attendance is taken at the beginning of the class. A student who arrives later than 10 minutes after the class started is considered absent.

Class participation

- Paying attention in class.
- Asking/answering questions.

Some common sense notices

- Please do not be late for classes or leave early.
- Please turn off all cell phones and other noisy electronic devices during class time.
- Please do not bring children, parents, friends, etc. into the class.
- Please avoid visiting websites unrelated to the class.
- Please show common courtesy to your fellow classmates and professor.

Academic dishonesty

Your work must be your own. Cheating will result in a grade of 0 for the applicable assignment; further disciplinary action, including assigning a failing grade (F) for the entire course may also be taken.

Important Dates

Activity	Date
Classes begin	Jan. 8
Drop/add ends	Jan. 14
Dr. Martin Luther King Jr. Day holiday	Jan. 15
Mid-term grades due	Feb. 28
Mid-term, last day to withdraw with "W"	March 2
Spring Break	March 4-11
Classes end (Full Session)	April 30
Final exams	May 2-8
End of semester grades due	May 10, 9 a.m.
Commencement	May 17
Grades available in Banner	May 18

Course Changes

This course syllabus provides a general plan for this course. The instructor reserves the right to make changes to the syllabus, including changes to assignments, projects, examinations, etc., in order to accommodate the needs of the class as a whole and fulfill the goals of the course.

School of Science And Technology Vision/Mission Statement

School Vision

The School of Science and Technology will become recognized in the region and the state for excellence in STEM education at an open access institution. SST Faculty will provide effective and relevant courses and programs in science, math, and technology which are characterized by interdisciplinary learning, novel use of educational technology, and an active learning environment that stimulates critical thinking.

School Policies

Class attendance and Financial Aid

Please be aware that faculty check attendance in each of your courses and are required to report to the Registrar students who never attend or cease attending a course. Students who are reported as never attended or have ceased attending a course, Financial Aid will be notified and is required to adjust your financial aid award accordingly. If you have any questions about how not attending a course for which you are registered will affect your financial aid eligibility, please contact the Financial Aid Office.

Make-up Exam Policy

You are expected to attend every class. Failure to attend class will affect your grade.

Special arrangements to take a regular exam early must be made in advance in writing. Early exams are available only at the instructor's discretion and only under extreme circumstances.

IF an emergency arises and you miss an exam you MUST notify me on the same DAY as the exam. Notification by email, text or phone message is acceptable. Any make-up work may have a different format or different content from the regular assignment. Make-up work should be completed within two days of the original due date. Work missed due to unexcused absences will be given a grade of zero.

Note: Lab Practical Exams CANNOT be rescheduled!

If you feel that you are unable to complete your courses due to illness or family emergency, contact the Registrar's Office to attempt to withdraw from your courses without penalty.

Final Exam

The final exam will be given sometime during finals week as specified by the registrar. The date and time of the final exam is set by the Registrar and will be posted. The exam schedule cannot be changed at the convenience of the student. You should not plan to be absent anytime during that week. A make-up final exam will only be given in cases of a verifiable excused absence.

Course Changes

This course syllabus provides a general plan for this course. I reserve the right to make changes to the syllabus, including changes to assignments, projects, examinations, etc., in order to accommodate the needs of the class as a whole and fulfill the goals of the course.

School/Program Outcomes

Integrated Educational Experience Goals:

The IEE Goals met by the objectives of this course are in bold/strong format:

IEE-1 Clearly communicate ideas in written and oral form.

IEE-2   Demonstrate creativity and critical thinking in inter- and multi-disciplinary contexts.

IEE-3   Demonstrate effective use of information technology.

IEE-4 Demonstrate an understanding of diversity and global perspectives leading to collaboration in diverse, global contexts.

IEE-5   Demonstrate an understanding of human and institutional decision making from multiple perspectives.

IEE-6   Demonstrate an understanding of moral and ethical principles.

IEE-7   Demonstrate and apply leadership principles.

IEE-8   Demonstrate competence in quantitative reasoning.

Academic Integrity and Use of Turnitin

Students in all courses are reminded that they are responsible for avoiding every aspect or appearance of plagiarism by appropriately citing the sources of ideas, thoughts, or words of others that appear in their academic work. Students should be aware that faculty may use the originality check feature of Turnitin to assist students in learning how to cite work appropriately in order to avoid potential plagiarism.

Please note: This policy mandates that students include complete citations for any and all work which is not totally original.

Examples of plagiarism include:

- Directly quoting another's words without appropriate citation and punctuation;

- Overusing quotations in a written work;

- Paraphrasing another's words without appropriate citation;

- **Submitting assignments and other work that is not your own;**

- Citing primary and secondary sources incorrectly.

Examples of academic dishonesty include:

- **Submitting a single assignment for multiple courses without the instructors' knowledge or permission;**

- **Using assignments submitted by other students;**

- Using unauthorized materials during an exam.

Georgia Gwinnett College Policies

Academic Respect

The college exists to foster educational excellence. To this end, a classroom atmosp that supports learning must be maintained. Students are expected to be active, attentive participants in the class. Students are also expected to abide by class policies and procedures and to treat faculty and other students in a professional, respectful manner. Students are expected to be familiar with the student conduct code published in the Student Handbook, page 31.

Americans with Disabilities Act Statement

Georgia Gwinnett College will provide reasonable accommodation to employees, applicants for employment, students, and patrons who have physical and/or mental disabilities, in accordance with applicable statutes. Georgia Gwinnett College will take affirmative action to employ and advance in employment persons who are qualified disabled veterans, veterans of the Vietnam Era, or other covered veterans. If you are a student who is disabled as defined under the Americans with Disabilities Act and require assistance or support services, please seek assistance through the Office of Disability Services. A CDS Counselor will coordinate those services.

For more information, refer to the Americans with Disabilities Act Policy.

Attendance Policy

The classroom experience is a vital component of the college learning experience. Interaction with instructors and with other students is a necessary component of the learning process. Students are expected to attend regularly and promptly all class meetings and academic appointments. Students who are absent from classes bear the responsibility of notifying their instructors and keeping up with class assignments in conjunction with instructor provisions in the course syllabus. An individual instructor bears the decision as to whether a student's absence is excused or unexcused and whether work will be permitted to be made up; the decision of the instructor in this case is final. Students who are absent because of participation in college-approved activities (such as field trips and extracurricular events) will be permitted to make up the work missed during their college-approved absences, provided that the student discussed with and obtained approval from the instructor to make up the work missed prior to the student's going on the field trip.

Individual instructors may establish additional attendance requirements appropriate to their course's context, e.g., lab attendance. A student whose class schedule would otherwise prevent him or her from voting will be permitted an excused absence for the interval reasonably required for voting.

For more information, refer to the GGC Student Attendance Policy.

[You may add your own Attendance Policy statement.]

Equal Opportunity and Affirmative Action Policy

Georgia Gwinnett College ads to affirmative action policies designed to promote diversity and equal opportunity for all faculty and students.

As an equal opportunity institution, Georgia Gwinnett College is committed to nondiscriminatory practices consistent with federal and state requirements and objectives. Georgia Gwinnett College affirms its commitment to keeping its workplace and academic programs free of discrimination and harassment and maintaining an environment that recognizes the innt worth and dignity of every person.

It continues to be the policy of Georgia Gwinnett College to implement affirmative action and equal opportunity for all employees, students and applicants for employment or admission without regard to race, color, creed, religion, national origin, sex, age, sexual orientation, gender identity, pregnancy/parental status, veteran status or disability.

For more information, refer to the GGC Equal Opportunity and Affirmative Action Policy Statement.

Academic Integrity

Student Honor Statement: We will not lie, steal, or cheat, nor tolerate the actions of those who do.

Georgia Gwinnett College students are expected to ad to the highest standards of academic integrity and are expected to encourage others to do the same. Further, students are expected to take responsible action when t is reason to suspect dishonesty on the part of others.

Academic dishonesty carries severe penalties ranging from a grade of "0" on the affected assignment to dismissal from Georgia Gwinnett College. Each faculty member at Georgia Gwinnett College bears the responsibility for assigning penalties for cases of academic dishonesty. Students may appeal a penalty as outlined in the Student Handbook, page 31.

Academic Enhancement Center (AEC)—Your Pathway to Success

We encourage you to take advantage of the various academic support services we provide to all currently enrolled GGC students on campus.

AEC Tutors

Our trained professional and peer tutors provide 30 minute one-on-one tutoring sessions. Group tutoring sessions are also available for students with similar questions on course content. Writing tutors will tutor you at any stage of the writing process. Math/Science/ITEC/Business tutors will help you gain a better understanding of course concepts. Bring your notes, textbook, rubrics, and your assignment sheets to your tutoring session. Be prepared to answer and ask questions.

How to Receive Tutoring

Schedule an appointment with one of our tutors by: 1) visiting the AEC in CG360, 2) calling 678-407-5191, or 3) sending an e-mail. Drop-ins are also welcomed. Visit the AEC website for the hours of operations. We stop tutoring sessions 30 minutes before closing.

For more information about the AEC and other services we provide like workshops and outline tutoring, visit the AEC website, follow us on Twitter and like us on Facebook.

Safety and Security

View the GGC Safety and Emergency Communications web page for information important to you. To avoid confusion and rumor, ensure you (1) sign up for RAVE alert text notification, (2) download the LiveSafe app for iPhone or Android. (3) View the 15 minute Active Shooter Video. You are the additional eyes and ears for first responders. Follow the adage, "If you see something, say something" to a GGC employee. Your community needs your increased vigilance and awareness.

Final Report

Affordable Learning Georgia Textbook Transformation Grants

Final Report

To submit your Final Report, go to the Final Report submission page on the ALG website: http://affordablelearninggeorgia.org/site/final_report_submission

Final report submission requires four files:

- *This completed narrative document*
- *Syllabus or syllabi*
    - *(if multiple files, compress into one .zip folder)*
- *Qualitative/Quantitative Measures data files*
    - *(if multiple files, compress into one .zip folder)*
- *Photo of your team or a class of your students w/ at least one team member, minimum resolution 800x600px*
    - *(nearly all smartphones take photos larger than this size by default)*

Follow the instructions on the webpage for uploading your documents. Based on receipt of this report, ALG will process the final payment for your grant. ALG will follow up in the future with post-project grantee surveys and may also request your participation in a publication, presentation, or other event.

General Information

Date: 5/19/18

Grant Round: 9

Grant Number: 316

Institution Name(s): Georgia Gwinnett College

Project Lead: Dr. Shuting Xu

Team Members (Name, Title, Department, Institutions if different, and email address for each): Shuting Xu, Associate Professor, Information Technology, sxu@ggc.edu

   Shuhua Lai, Professor, Information Technology, slai@ggc.edu

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

Semester Project Began: Summer 2017

Final Semester of Implementation: Spring 2018

Total Number of Students Affected During Project: 153

1. Narrative

We developed the no-cost-to-student course learning material during the Fall 2017 semester and piloted its implementation in 2 sections of ITEC 2130 Web Technologies in Spring 2018 semester. The key outcomes of this project include

1. A completed set of course material for students to use for free is developed

2. Student cost for textbook is significantly reduced when take this course

The exit survey showed that students enjoyed using this no-cost-to-students course material and overall experience is overwhelmingly positive.

The instruction experience for faculty who piloted the implementation of the no-cost-to-student course learning material was improved by having more relevant and up to date course material freely available to students on the first day of class, which eliminated the situation that some students could not afford a textbook.

The main impacts the no-cost-to-student learning material had on students include:

1. No-cost-to-student learning material freely available to students on the first day of class helps students succeed in class.

2. The project-based pedagogical transformation better engaged students as they knew every skill they learned in class would be used to build their web sites. This also helped to improve course's attendance and retention.

We did not experience any challenge or difficulty implementing this project.

2. Quotes

"I thought the no cost to students learning material was a great way for students to learn without having to spend any extra or unnecessary money we may not have."

"It has definitely helped me save money and I hope other classes can be able to use it. I think it is VERY effective."

"I loved it, material was accurate and easy to follow,"

3. Quantitative and Qualitative Measures

3a. Uniform Measurements Questions

The following are uniform questions asked to all grant teams. Please answer these to the best of your knowledge.

Student Opinion of Materials

Was the overall student opinion about the materials used in the course positive, neutral, or negative?

Total number of students affected in this project: __153_____

- Positive: ____94___ % of ___36_____ number of respondents
- Neutral: ____6___ % of ____36____ number of respondents
- Negative: ___0____ % of ____36____ number of respondents

Student Learning Outcomes and Grades

Was the overall comparative impact on student performance in terms of learning outcomes and grades in the semester(s) of implementation over previous semesters positive, neutral, or negative?

Student outcomes should be described in detail in Section 3b.

Choose One:
- _x__   Positive: Higher performance outcomes measured over previous semester(s)
- ___   Neutral: Same performance outcomes over previous semester(s)
- ___   Negative: Lower performance outcomes over previous semester(s)

Student Drop/Fail/Withdraw (DFW) Rates

Was the overall comparative impact on Drop/Fail/Withdraw (DFW) rates in the semester(s) of implementation over previous semesters positive, neutral, or negative?

Drop/Fail/Withdraw Rate:
Depending on what you and your institution can measure, this may also be known as a drop/failure rate or a withdraw/failure rate.

__10.7_____% of students, out of a total __75_____ students affected, dropped/failed/withdrew from the course in the final semester of implementation.

Choose One:

- ___   Positive: This is a lower percentage of students with D/F/W than previous semester(s)
- _x__   Neutral: This is the same percentage of students with D/F/W than previous semester(s)
- ___   Negative: This is a higher percentage of students with D/F/W than previous semester(s)

3b. Measures Narrative

We used a survey to evaluate the outcomes of using the developed no-cost-to-student course material. The survey was conducted at the end of spring 2018 semester. 36 student volunteers in two sections of ITEC 2130 Web Technologies participated in the survey. The survey results are summarized below:

- 72% of the participants are male, and 28% are female.
- Among the participants 3% are freshmen, 47% are sophomores, 25% are juniors, and 25% are seniors.
- 87% of participants saved more than $100 in the course expense.
- 94% of participants agreed that the benefits of using No-Cost-to-Students Learning Materials are convenience, availability, no-cost, and up-to-dateness.
- 78% of participants felt no challenge using the No-Cost-to-Students Learning Materials, while 17% of participants thought no hard copy of the textbook was a challenge.
- 94% of participants hoped that other courses would adopt a no-cost-to-student textbook too.

Other measures:

- *Drop, fail, withdraw (DFW) delta rates: 10.7%*
- *Course retention and completion rates: 98%*
- *Average GPA: 3.4*
- *Student success rate in ITEC 2130 course learning goals (score 70 or above):*

  1. Design, create and deploy a website: 98%

  2. Design and create web animations: 92%

  3. Demonstrate understanding of social and economic implications of social networking: 98%

  4. Demonstrate understanding of current and emerging web technologies: 96%

  5. Utilize web technologies for an international environment: 94%

4. Sustainability Plan

All no-cost materials and resources are made publicly available in GGC D2L and will be shared among all GGC faculty teaching this course. For none GGC faculty, they can access the no-cost-to-student course learning material from the following web site: https://en.altervista.org/. User name is: algwebtech. Password is: WebTech2018. The materials include syllabus, slides, in class activities, labs, projects, and tests. Moreover, the course materials will be updated periodically by faculty in the IT program reflecting feedback from various sources and newly emerged digital media technologies in the industry.

5. Future Plans

Due to the overwhelmingly positive feedback we got from our students, we plan to provide the no-cost-to-students course materials to more sections of the ITEC 2130 Web Development

course and expand the Affordable Learning concept into other potential courses, such as ITEC 1001 Introduction to Computers. The idea of zero textbook cost and project-based learning may inspire more successful course transformation in other areas and disciplines at GGC.

6. Description of Photograph

Left: Dr. Shuhua Lai, Co-PI

Right: Dr. Shuting Xu, PI