Grants Collection
Middle Georgia State University

UNIVERSITY SYSTEM
OF GEORGIA

Kevin Floyd, Myungjae Kwak

Web Programming

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.

Syllabus

Syllabus
ITEC 3280-01 – Web Programming
Fall 2015 – On Campus

Section 1 – General Course Information

Course CRN#: 84467

Instructor Information

Instructor:	Myungjae Kwak, Ph.D.
Office:	PSC 314
Office Phone Number:	478-757-6682 (cell 909-731-3994)
Email:	myungjae.kwak@mga.edu
Tentative Office Hours:	Tuesday 1:00 – 4:00 pm Wednesday 1:00 – 4:00 pm Thursday 1:00 – 3:00 pm or by appointment
Classroom:	WRC1 123

Section 2 – Standard Course Information

Hours: 3

Course Description
This course is an introduction to the client and server-based Web processing environments; coverage of the browser document object model, dynamic formatting, and styling, browser scripting languages, user interaction, and personalization, data validation and processing of browser-side data structures, data exchange languages, and database access.

Prerequisites
At least a "C" in both (ITEC 2380 and ITEC 2270)

Textbook
No textbook needed
All materials will be provided in a course web site. (http://itwebtutorials.mga.edu/default.aspx)

Required Software

Notepad++ (most recent version) http://notepad-plus-plus.org/

XAMPP http://www.apachefriends.org/en/xampp.html

Latest versions of Internet Explorer, and Mozilla Firefox

Course Outcomes

The purpose of this course is to provide students with an introduction to client and server-based Web scripting and dynamic Web application development. Students develop various Web applications and gain knowledge of current and emerging technologies and practices. At the completion of the course, students should be able to:

- Describe the architecture of client-side and server-side web applications
- Identify the appropriate programming environment for developing dynamic client-side and server-side web applications.
- Plan, develop, debug, and implement interactive client-side and server-side web applications.
- Identify the tools needed to create dynamic client-side and server-side web applications.
- Evaluate and validate web applications for conformance to the latest W3C markup standards.
- Analyze and evaluate web applications for conformance to section 508 and W3C accessibility standards.
- Choose between server-side and client-side programming, depending on the task to be performed.

Topics

- JavaScript
- DOM
- XML
- PHP
- JQuery

Section 3 – Course Assessment Information

Course Assessments

Students are evaluated on web programming assignments, exams, and a final project. Assignments require coding and scripting of Web pages to illustrate course content.

Homework Programming Assignments

Thirteen (13) homework assignments are worth 130 points toward the student's overall course grade. Homework assignments must be uploaded to the student's Web directory on the campus server by midnight of the due date listed on the class schedule. The student must submit the URL via the Dropbox in BrightSpace(D2L) in order to receive credit. If you don't have your Web directory, please refer to the following URL (http://www.mga.edu/technology/webdav.aspx).

Hands-on Project

A hands-on project is worth 100 points toward the student's overall course grade. Points will be given based on the creativity and completeness of the outcome. Detailed project schedule and evaluation criteria will be announced in BrightSpace (D2L).

Assignments Submission Policy

To obtain full credit for each assignment or project, the student must submit the assignment by its deadline. If an assignment or project is submitted past the deadline, 10% penalty will be applied for each 24 hour delay and the Dropbox will be closed after 10 days.

Exams

Midterm exam is worth 60 points. They are to be completed in BrightSpace (D2L)before the due date indicated in the syllabus. Please do not wait until the last minute to take exams.

Online Discussions

Thirteen (13) online discussions are worth 65 points. You are expected to discuss given topics, post questions, or answer others' questions in BrightSpace (D2L)discussion forums.

Grading Policy (Total 355 points)

- Homework Assignments (13 × 10 pts = 130 pts)
- Midterm Exam (1@60 pts = 60 pts)
- Discussions (13@5pts = 65 pts)

- Project (100 pts)

Grading Scale

- A: 320 – 355 pts
- B: 284 – 319 pts
- C: 249 – 283 pts
- D: 213 – 248 pts
- F: fewer than 212 pts

Section 4 – Standard Course Policies

Attendance Policy:

The classroom experience is a vital part of college education. Interaction with instructors and other students is an important element of the learning process. Students are expected to attend all class sessions. Students who do not attend classes on a regular basis are subject to reassessment of financial aid eligibility. Students who earn a failing grade in a class due to excessive absenteeism may receive a grade of "FA." This grade will become a part of the students' permanent academic record.

Students whose number of absences is more than twice the number of class meetings per week may be assigned a failing grade for the course at the discretion of the instructor. Students who have more absences than the number of class meetings per week but less than twice the number of class meetings per week may be penalized at the discretion of the instructor. Students who have absences which are less than or equal to the number of class meetings per week will not be penalized.

Individual faculty members have the right to use the institutional policy exactly as is or to establish additional attendance policies and/or penalties. However, all faculty attendance 16 policies must be included in this section of the syllabus. Faculty are expected to maintain an attendance record for all classes.

Student Withdrawal Policy

Students who wish to withdraw from the College must complete the Withdrawal Form, obtaining the required signature from the advisor, and submitting it to the Office of the Registrar at the Macon campus or the administrative offices at other campuses. Withdrawal is not complete until all withdrawal procedures have been properly executed.

Policy on Academic Misconduct

Cheating and plagiarism are acts of academic dishonesty. They refer to the use of instructor’s versions of books, unauthorized notes, or otherwise securing help in a test; copying tests, assignments, reports, or term papers; representing the work of another as one's own; collaborating, without authority, with another student during an examination or in preparing academic work; or otherwise practicing scholastic dishonesty. Students caught cheating on any assignment or exam will be given an F for the course and are at risk of being dismissed from the college.

The MGSC Policy on Academic Misconduct is available at

http://www.mga.edu/student-affairs/docs/MGSC_Student_Handbook.pdf

This syllabus is provided for general guidance on course activities and expectations. The instructor reserves the right to modify the syllabus in response to changing student needs or pedagogical circumstances. Changes are announced in class and posted on the class Web pages.

Disability Accommodations

"Students seeking academic accommodations for a special need must contact Middle Georgia State College Office of Disability Services in Macon at (478) 471-2985 or in Cochran at (478) 934-3023. Students may also visit the Disability Services Office in room 266 of the Student Life Center on the Macon campus or in Sanford Hall on the Cochran campus."

Section 5 – Instructor-specific Policies

Homework Assignments

Homework assignments are typically hands-on coding for concepts that your instructor thinks are important. You can discuss with your classmates, but outcomes should be different.

Hands-on Project

The hands-on application development project requires some amount of time. Topics and details will be released in BrightSpace (D2L). You are recommended to work on the project diligently after it is released to submit the outcome on time.

Communicating with Instructor

There are five ways to communicate with me. They are face-to-face, MGA email, BrightSpace (D2L) email or discussion forms, and phone in the order of my preference. I will check the emails and discussion forums periodically and try to reply to your post or email as soon as I can.

Especially, when you email me using your Middle Georgia State College e-mail account, please make sure that your emails should have a meaningful subject line that reads “ITEC 3280-01B: Short description of the request.

Section 6 – Tentative Course Schedule and Outline

ITEC 3280-01 **As of 8/19/2015**

The schedule below contains class activities, assignments and deadlines. Note that the course schedule is "tentative" and subject to change based on student and/or pedagogical needs. All changes will be announced and posted on the course website.

Class/Date	*Activities*	*Notes/Due Dates*
Week 1 (Aug 17 – 23)	Introductions Syllabus Review Tools for developing client-side web applications Accessing Web Folders JavaScript – Introduction, Data Operations, Basic Input and Output http://itwebtutorials.mga.edu/js/chp1/default.aspx http://itwebtutorials.mga.edu/js/chp2/default.aspx	- Install required software - Assignment 1 – Due 8/27 - Discussion 1 – Due 8/27
Week 2 (Aug 24 – 30)	JavaScript – Basic Input and Output, Decision Making http://itwebtutorials.mga.edu/js/chp3/default.aspx http://itwebtutorials.mga.edu/js/chp4/default.aspx	- Assignment 2 – Due 9/3 - Discussion 2 – Due 9/3
Week 3 (Aug 31 – Sep 6)	JavaScript – Iterations and Arrays http://itwebtutorials.mga.edu/js/chp5/default.aspx http://itwebtutorials.mga.edu/js/chp6/default.aspx	- Assignment 3 – Due 9/10 - Discussion 3 – Due 9/10
Week 4 (Sep 7 – Sep 13)	JavaScript – Iterations and Arrays http://itwebtutorials.mga.edu/js/chp5/default.aspx http://itwebtutorials.mga.edu/js/chp6/default.aspx	- Assignment 4 – Due 9/17 - Discussion 4 – Due 9/17
Week 5 (Sep 14 – 20)	JavaScript – Browser Objects http://itwebtutorials.mga.edu/js/chp7/default.aspx	- Assignment 5 – Due 9/24 - Discussion 5 – Due 9/24
Week 6 (Sep 21 – 27)	JavaScript – Document Objects http://itwebtutorials.mga.edu/js/chp8/default.aspx	- Assignment 6 – Due 10/1 - Discussion 6 – Due 10/1

Week 7 (Sep 28 – Oct 4)	**Midterm Exam**	- Exam will be available in D2L from 10/3 to 10/5
Week 8 (Oct 5 – 11)	JavaScript – Forms, Dynamic Styles, Error Handling http://itwebtutorials.mga.edu/js/chp9/default.aspx http://itwebtutorials.mga.edu/js/chp10/default.aspx http://itwebtutorials.mga.edu/js/chp11/default.aspx	- Assignment 7 – Due 10/15 - Discussion 7 – Due 10/15
Week 9 (Oct 12 – 18)	XML, DTD, and Schemas http://itwebtutorials.mga.edu/xml/default.aspx	- Assignment 8 – Due 10/22 - Discussion 8 – Due 10/22
Week 10 (Oct 19 – 25)	PHP Basics http://itwebtutorials.mga.edu/php/chp1/default.aspx http://itwebtutorials.mga.edu/php/chp2/default.aspx http://itwebtutorials.mga.edu/php/chp3/default.aspx	- Assignment 9 – Due 10/29 - Discussion 9 – Due 10/29
Week 11 (Oct 26 – Nov 1)	PHP Control Statements http://itwebtutorials.mga.edu/php/chp4/default.aspx	- Assignment 10 – Due 11/5 - Discussion 10 – Due 11/5
Week 12 (Nov 2 – 8)	PHP Form Processing http://itwebtutorials.mga.edu/php/chp7/default.aspx	- Assignment 11 – Due 11/12 - Discussion 11 – Due 11/12
Week 13 (Nov 9 – 15)	PHP Database I http://itwebtutorials.mga.edu/php/chp9/default.aspx	- Assignment 12 – Due 11/19 - Discussion 12 – Due 11/19
Week 14 (Nov 16 – 22)	PHP Database II http://itwebtutorials.mga.edu/php/chp9/default.aspx	- Assignment 13 – Due 12/3 - Discussion 13 – Due 12/3
Week 15 (Nov 23 – 29)	**Thanksgiving Holidays – no class**	
Week 16 (11/30 – 12/6)	jQuery http://itwebtutorials.mga.edu/js/chp12/default.aspx	
Week 17 (12/7 –)	**Final Project**	- Final project due by Midnight, 12/11 (Fri)

Initial Proposal

Affordable Learning Georgia Textbook Transformation Grants
Round 2
Summer 2015, Fall 2015, Spring 2016
Proposal Form and Narrative

Please complete per inline instructions; the completed document is not to exceed four pages. The 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.

Institution Name(s)	Middle Georgia State College				
Team Members (Name, Title, Department, Institutions if different, and email address for each)	Dr. Kevin Floyd, Program Chair & Associate Professor of Information Technology, School of Information Technology, kevin.floyd@mga.edu Dr. Myungjae Kwak, Assistant Professor of Information Technology, School of Information Technology, myungjae.kwak@mga.edu				
Sponsor, Title, Department, Institution	Dr. Alex Koohang, Dean, School of Information Technology, Middle Georgia State College				
Course Names, Course Numbers and Semesters Offered (Summer 2015, Fall 2015, or Spring 2016)	ITEC 2380 Web Development (Summer, Fall, Spring) – 7 sections / year ITEC 3280 Web Programming (Fall, Spring) – 4 sections / year ITEC 4248 Web Development Environments (Fall) – 1 section / year				
Average Number of Students Per Course Section	30	**Number of Course Sections Affected by Implementation in Academic Year 2016**	**12 sections /year**	**Total Number of Students Affected by Implementation in Academic Year 2016**	360
Award Category (pick one)	☐ No-Cost-to-Students Learning Materials ☐ OpenStax Textbooks ☐ Course Pack Pilots ☒ Transformations-at-Scale				
List the original course materials for students (including	*ITEC 2380 – Web Development & Design Foundations with HTML 5 7th edition*			*$102.00 (210 students/year)*	

title, whether optional or required, & cost for each item)	*ITEC 3280 – Modern JavaScript Develop and Design* *ITEC 4248 – PHP and MySQL for Dynamic Websites* *jQuery and jQuery UI*	*$36.00* *(120 students/year)* *$27.00* *(30 students/year)* *$22.00* *(30 students/year)* ***Total Cost*** ***$27,210.00/year***	
Plan for Hosting Materials	☐ OpenStax CNX ☐ D2L ☐ LibGuides ☒ Other _Course materials will be hosted on a public webserver at Middle Georgia State College		
Projected Per Student Cost	**$76.00**	**Projected Per Student Savings (%)**	100

1. PROJECT GOALS

- *To develop a series of online web applications development course materials*
- *To reduce student costs associated with textbooks*
- *To develop online resources that can be used by students and even by professionals world-wide in IT or related fields*
- *To improve student learning by providing online tutorial videos and examples that the students can try by themselves*
- *To develop an online web applications development resource site that can continuously reflect fast evolving web technologies and the feedbacks from the users*

1.1 STATEMENT OF TRANSFORMATION

- *Describe the transformation*

  The purpose of this transformation is to develop a series of web-based web applications development course materials including tutorials and references covering the topics of HTML, CSS, JavaScript, PHP, MySQL database, and XML to replace existing four textbooks used in three ITEC courses at Middle Georgia State College. Since the materials will be web-based, they will be open and accessible to students and professionals world-wide and also can be easily updated to reflect fast evolving web development technologies.

- *Identify stakeholders affected by the transformation*

  The stakeholders affected by the transformation are primary IT students taking web applications development related courses in the Information Technology program at Middle Georgia State College. Since the materials will be open to public, any IT professional world-wide can be potentially affected by the transformation.

- *Describe the impact of this transformation on stakeholders and course success.*

  The transformation will impact on students by reducing costs associated with the textbooks currently required in three web applications development related ITEC courses. The transformation will develop a series of web-based web applications development course materials including tutorials and references that will replace the currently required textbooks. The materials will be accessible at no charge. Additionally, since the materials are completely web-based, they may be used by other institutions of higher education or by professionals world-wide.

  Most textbooks, including those currently used in our web development related courses, currently include materials/chapters not applicable or outdated. The materials will present more focused content that is specifically aligned with the course objectives and

student learning outcomes. In addition, more detailed examples, explanations, interactive features, and tutorial videos on important topics will be provided to support student learning greatly.

- *Category 4 only: Describe the transformative impact on the program, department, institutions, access institution, and/or multiple courses.*

  The transformation will initially impact on three web applications development related courses. Long term, the course materials will be continuously used and updated reflecting fast evolving web development technologies and also more tutorials and content will be added to the site to support additional courses. Since the materials will be accessible to anyone in the world, the content will likely bring recognition to the School and Institution.

1.2 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 stated in the course syllabi of the three web applications development related ITEC courses. While some of the course materials can be created by referring to the currently used textbooks, most of them will be produced by using publicly available resources since most of the content taught in the three ITEC courses are standard web development technologies maintained by non-profit organizations and open source foundations.

  The identified, selected, and re-created course materials will be officially adopted after the Curriculum Committee in the School of Information Technology at Middle Georgia State College thoroughly reviews and approves.

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

  Since the new course materials will be completely web-based, each topic included in the online course syllabi will be linked to a web page, which contains all the materials relevant to the topic. Also, each course web page will be designed based on learning by doing approach to include many examples, tutorials, and hands-on features that allow students to test their own codes/programs at the site.

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

  - *Dr. Kevin Floyd, as a subject matter expert and instructional designer, will identify and create new course materials and oversee the entire transformation process.*

- *Dr. Myungjae Kwak, as a subject matter expert and instructional designer, will create new course materials and develop hands-on features. Also he will set up and maintain a public/cloud server that houses the web site.*
- *Two student programmers, one editor, and one graphic designer will be hired to help to develop the online course materials site.*

- *The plan for providing open access to the new materials.*

  The new course materials will be housed in a public/cloud server and publicly available to students and any IT professionals in the world.

1.3 QUANTITATIVE AND QUALITATIVE MEASURES

- *Drop, Fail, and Withdraw (DFW) delta rate will be utilized to measure the student success quantitatively. Also, online survey will be given at the end of each semester to collect students' feedback. The feedback survey and faculty course evaluation results will be analyzed. Also, the site hosting course materials will be facilitated to allow the users to leave comments about the materials. Those comments will be also evaluated and used for the further enhancement.*

1.4 TIMELINE

- ***January 31*** *– Set up a public server and install/test necessary software*
- ***April 30*** *– Finish web site design and development and upload the course materials of ITEC 2380 (Web Development)*
- ***May 31*** *– Edit and upload the course materials of ITEC 3280 (Web Programming) and ITEC 4248 (Web Development Environments)*
- ***August 15*** *– Measure the student success for the ITEC 2380 (for summer semester)*
- ***December 20*** *– Measure the student success of the ITEC 3280 and ITEC4248 (for fall semester)*

1.5 BUDGET

- *Course release/overload - $10,000 (2 faculty x $5,000)*
- *Student programmers - $5,000 (2 x $2,500)*
- *Editor - $2,500*
- *Graphic designer - $2,000*
- *Server hosting cost - $8,400 (1 server x $350 x 24 months)*
- *Travel expense - $800*

- ***Total cost - $28,700***

1.6 SUSTAINABILITY PLAN

The new course materials will be continuously hosted at a public server and used in the three web development related courses in the future semesters. In addition, the course materials will updated periodically by two faculty in the School of Information Technology reflecting feedback from various sources and newly emerged web development technologies in the industry.

1.7 REFERENCES & ATTACHMENTS

References

- *Djenic, S., Krneta, R., & Mitic, J. (2011). Blended learning of programming in the internet age. IEEE Transactions on Education, 54(2), 247-254.*
- *Petrides, L., Jimes, C., Middleton-Detzner, C., Walling, J., & Weiss, S. (2011). Open textbook adoption and use: Implications for teachers and learners. Open learning, 26(1), 39-49.*
- Cavanaugh, T. (2011, March). *Integrating an Open Textbook into Undergraduate Teacher Education*. In *Society for Information Technology & Teacher Education International Conference* (Vol. 2011, No. 1, pp. 2372-2378).
- Chesser, W. D. (2011). Chapter 5: the e-textbook revolution. *Library technology reports*, *47*(8), 28-40.
- Murray, M. C., & Pérez, J. (2011). E-textbooks are coming: Are we ready. *Issues in Informing Science and Information Technology*, *8*, 49-60.
- Allen, N., & PIRG, S. (2010). A cover to cover solution: How open textbooks are the path to textbook affordability. *Student PIRGs*.
- Miller, B. N., & Ranum, D. L. (2012, July). Beyond PDF and ePub: toward an interactive textbook. In *Proceedings of the 17th ACM annual conference on Innovation and technology in computer science education* (pp. 150-155). ACM.
- *Jones, B. J., & Jackson, K. L. (2012). Reducing Textbook Costs: An Unconventional Approach. Business Education Innovation Journal VOLUME 4 NUMBER 2 December 2012, 66.*
- *Bergman, S. D. (2014). Open Source Textbooks: A Paradigm Derived from Open Source Software. Publishing Research Quarterly, 30(1), 1-10.*

Attachments

- *Attached: Letter of support from Dean of the School of Information Technology at Middle Georgia State College*

December 5, 2014

Affordable Learning Georgia
2500 Daniells Bridge Road
Building 300
Athens, Ga 30606

To: Whom It May Concern

Letter of Support for Affordable Learning Georgia Textbook Transformation Grants Proposal

I am very pleased to fully support the grant proposal entitled "Affordable Learning Georgia Textbook Transformation Grants" submitted by two faculty of the School of Information Technology at Middle Georgia State College. The proposed textbook transformation project is expected to improve student learning tremendously and reduce student costs greatly by providing web applications development course materials online at no cost. The new web applications development course materials will contain many beneficial learning instruments including tutorial videos and detailed code examples. Also, the online site hosting the course materials will be facilitated to allow the students to test their own codes at the site. Moreover, the course materials are expected to bring world-wide recognition not just to Middle Georgia State College but also to University Systems of Georgia since they are entirely web-based and publicly available to anyone in the world.

I truly believe that the proposed grant project is expected to make a significant contribution to the success of the USG textbook transformation grants. As the Dean of School of Information Technology at Middle Georgia State College, I strongly support this grant proposal and will make every effort to make all the required physical and human resources available to ensure the success of the project.

Please do not hesitate to let me know if you have any question.

Sincerely,

Alex Koohang, PhD
Dean, School of Information Technology
Peyton Anderson Eminent Scholar & Professor of Information Technology
Middle Georgia State College

Final Report

Affordable Learning Georgia Textbook Transformation Grants Final Report (Round 2)

Date: May 20, 2016

Grant Number: 126

Institution Name(s): Middle Georgia State University

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

- Dr. Kevin Floyd (kevin.floyd@mga.edu), School of Information Technology
- Dr. Myungjae Kwak (myungjae.kwak@mga.edu), School of Information Technology

Project Lead: Dr. Kevin Floyd

Course Name(s) and Course Numbers:

Web Development ITEC 2390
Web Programming ITEC 3280
Web Development Environments ITEC 4248

Semester Project Began: Spring 2015

Semester(s) of Implementation: Spring 2015, Fall 2015, and Spring 2016

Average Number of Students Per Course Section: 30

Number of Course Sections Affected by Implementation: 12 sections per year

Total Number of Students Affected by Implementation: 360 students per year

1. Narrative

Accomplishments

- Transformed twelve sections of three IT web development related courses which formerly used hard-copy textbooks to on-line textbooks and course materials.
- Developed a public web server which included all course materials, case studies, and interactive example codes.
- Used Middle Georgia State IT survey tool to gain student feedback.

Challenges

- Setting up a web server in campus and assigning a subdomain name to the website (http://itwebtutorials.mga.edu/).
- Designing and developing a website with proper theme and menus that contains all course materials and example case studies.
- Finding and reorganizing on-line resources which were similar to the hard-copy textbooks used in classes.
- Some students had difficulty "finding" materials on the website.
- Updating/maintaining the website is time consuming and demanding.
- Practice must be printed out, copied, and handed out during class for additional student practice sets.
- Raising students' expectations for a course after they learn that they are not required to buy a textbook for that course.

Transformative impacts on instruction:

- Generally positive acceptance by students.
- No serious issues were brought to faculty's attention from students after using on-line course materials.
- Once on-line textbook site was constructed and used, classes ran smoothly and instructors didn't need to worry about handing out course materials.

Transformative impacts on students and their performance

- Most of students liked the transition from hard-copy textbooks to the free on-line course materials since most of them already got used to digital resources and they can refer to the materials wherever and whenever they want.
- Some students expressed difficulty in locating right materials on the website.

Lessons Learned

- Many students have been waiting for online textbooks and resources.
- Need to continuously update the course materials since web development technologies are evolving/changing fast.
- Need more time to create various case studies for assignment.
- Need to provide more supporting materials for students' in-depth learning.
- Need to conduct more feedback surveys to determine issues students may have.

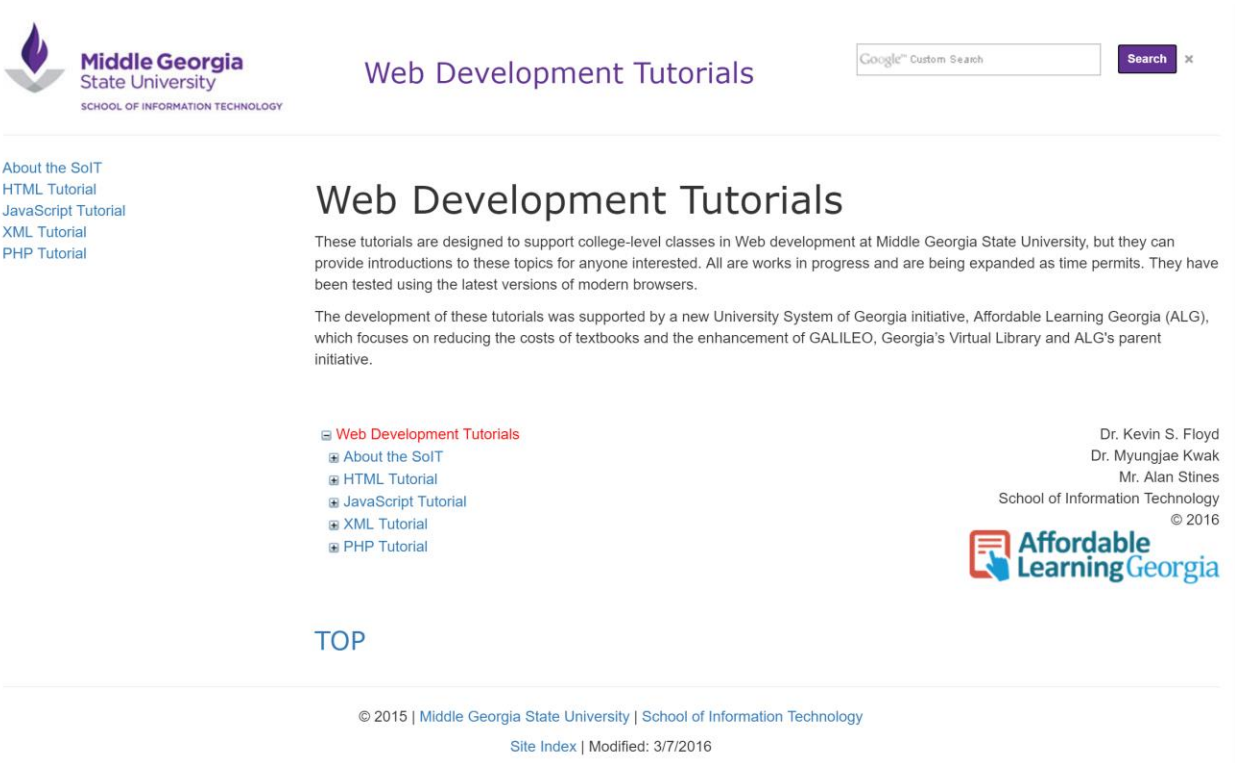
- Need to implement a way of receiving direct student feedback on specific course materials.

List of Used Online Resources

- www.w3schools.com
- www.php.net
- www.w3.org
- www.mysql.com
- jquery.com

List of Constructed Course Websites

- ITEC 2380 Web Development: http://itwebtutorials.mga.edu/html/default.aspx
- ITEC 3280 Web Programming: http://itwebtutorials.mga.edu/js/default.aspx, http://itwebtutorials.mga.edu/xml/default.aspx, and http://itwebtutorials.mga.edu/php/default.aspx
- ITEC 4248 Web Development Environments: http://itwebtutorials.mga.edu/php/default.aspx



2. Quotes

Student 1: *It is wonderful that there is a system dedicated to helping student get the textbooks they need for free. Paying tuition, plus textbooks on top of that really does suck. With the climbing prices of textbooks due to publishers making up for the falling market, it is very good to have a program willing to help students get the materials they need for a good price, or in this case, free. Students have enough to worry about without needing to shell out hundreds of extra dollars for texts, and this program is incredible for helping in the way that it does.*

Student 2: I think that the textbook could always have tutorial videos for certain classes. With web development it sometimes would have been helpful to be able to watch a web tutorial over the content. Other than that I believe that the textbook was integrated into the course perfectly.

It would be pretty awesome if there was a personalized link or something in D2L that "bookmarked" where you left off, and you can click on it to go straight to the section you were in middle of reading. (I used the IT Web Tutorials for initially learning the information and also for reference when actually creating webpages.)

Student 3: Thank you! It was such a great resource and I didn't feel any lacking about not having a "real" textbook. If you had more tutorial textbooks that were of the same quality for more courses, I would be thrilled!

3. Quantitative and Qualitative Measures

3a. Overall Measurements

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: ___175_____

- Positive: __64___ % of ___50___ number of respondents
- Neutral: __26___ % of ___50___ number of respondents
- Negative: __10___ % of ___50___ 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?

Choose One:

- ___ Positive: Higher performance outcomes measured over previous semester(s)
- _X_ 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:

___20___% of students, out of a total __257___ 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. Narrative

Table 1 shows the rubrics (**number** and **percentage** of students) for the **Pass/Fail and Withdrawal (PFW)** for Web Development, Web Programming, and Web Development Environments courses.

Table 1. Courses, number of enrolled students, and pass/fail/withdrawal percentages

Courses	Semester & Year	# of Enrolled Students	Pass (%)	Fail (%)	Withdraw (%)
ITEC 2380 Web Development (Online Textbook: **Summer 2015 ~**)	Fall 2014	25	68.0	8.0	24.0
	Spring 2015	30	73.3	20.0	6.7
	Summer 2015 (Online Textbook)	24	75.0	20.8	4.2
	Fall 2015 (Online Textbook)	50	70.0	14.0	16.0
	Spring 2016 (Online Textbook)	58	77.6	8.6	13.8
ITEC 3280 Web Programming (Online Textbook: **Fall 2015~**)	Fall 2014	47	89.4	2.1	8.5
	Spring 2015	53	86.8	7.5	5.7
	Fall 2015 (Online Textbook)	60	86.7	6.7	6.7
	Spring 2016 (Online Textbook)	65	87.7	9.2	3.1
ITEC 4248 Web Development Environment (Online Textbook to be used **Fall 2016**)	Fall 2014	26	73.0	4.0	23.0
	Fall 2015	22	59.0	41.0	0.0

After analyzing student performance changes of ITEC 2380 (Web Development) and ITEC 3280 (Web Programming), we found that student performance for ITEC 2380 increased after online textbook was introduced and that student performance for ITEC 3280 remained the same.

In both the Fall 2014 and 2015, we did not use the online course materials website for ITEC 4248 (Web Development Environments). The website will be used for the ITEC 4248 in the Fall 2016.

4. Sustainability Plan

- We will continue to use the website for three web development related courses including Web Development, Web Programming, and Web Development Environments.
- We will continue to maintain and update the online course materials referring to textbooks and online resources.
- We will continue to gather students' feedback and enhance the course materials.

5. Future Plans

- We will consider adding content for emerging web development frameworks and technologies.
- We will consider creating content for other courses such as .NET and Java programming languages.
- We will create more case studies and tutorial videos so that students can learn by doing hands-on projects.
- We will consider publishing an article after analyzing students' feedback and performance.

6. Description of Photograph

- (left-right) Dr. Myungjae Kwak and Dr. Kevin Floyd