Application Details

Manage Application: ALG Textbook Transformation Grants Round 8

**Award Cycle:** Round 8

**Internal Submission Deadline:** Sunday, December 11, 2016

**Application Title:** 308

**Application ID:** #001313

**Submitter First Name:** Teresa

**Submitter Last Name:** Adams

**Submitter Title:** Associate Professor of Information Systems

**Submitter Email Address:** tadams40@gsu.edu

**Submitter Phone Number:** 678-570-5769

**Submitter Campus Role:** Proposal Investigator (Primary or additional)

**Applicant First Name:** Teresa

**Applicant Last Name:** Adams

**Applicant Email Address:** tadams40@gsu.edu

**Applicant Phone Number:** 678-570-5769

**Primary Appointment Title:** Associate Professor of Information Systems

**Institution Name(s):** Georgia State University- Perimeter College

**Submission Date:** Tuesday, December 13, 2016

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

- **Project Lead and Faculty Subject Matter Expert:** Teresa Adams, Associate Professor of Information Systems
tadams40@gsu.edu

- **Project Investigator and Faculty Subject Matter Expert:** Illiad Connally, Assistant Professor of Information Systems
iconnally@gsu.edu

Sponsor, (Name, Title, Department, Institution):
Dr. James Kahiga, Chair, Department of Business, Georgia State University - Perimeter College

Proposal Title: 308

Course Names, Course Numbers and Semesters Offered:

CIS 2010 (Formerly BISM 2601) Introduction to Information Systems

CIS 2010 is offered every semester including Fall, Spring and Summer at both Perimeter College and Georgia State University across six different campuses.

During the 2015-2016 academic year, Perimeter College offered approximately 24 sections of CIS 2010 during the Fall and Spring semester. Approximately 8 sections of CIS 2010 were offered by Perimeter College during the summer semester. The average enrollment per class was 23 students. CIS 2010 courses at Perimeter College are offered on-line and on-campus. On-campus sections of the CIS 2010 are taught in a computer classroom where students have ready access to computers during class.

During the 2015-2016 academic year, Georgia State University offered approximately 25 sections of CIS 2010 during the Fall and Spring semester. Approximately 8 sections of CIS 2010 were offered by Perimeter College during the summer semester. The average enrollment per class was 30 students. Currently, CIS 2010 courses at Georgia State University are offered in a lecture classroom without computer access for students.

Average Number of Students per Course Section: 23 student at PC 30 student at GSU

Number of Course Sections Affected by Implementation in Academic Year: 56 sections at PC 58 sections at GSU

Total Number of Students Affected by Implementation in Academic Year: 1,288 at PC 1,740 at GSU
List the original course materials for students (including title, whether optional or required, & cost for each item):

http://www.bkstr.com/ProductDisplay?urlRequestType=Base&catalogId=10001&categoryId=9604&productId=75616567&errorViewName=ProductDisplayErrorView&langId=-1&top_category=&parent_category_rn=&storeId=10292

Georgia State University currently required materials for CIS 2010: Intro to Information Systems by Rainer (w/WileyPLUS Learning Card Set) ISBN: 9781119231769 COST: $169.00MANDATORY: YESTEXTBOOK LINK:
http://www.bkstr.com/webapp/wcs/stores/servlet/CourseMaterialsResultsView?catalogId=10001&categoryId=9604&storeId=10489&langId=-1&campusId=263&programId=403&termId=100045097&divisionDisplayName=%20&departmentDisplayName=CIS&courseDisplayName=2010&sectionDisplayName=14032&demoKey=d&purpose=browse

Requested Amount of Funding: $10,800

Original per Student Cost: $115 for Perimeter College Students $169 for Georgia State University Students

Post-Proposal Projected Student Cost: $35 for Perimeter College & Georgia State University Students

Projected Per Student Savings: $80 for Perimeter College Students $134 for Georgia State University Students

Projected Total Annual Student Savings: $103 for Perimeter College Students $233 for Georgia State University Students

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

Brightspace/D2L: The state-wide adopted learning management system, Brightspace (formerly D2L) will serve as the main delivery platform for CIS 2010. Brightspace provides a common interface familiar to many students. A course interface within Brightspace can be easily customized via widgets to integrate a variety of publisher and vendor applications.
Course Content:

**Creative Commons License (CCL) Textbook:** Adoption and adaptation of a "creative common license" textbook will be used as the basis for disseminating Information System concept and theory. CCL materials are free and provide the greatest latitude for using the material. Materials licensed as CCL may be used in any way a user likes including to create new works as long as the material originated by the creator is properly credited. This type of license is recommended for dissemination and use of licensed materials to large audiences.

**Online Data Analytics Courses:**

**DataCamp.Com:** The DataCamp.com offers a unique interactive platform for teaching data science and analytic tools via a browser environment. The website features several best-in-class courses on topics identified for inclusion in the "newly revised" CIS 2010 course such as R programming. DataCamp courses are 100% experiential and extremely effective. In addition to ready-made courses, DataCamp offers course authoring tools that allow instructors to create and/or modify their own interactive technology skills courses. Additionally, instructors can integrated student grades into D2L as DataCamp provides integration with learning management systems such as D2L. DataCamp is available to students initially for free followed by a nominal fee for as low as $9 per month. The monthly fee is largely optional and includes the ability to earn marketable certificates in a variety of data science courses.

**Lynda.Com Courses:** Lynda.com, the online video tutorial site, is available at no charge to Georgia State University and Perimeter College students, faculty, and staff. Lynda.com offers tutorials on analytic tools such as Excel and Tableau which are topics that have been incorporated into the newly modified CIS 2010. Lynda.Com lessons will be analyzed and incorporated into D2L assignments through playlists and customized widgets.

**Proposal Category:** Specific Top 100 Undergraduate Courses

**Final Semester of Instruction:** Fall 2017

**Project Goals:**

The "Introduction to Information Systems" course is an undergraduate course required course for all business majors at both Perimeter College and Georgia State University. The course is known as CIS 2010 at Georgia State University and was formerly known as BISM 2601 at Perimeter College. As of Fall 2016, Perimeter College renamed BISM2601 to CIS 2010.

The objective of CIS 2010 is to familiarize students with information system theory. In addition, students have traditionally received rudimental exposure to the applications used in business including enterprise applications, spreadsheets and databases.

Upon the merger of Perimeter College with Georgia State University, the CIS discipline at both
institutions were asked to come up with a cohesive course revision to CIS 2010 which entailed
greater problem solving and data analytic skills. These new competencies are to be
incorporated into all CIS 2010 courses by Fall of 2017 through the use of analytical
applications such as Excel, Tableau and the R programming language.

The more "analytical approach" to CIS 2010 presents many challenges the biggest of which is
a suitable textbook. At present, there is no one textbook that adequately addresses
"Information Systems" concepts AND the analytical tools to be covered in the newly, revised
CIS 2010 course (Excel, R Programming, Tableau).

Currently, CIS 2010 students are required an "Information Systems" concept textbook for 119 to
$169 which includes a "registration code" to the publisher's copyrighted tools and websites.
Students unable to afford a new textbook and who's s professor require they access a
publisher's tools often find themselves in an untenable financial position as used textbooks
almost always lack a valid publisher registration code.

Given the "Information System" textbook costs well over a $100, any attempt to bundle the
concepts book with other suitable texts on Excel, Tableau or R programming would likely
prove extremely cost prohibitive for students. Yet a complex topic such as the R programming
requires well delineated instruction in order to ensure student success.

Hence our primary goals is to compile high quality teaching materials from open-access and
low cost sources that meet the specified course outcomes. In so doing, other goals we wish to
meet include:

- Provide low-cost learning materials to students in electronic and printable format.
- Ensure the pedagogy used aligns with the common course outline.
- Emphasize current technology through online resources and visualized media.
- Measure and compare student performance as to assess success of learning objectives.
- Emphasize hands-on experiences that provide students with practical analytical skills and
  knowledge.

**Statement of Transformation:**

A comprehensive "Introduction to Information Systems" course will be developed to provide
students with an experiential understanding of Information Systems and data analytics in
business. The content will be delivered via Brightspace/D2L utilizing open content enhanced
by interactive, hands-on assignments, engaging discussions and integrated assessments.
These elements will be designed to enhance learning outcomes as well as the student learning
experience.

Stakeholders include students, instructors and businesses.
Students will benefit the most from this project as they will receive an up-to-date and in-depth understanding of the emerging technology trends in business. They will also achieve practical, hands-on skills utilizing data analytics tools commonly used in business.

Instructors teaching the Introduction to Information Systems course will also benefit by having access to comprehensive content and ready-to-teach materials.

Businesses and society will also reap the benefits of students able to thinking critically and analytically.

**Transformation Action Plan:**

- Review CCL textbook materials and choose the relevant, high quality content
- Review Excel, R programming and Tableau tutorials and online courses for relevancy & quality
- Organize content for each of the course outcomes into course modules
- Develop course modules in Brightspace/D2L
- Integrate external content into Brightspace/D2L
- Develop presentation, assignments, test banks, and exercises into D2L course

**Quantitative & Qualitative Measures:** A study analyzing student performance on graded course content including assignments, quizzes, and exams will be conducted and compared to previous course sections as well as sections not utilizing the integrated version of the course. An anonymous survey of students perceived learning experience will be conducted via an online survey. Questions will be composed to analyze and validate the learning satisfaction and effectiveness of the course. The survey outcomes will be compared to surveys given to participants in sections not piloting the integrated course. Faculty will also be asked to complete a survey regarding the ease of use, accuracy, quality and appropriateness of the material.

**Timeline:**

- Spring Semester 2017
  1. Adopt CCL textbook
  2. Adapt & Modify CCL textbook
  3. Adapt DataCamp course modules
  4. Create Brightspace/D2L Course Template
Summer Semester 2017

1. Train Instructors
2. Pilot Course during Summer Sections
3. Assess Course Outcomes
4. Review & Modify Course Content

Fall Semester 2017

1. Final Course Rollout & Delivery

Budget:

Part A: Course Overload Compensation - $10,000
The overload compensation is for the time and effort spent on developing and redesigning the transformed courses utilizing Brightspace/D2L, CCL adopted textbook, DataCamp courses and Lynda.com courses.

Teresa Adams, Project Lead and Faculty Subject Matter Expert: $5,000 for overload compensation in 2016-2017 academic year.
Illiad Connally, Faculty Subject Matter Expert: $5,000 for overload compensation in 2016-2017 academic year.

Part B: Training/ Travel - $800

ALG Project Training travel for two team members, Teresa Adams and Illiad Connally to meet and train with DataCamp Developers.

Total Budget: $10,800

Sustainability Plan:

The sustainability plan is to develop the course structure and content for CIS 2010 during the Spring of 2017. The course will be piloted in two on-line sections as well as two on-campus sections of CIS 2010 during the Summer semester of 2017. Modifications to the course shall be implemented prior to Fall Semester 2017.
December 10, 2016

Dear Affordable Learning Grant Committee:

I am writing in support of a grant proposal for the ALG Textbook Transformation Grant. The grant is being submitted to develop course content for the course: CIS 2010 Introduction to Information System. The principle investigator and key personnel are working on a no-cost textbook for the course and wish to further their work with refined content and conversion to the iCollege/D2L Learning Management System. The grant amount of $10,800 will be utilized for course release time requested by each person and expenses related to the content development, the licensing and the purchase of media content.

Thank you for reviewing the enclosed grant. My colleagues and I look forward to working with you.

Sincerely,

M. J. Kahiga, Ph.D.
Department Chair
Business/ Kinesiology & Health/Sign Language Interpreter Training/Dental Hygiene
Focus and Motivation:
This course develops the digital competencies necessary to apply the power of emerging digital technologies for business and society. The course provides 1) a functional understanding of digital technologies, 2) essentials of programming logic, 3) data management, analysis, visualization and interpretation skills, and 4) the ability to combine and apply digital technologies for desired business outcomes and societal impacts.

Digital technologies are undergoing rapid, concurrent and complementary developments affecting software, hardware and internet access technologies. In addition, computer tools and techniques favored by business change rapidly as innovation shifts from functional area systems to eBusiness and networked communities, to social computing, analytics and Internet of Things. This course will engage students in spreadsheets, statistical computing environments and visualization tools for hands-on learning of digital building blocks that innovators use when addressing business problems.

Computer Skills Prerequisites
Although there are no course prerequisites for CIS2010, you are responsible for having the computing prerequisite skills listed. They will not be taught in class. Detailed descriptions of the computer skills can be found in the course catalog.
- CSP 1: Basic Micro computing Skills
- CSP 2: Basic Micro computing Spreadsheet Skills
- CSP 7: Basic Internet Usage

Description and Learning Objectives:
Upon successful completion of the course students will:

1. Implement and use personal, local and cloud based digital applications and develop the ability to explore applications independently.
2. Demonstrate basic programming logic portable to different software environments and business application development.
3. Apply data management tools to organize data hierarchies, establish relationships, and scrutinize data quality needed for information processing and analysis.
4. Evaluate characteristics and applications of structured and unstructured data.
5. Apply programming logic and analytical tools for data mining and visualization.
6. Analyze how enterprise information systems are applied to automate and innovate business processes and operation.
7. Identify opportunities for transforming long standing business practices.
8. Analyze how to leverage digital technologies for transforming communication, coordination, collaboration, problem solving, and decision making.
9. Demonstrate knowledge and skills to manage and ensure confidentiality, integrity and availability of digital assets.
10. Evaluate how digitization creates new opportunities for innovation while simultaneously safeguarding against new environmental, ethical, security and privacy risks.

Assumptions: 1) technology will be in the hands of students, 2) real-time instruction (including face-to-face for large sections) will be employed for developing competency with the technologies, 3) the CIS dept. may adjust to different tools/technologies as tools, vendor relationships and computing devices in the hands of students evolve over time. This syllabus is not a commitment to use specific tools when developing tacit knowledge associated with these learning objectives.
CIS 2010-001
Introduction To Information Systems

Week 1 - Completion Date: 6/16/16
- Complete iCollege Policy Quiz
- Read Course Syllabus
- Read Course FAQs
- Run the iCollege System Checker
- Complete Course Overview Quiz
- Read Information Systems Textbook - Chapter 1
- View Information Systems Textbook - Chapter 1
- Complete Vocabulary Matching - Chapter 1
- Read & Reply to Chapter 1 Discussion

Week 2 - Completion Date: 6/23/17

Week 3 - Completion Date: 6/30/17

Week 4 - Completion Date: 07/07/17

Week 5 - Completion Date: 07/14/17

Week 6 - Completion Date: 07/21/17

Week 7 - Completion Date: 07/28/17

Watch: Chapter 1 Lecture
Download: Right Click and Save As

Weekly Poll
Do you think hacking of the DNC by the Russians affected the outcome of the presidential election?
- Yes
- No

Technology Twitter Feed
Round out your knowledge to help your #analytics project succeed. Hit the library. utm.io/2h50a64 @AIAnalytics

Tweets by @CIOMagazine

Proposed DataCamp Lessons On "R"

Introduction to R
In this introduction to R, you will master the basics of this beautiful open-source language, Inc... Learn More
Start Course

Importing Data in R (Part 1)
Importing data into R to start your analyses; it should be the easiest step. Unfortunately, this... Learn More
Start Course

Cleaning Data in R
It’s commonly said that data scientists spend 80% of their time cleaning and manipulating data and... Learn More
Start Course

Writing Functions in R
Functions are a fundamental building block of the R language. You’ve probably used dozens (or even... Learn More
Start Course

Importing Data in R (Part 2)
In this second course on importing data in R, you will take a deeper dive into the wide range of... Learn More
Start Course

Importing & Cleaning Data in R: Case Studies
Running exciting analyses on interesting datasets is the dream of every data scientist, but first... Learn More
Start Course

12 of 26
Proposed Lynda.Com Tutorials

**Statistics with Excel Part One** with Joseph Schmuller
Learn statistics. Professor Joseph Schmuller teaches the fundamentals of descriptive statistics and inferential statistics using Microsoft Excel.

3h 45m  Appropriate for all  Views 383,254  Sep 27, 2016

**Statistics with Excel Part Two** with Joseph Schmuller
Learn how to use statistics concepts and tools (including functions, 3D maps, and ANOVA) to perform data analysis in Microsoft Excel.

1h 59m  Beginner  Views 39,926  Jun 02, 2016

**Data Modeling with Excel Power Pivot** with Ron Davis
Explore all the steps for data modeling with Excel’s Power Pivot plugin—adding data sources, setting up relationships, and adding hierarchies—and discover the power of DAX expressions.

1h 15m  Intermediate  Views 112,535  Nov 18, 2014

**Excel Data-Mining Fundamentals** with Ron Davis
Learn how to use Excel and Excel SQL Server Analysis Services to perform basic data mining and analysis.

1h 28m  Intermediate  Views 143,374  Nov 14, 2014

**R for Excel Users** with Conrad Carlberg
Update your data science skills by learning R. Learn how common data analysis and statistics operations are run in Excel vs. R and how to move data back and forth between each program.

1h 28m  Intermediate  Views 90,957  Aug 08, 2016

**Tableau 10 Essential Training** with Curt Frye
Learn everything you need to know to analyze and display data using Tableau Desktop—and make better, more data-driven decisions for your company.

4h 22m  Appropriate for all  Views 112,673  Oct 13, 2016