Affordable Learning Georgia Textbook Transformation Grants
Proposal Form

Please complete per inline instructions; completed form not to exceed four pages.

Institution Name	Georgia College & State University		
Team Members (Name, Title, Department and email address for each)	Marcela Chiorescu, Assistant Professor, Mathematics, marcela.chiorescu@gcsu.edu Jenny Harris, User Engagement Librarian & Assessment Coordinator, Ina Dillard Russell Library, jennifer.harris@gcsu.edu		
Sponsor, Title, Department	Kelli Brown, Provost, Academic Affairs		
Course Name, Course Number and Semester Offered (Spring 2015 Required)	College Algebra, MATH 1111, Spring 2015, Fall 2015		
Average Number of Students in the Course	38	**Number Course sessions per Academic year**	16
Award Category (pick one)	☒ No-Cost-to-Students Learning Materials ☐ OpenStax Textbooks ☐ Course Pack Pilots		
List the original course materials for students (including title, whether optional or required, & cost for each item)	*[Material Title, opt|req]* *MyMathLab access code for College Algebra & Trigonometry, fifth edition, by Lial and others (required)*	*[Cost]* *$114/student* ***$69,312/annually***	
Projected Per Student Cost	$27.95	**Projected Per Student Savings (%)**	75%

1. PROJECT GOALS

The USG's Affordable Learning Georgia initiative provides a unique opportunity to equip students with low-cost options to excel in their academics without the burden of costly textbooks. The main goal of this project is to promote affordable, high quality instructional resources fostering student success in Math 1111 College Algebra at Georgia College, which falls under the Top 50 USG Lower-Division Courses. Subsequently, this project serves to increase retention and progression in the course and raise awareness to students regarding resources currently available to them, such as GALILEO.

1.1 STATEMENT OF PROBLEM

The MATH 1111 College Algebra course at Georgia College was introduced in Fall 2011 using the Emporium Model [1]. One of the goals of the College Algebra Emporium is to enhance the algebraic skills of our students so as to better prepare them for any subsequent mathematics courses they may take and can be used to satisfy the mathematics requirement in Core Area A. The course is offered every fall and spring, eight sections per term. Enrollments have been as follows:

Academic year 2011-2012: **511**
Academic year 2012-2013: **535**
Academic year 2013-2014: **593**

Since we piloted College Algebra Emporium in fall 2011 we analyze the grade rates every year.

	A/B	**D/F**	**Withdraw**
AY 11-12	55%	24%	13%
AY 12-13	67%	20%	9%
AY 13-14	71%	16%	7%

The rates for the first three years suggest that the course appears to be having a very positive effect on student success in freshman-level math. The problem is that the required material is too expensive and is a burden for students. The course requires students to purchase a MyMathLab access code that gives access to an e-book version of *College Algebra & Trigonometry*, 5th edition by Lial and others, and online assignments (homework, quizzes and tests). The Georgia College bookstore's price of this access code is $**114**. We had students dropping from the course because they could not afford to pay for the access code. Our goal as educators is to ensure students have the tools needed to succeed; not to penalize them for little or no access to resources. We propose the replacement of the currently required access code with an access code for WebAssign that cost only $**27.95** and can be supplemented with open educational resources**.** This will mean a **75%** savings for every student and a total of **$**52,318 savings annually. In addition to the savings, all of these materials will be accessible any time if the students need to refer back to them later.

1.2 TRANSFORMATION ACTION PLAN

In Spring 2015, Dr. Chiorescu is scheduled to teach four sections of Math 1111, about 152 students. The course requires students to purchase a MyMathLab access code that gives access to an e-book version of *College Algebra & Trigonometry*, 5th edition by Lial and others, and

online assignments (homework, quizzes and tests). The Georgia College bookstore's price of this access code is $114.

Dr. Chiorescu identified two open education resources, which can be used to replace the current materials:

1. *College Algebra*, 3rd edition by Carl Stitz and Jeff Zeager (listed under the American Institute of Mathematics Approved Open Textbooks: http://www.affordablelearninggeorgia.org/find_textbooks/alg_top_courses/) an electronic free book accessible here: http://www.stitz-zeager.com/

   This e-book can be packaged with access to an online instructional system, WebAssign, which provides access to online assignments generated from the exercises of the book. (www.webassign.net/features/textbooks/stitzca3/details.html)

2. *Schaum's Outline of Theory and Problems of College Algebra*, 2nd edition by Spiegel, Murray and others, an electronic book fully accessible through GALILEO (EBSCOhost).

The first textbook covers almost all the required concepts for College Algebra. The missing part is an in-detail review chapter, which can be found in the second textbook. One of our activities is to create a center of resources that map to the concepts covered in College Algebra. After we identify the resources, Dr. Chiorescu will create the online assignments in WebAssign (homework and quizzes). For the review chapter, Dr. Chiorescu found a variety of questions in Webassign, which are freely available to create assignments corresponding to each concept being covered.

College Algebra by Stitz and Zeager has some great ancillaries (http://www.stitz-zeager.com/ancillaries.html): power points for all chapters, checkpoint quizzes that have video solutions and a great formula summary sheet ready available. We are going to review this in detail and make use of them, if possible. The checkpoint quizzes will be assigned in class as an activity to engage the students, and the video solutions will be made available immediately following class.

Ms. Jenny Harris, User Engagement Librarian and Assessment Coordinator, will serve as an advisor to students seeking supplemental resources for MATH 1111 and will create a LibGuide (Library-Specific Springshare Product) that will serve as an easily accessible resource guide for any student interested in taking this course. The current library libguide for Math courses can be found at http://libguides.gcsu.edu/c.php?g=103599&p=672636.

Dr. Chiorescu will rewrite the syllabus after all the materials are adapted.

The replacement of the high cost required materials with reduced cost instructional resources

can make College Algebra an affordable and successful course at Georgia College. We plan to measure the qualitative impact of the materials adapted on student success by administrating reflective surveys at the end of semester. We will measure the quantitative metrics by comparing the grade rates of this term with the ones from previous terms and by collecting usage statistics of the MATH 1111 Libguide.

1.3 TIMELINE

September 29- October 31

- Review the e-textbooks and map the concepts and learning objectives of the course to the sections of the texts

November 3-14

- Create a LibGuide for the course
- Modify syllabus to reflect the changes
- Design a reflective survey for students in Qualtrics

November 17- December 12

- Create assignments in WebAssign

December 19:

- Mid-point status report

1.4 BUDGET

Dr. Chiorescu will receive summer pay totaling $5,000 salary and benefits. Ms. Harris will receive a contract addendum totaling $5,000 salary and benefits.

$800 is requested for registration and some travel for Dr. Chiorescu to attend the Online Learning Consortium International Conference 2014, October 29-31, 2014 (http://onlinelearningconsortium.org/conference/2014/aln/about). This conference will provide the latest information on best practices for online/hybrid courses. Dr. Chiorescu hopes to find out about open source software that can be used to replace WebAssign and offer a no-cost Math 1111 in the future.

Total: $10,800

1.5 SUSTAINABILITY PLAN

For Math 1111 we offer every year, 16 sections with about 38 students per section. Once the pilot is set up for spring 2015 it will be easily adaptable from term to term. It does not require much maintenance. Dr. Chiorescu will continue to explore open resources that may lead to a free replacement for WebAssign resulting in a no-cost course for the students.

1.6 REFERENCES & ATTACHMENTS

1. The Emporium Model: http://www.thencat.org/PlanRes/R2R_Model_Emp.htm

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September 5, 2014

Dear Review Board,

On behalf of Georgia College in Milledgeville, I am pleased to offer this letter of support for our institution's ***Affordable Learning Georgia*** Textbook Transformation grant application. Georgia College is requesting funding for the creation of an Open Textbook for a core college algebra course, the development of which will be spearheaded by mathematics faculty member Dr. Marcela Chiorescu. Each year, Georgia College provides 6,600 undergraduate and graduate students with an exceptional learning environment that extends beyond the classroom, with hands-on involvement with faculty research, community service, residential learning communities, study abroad, and internships. We are the only public institution named as a "College of Distinction" in Georgia for the 8th consecutive year, and our institution is regularly named as a "Best Southeastern College" by the Princeton Review, which places us in the top 25 percent of the nation's four-year colleges.

As Georgia's designated Public Liberal Arts University, our institution seeks to combine the education experience of private liberal arts colleges with the *affordability* of public higher education. In recent years, affordability has become more and more of a challenge for Georgia's students, especially with regard to the cost of textbooks. Though the College Board estimates that the average student attending a four-year public college spent $1,200 on books and supplies in 2012, Georgia College students spent an average of $1,350 on textbooks during the 2012-2013 academic year. As a growing body of literature suggests, no-cost learning materials are crucial to ensuring student retention and completion of courses. If Georgia College is to contribute to the additional 250,000 graduates needed to enter our state's growing workforce by 2020, it is imperative that we lower the cost of college for students through initiatives such as the ALG Textbook Transformation program.

Dr. Chiorescu's project will support the creation of a "low-cost-to-students" online textbook and supplemental material for the introductory College Algebra course *MATH 1111*, part of the core curriculum required for students at Georgia College. Some 600 students in sixteen course sections will benefit from an online version of this textbook, which normally retails for $114.00. This low-cost option of $27.95/student will be a huge step forward for increasing Georgia College's affordability and will pave the way for increased adoption of free and low-cost course materials. At this time there is no projected institutional expense for the development of the low-cost option. However, the Office of Academic Affairs will work with Dr. Chiorescu to implement the changes to the College Algebra course and provide support if needed. The Provost, along with the Office of Grants and Sponsored Projects, will ensure compliance with all State, Board of Regents, and institutional policies and procedures, should we receive funding.

Thank you for your favorable consideration of Georgia College's application. Please contact me should you have any questions regarding this project.

Best Regards,

Kelli Brown, PhD
Provost

Dr. Joe Mocnik
Director of Libraries