

**Affordable Learning Georgia Textbook Transformation Grants
Proposal Form**

Institution Name	University of North Georgia – Oconee Campus		
Team Members (Name, Title, Department and email address for each)	Mr. Michael Goodroe, M.Ed., Lecturer of Mathematics and Learning Support Liaison of Mathematics; michael.goodroe@ung.edu Mr. Berhanu Kidane, PhD, Assistant Professor of Mathematics; berhanu.kidane@ung.edu		
Sponsor, Title, Department	Mr. John Cruthirds, PhD, Department Chair of Mathematics, University of North Georgia; john.cruthirds@ung.edu		
Course Name, Course Number and Semester Offered (Spring 2015 Required)	Introductory Algebra; Math 0097; Fall, Spring, Summer Intermediate Algebra; Math 0099; Fall, Spring, Summer College Algebra; Math 1111; Fall, Spring, Summer		
Average Number of Students in the Course	30	Number Course sessions per Academic year	Math 0097: 4 Math 0099: 8 Math 1111: 28
Award Category (pick one)	<input checked="" type="checkbox"/> No-Cost-to-Students Learning Materials <input type="checkbox"/> OpenStax Textbooks <input type="checkbox"/> Course Pack Pilots		
List the original course materials for students (including title, whether optional or required, & cost for each item)	<i>[Material Title, opt req]</i> <u>Beginning & Intermediate Algebra</u> , Martin-Gay, 5 th Ed. Required <u>Algebra and Trigonometry</u> , Stewart, Redlin and Watson, 3 rd Ed. Required	<i>[Cost]</i> \$188.33(New) \$206.08(New) Total Cost = \$394 .41	
Projected Per Student Cost	<u>Beginning & Intermediate Algebra</u> \$188.33 <u>College Algebra</u> \$206.08	Projected Per Student Savings (%)	100%

1. PROJECT GOALS

1. To identify appropriate on-line textbook options, at no cost to students, which can be adopted and adapted for use in three Algebra courses: Introductory Algebra, Intermediate Algebra, and College Algebra at the University of North Georgia Oconee Campus.
2. To determine options which:
 - 2.1. Closely match the curriculum guidelines set forth for each course in the University of North Georgia Course Catalogue and individual course syllabi.
 - 2.2. Provide for varied and engaging practice problem sets so that students will be able to gain deeper understanding of the concepts presented in the classroom.
 - 2.3. Provide for an effective linkage between on campus tutoring and peer tutoring options.
3. To provide options which:
 - 3.1. Reduce student textbook overall cost while attending college.
 - 3.2. Works well with the current student online skills and Internet accessibility from various computer platforms.

1.1 STATEMENT OF PROBLEM

- *Describe the problem*

Increasingly, the cost of textbooks is rising for students, especially mathematics texts. At the same time, students typically use textbooks for the practice sets at the end of sections. Much of the conceptual material students acquire during course lectures. Additionally, there is greater use of technology in mathematics classrooms where traditional textbooks cannot stay as current as on-line materials.
- *Identify stakeholders affected by the problem*

Students are the primary stakeholders; however mathematics instructors, campus tutors and/or math lab staff, library staff, and IT staff are clearly major stakeholders as well.
- *Describe the impact of this problem on stakeholders and course success*

Lowering textbook costs for students while at the same time providing high quality materials with no or low-cost options have the benefit of reducing the financial burdens students face. If on-line options provide the same level of quality as do hardcopy textbooks, then course success for students can focus on instructors and student engagements.
- *Indicate the proposed solution and list a few key benefits*

We propose to adopt on-line Algebra texts and associated practice sets of problems from **Affordable Learning Georgia** and its associated links, such as Merlot. Certainly, the major benefit is the reduction of costs to students. However, having a textbook on-line allows students greater freedom to access their text anywhere with an Internet connection. Additionally, instruction can begin immediately without waiting for students to purchase their textbooks. For that matter, even within the classroom the textbook can be projected through classroom Smartboard technologies.

1.2 TRANSFORMATION ACTION PLAN

A. Expected Activities

- Identified courses: **Introductory/Intermediate/College Algebra**
- Comprehensive digital notes have been created and have been in use by the instructors thus far, which can be incorporated with Free Online Resources from **Affordable Learning Georgia** such as: eBooks from [Open Textbook Library](http://open.umn.edu/opentextbooks/) (<http://open.umn.edu/opentextbooks/>) and supporting tutorial from **MERLOT** (for example; [West Texas A&M Virtual Math Lab / College Algebra Tutorial](http://www.merlot.org/merlot/view.do?cid=12072)) will be employed
- Free web based internet resources like: **Khan academy** at: <http://www.khanacademy.org>; **Purplemath.com** at: <http://www.purplemath.com>; **YouTube** at: <http://www.youtube.com>; **Desmos graphing calculator** at: <https://www.desmos.com/calculator>; and **Google** at: <http://www.google.com>, will be used to support the class digital notes and on-line texts
- Hard Copies of the selected eBooks will be placed in the library for references.

B. Quantitative and qualitative measures of impact on student success and experience

Learning Objective Success Measures (Quantitative and Qualitative measures)

1. *Pass, Fail, Withdraw and Drop (PFWD) Rubrics (Quantitative)*

- **Spring 2013, Fall 2103 and Spring 2014 PFWD Rubric for College Algebra**

Course Text Book	Semester Year	Total No. Stud./class Registered	Pass %	Fail % A grade of D or less	Withdraw %	Drop %
College Algebra; Algebra and Trig. Stewart, Redlin and Watson, 3 rd ed.	Fall 2013					
	Spring 2014					
Beginning & Intermediate Algebra , Martin-Gay, 5 th Ed.	Fall 2013					
	Spring 2014					

- **Spring 2015 PFWD Rubric for College Algebra**

Course Text Book	Semester Year	Total No. Stud./class Registered	Pass %	Fail % A grade of D or less	Withdraw %	Drop %
College Algebra Free Online Resources	Spring 2015					
Beginning & Intermediate Algebra, Free Online Resources	Spring 2015					

2. *Students Overall Performance (Quantitative)*

- Percentage of Excellent A or Very good B grades
- Rubric for the PFWD in comparison to previous semesters

3. ***PFWD Expected Outcomes (Quantitative)***

- Percent pass greater than or equal to _____
- Percent fail less than or equal to _____
- Percent withdrawn strictly less than _____

4. ***Technological Competency (Survey feedback, Qualitative)***

- Internet skills, retrieving and managing information via technology
- Use available technology effectively and efficiently to locate, retrieve, and manage information

5. ***Student feedback through survey (end of semester)***

- Questionnaires reflecting qualitative measures using <http://www.surveymonkey.com>

1.3 TIMELINE

- Initial effort will be on selecting the appropriate on-line textbooks, which includes determining whether the textbook meets the stated curriculum goals and the objectives of the specific syllabi. To be completed by the end of November 2014.
- Development of simple survey of students opinions concerning purchasing and using a hardcopy textbook versus the use of an on-line text at no charge. This survey will be given to current students during the fall 2014 semester. A similar survey would then be given to students using the adopted on-line texts at the end of spring 2014.
- We plan to implement the use of on-line textbooks for Introductory and Intermediate Algebra using the same textbook and College Algebra will use a separate textbook starting the 2015 spring semester.

1.4 BUDGET

Material cost (Instructional Materials) \$250.00

Workshops and conferences \$150.00

Travel expenses \$400

Faculty additional time spent on preparation the material \$5,000/ faculty

1.5 SUSTAINABILITY PLAN

- Continue to offer Introductory, Intermediate, and College Algebra courses using on-line texts.
- Expand use of on-line texts to all 40 courses offered on the UNG Oconee campus with a projected student savings annually of \$140,00.00
- Expand the use of on-line texts to included Pre-Calculus, Calculus, and Statistics
- Continue to enhance current digital supporting materials for courses
- Explore development of course texts via OpenStax Textbooks

1.6 REFERENCES & ATTACHMENTS

PROPOSAL SUBMISSION: ALL PROPOSAL DOCUMENTS, REFERENCES, AND ATTACHMENTS SHOULD BE SUBMITTED IN A SINGLE EMAIL TO ALG@GATECH.EDU BY 5:00 PM, EST, SEPTEMBER 8, 2014.



September 3, 2014

Affordable Learning Textbook Transformation Grant
Review Committee

Dear Committee Members:

I am writing this letter in support of the proposal being submitted to you by Professors Michael Goodroe and Berhanu Kidane from my department. I am in full support of this proposal because I believe the proposal has strong merit and because Professors Goodroe and Kidane are talented faculty members who are well qualified to accomplish the goals of the proposal.

Michael and Berhanu both have significant experience teaching the courses that are targeted in the proposal. I am excited at the potential financial savings our students could experience, and I intend to lend full departmental support for the work of this proposal. Since we teach multiple sections of these courses every semester, including summer, the potential sustainability of the project will not be a concern. The expansion of the project to other sections of these classes on the Oconee campus and on our other three campuses can be accomplished by working through our existing departmental Curriculum Committee which has representation from faculty on all University of North Georgia campuses.

I am in full support of this proposal, and I hope that you will be able to give the proposal every possible consideration. I would be happy to comment further if you so like.

Sincerely,

John Cruthirds, Head
Department of Mathematics
john.cruthirds@ung.edu
706 864-1810