

**Affordable Learning Georgia Textbook Transformation Grants  
Round 2, Fall 2015  
Proposal Form and Narrative**

<b>Institution Name(s)</b>	<b>University of North Georgia – Oconee Campus</b>				
<b>Team Members</b> (Name, Title, Department, Institutions if different, and email address for each)	1) Mr. Michael Goodroe, M.Ed., Lecturer of Mathematics and Learning Support Liaison of Mathematics; <a href="mailto:michael.goodroe@ung.edu">michael.goodroe@ung.edu</a> 2) Mr. Berhanu Kidane, PhD, Assistant Professor of Mathematics; <a href="mailto:berhanu.kidane@ung.edu">berhanu.kidane@ung.edu</a> 3) Mr. Julian Allagan, PhD, Associate Professor of Mathematics; <a href="mailto:julian.allagan@ung.edu">julian.allagan@ung.edu</a> 4) Mr. John Williams, Med, eLearning and Media Services; <a href="mailto:John.williams@ung.edu">John.williams@ung.edu</a>				
<b>Sponsor, Title, Dept., Institution</b>	Mr. John Cruthirds, PhD, Department Chair of Mathematics, University of North Georgia; <a href="mailto:john.cruthirds@ung.edu">john.cruthirds@ung.edu</a>				
<b>Course Names, Course Numbers and Semesters Offered (Summer 2015, Fall 2015, or Spring 2016)</b>	Introductory Algebra; Math 0097; Fall 2015, Spring 2016, Summer 2016 Intermediate Algebra; Math 0099; Fall 2015, Spring 2016, Summer 2016 College Algebra; Math 1111; Fall 2015, Spring 2016, Summer 2016 Precalculus Math 1113; Fall 2015, Spring 2016, Summer 2016 Calculus 1 Math 1450; Fall 2015, Spring 2016, Summer 2016				
<b>Average Number of Students Per Course Section</b>	<b>30</b>	<b>Number of Course Sections Affected by Implementation in Academic Year 2016</b>	<b>28</b>	<b>Total Number of Students Affected by Implementation in Academic Year 2016</b>	<b>840</b>
<b>Award Category (pick one)</b>	<input type="checkbox"/> No-Cost-to-Students Learning Materials <input type="checkbox"/> OpenStax Textbooks <input type="checkbox"/> Course Pack Pilots <input checked="" type="checkbox"/> Transformations-at-Scale				
<b>List the original course materials for students (including title, whether optional or required, &amp; cost for each item)</b>	<i>Beginning &amp; Intermediate Algebra, Martin-Gay, 5<sup>th</sup> Ed. Required</i> <i>Algebra and Trigonometry, Stewart, Redlin and Watson, 3<sup>rd</sup> Ed. Required</i> <i>Calculus Early Transcendental Functions 6<sup>th</sup> Ed. Larson &amp; Edwards</i>		<b>\$188.33(New)</b>  <b>\$206.08(New)</b>  <b>\$211.20(New)</b>  <b>Total Cost = \$605.61</b>		
<b>Plan for Hosting Materials</b>	<input type="checkbox"/> <a href="#">OpenStax CNX</a> <input checked="" type="checkbox"/> D2L <input type="checkbox"/> <a href="#">Lib Guides</a> <input checked="" type="checkbox"/> Other: <a href="#">UNG Faculty Webpage</a>				
<b>Projected Per Student Cost</b>	<i>Beginning &amp; Intermediate Algebra, \$188.33</i> <i>College Algebra &amp; Precalculus, \$206.08</i> <i>Calculus, \$211.20</i>		<b>Projected Per Student Savings (%)</b>	100% 100% 100%	

## 1. PROJECT GOALS

- i) To provide lessons for five courses: Beginning and Intermediate Algebra, College Algebra, Precalculus and Calculus 1 at the University of North Georgia Oconee Campus beginning in the Fall of 2015, using the **Affordable Learning Georgia resources**, at no cost or minimum cost to students.
- ii) To determine options which closely match the curriculum guidelines set forth for each course in the University of North Georgia course catalogue or by individual instructors' course syllabi.

### 1.1 STATEMENT OF TRANSFORMATION

- **Describe the transformation**

- Transformations-at-Scale: In the fall of 2015 we plan to offer five core courses for 16 classes to students at the University of Georgia using the ALG Textbook Grant. These courses are offered at no cost or low cost options. The transformation will have a significant impact on student's text book costs.

- **Identify stakeholders affected by the transformation**

- 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 transformation 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

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

- We won the spring 2015 ALG text book transformation grant. This grant will be used for three algebra courses for 5 classes. The fall 2015 ALG grant application will help extend our spring 2015 program, and it will impact five courses and 28 classes
- Our experience with the spring 2015 ALG grant has inspired a number of colleagues to apply for the fall 2015 grant as they seek to apply this program to statistics courses on the local campus. As the new fall 2015 grant covers more courses, only one math course (MATH 2460) will be left uncovered on our campus. This will be equivalent to less than .01% of our students who might not benefit from this grant.

### 1.2 TRANSFORMATION ACTION PLAN

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

- Identified courses: Introductory, Intermediate and College Algebra, Precalculus, Calculus 1
- Comprehensive digital notes that have been created and have been used by the instructors thus far will be modified and incorporated into the Free Online Resources from **Affordable Learning Georgia**
- The content of other free web based Internet resources such as: **Khan Academy, YouTube, and Desmos Graphing Calculator** that have been used so far will be reviewed. We will select the sections or videos that best reflect the course objectives listed on the instructor's course syllabus. The links to the appropriate source will be made available on the instructor's website for a wider community use

- **The course and syllabus instructional design/redesign necessary for the transformation.**
  - Syllabi that have been in use for teaching the courses will be modified by the course instructors; textbook will not be required for these courses and a list of acceptable online free textbooks will be given in addition to other supplemental resources
- **The activities expected from each team member and their role(s): subject matter experts, instructional designer, librarian, instructor of record, et al.**
  - Each member/instructor has full responsibility for creating a web page, researching the appropriate online free textbooks and lists them for each course he/she will be teaching. Each team member is responsible for modifying his/her syllabi accordingly, and posts on his/her website other supplemental resources that are available free online.
  - John Williams: website design (help create faculty webpages), facilitate technical support on eLearning and media services
- **The plan for providing open access to the new materials.**
  - We propose to adopt on-line texts and associated practice sets of problems and tutorials from Affordable Learning Georgia. In addition to providing the links to the web pages, we make available the learning resources to UNG students online through Shared Classes Files or D2L, and the public UNG Faculty web pages

### 1.3 QUANTITATIVE AND QUALITATIVE MEASURES

#### Learning Objective Success Measures (Quantitative and Qualitative measures)

##### i) Pass, Fail, Withdraw and Drop (PFWD) Rubrics (Quantitative)

- **Spring 2014, Fall 2014 and Spring 2015 PFWD Rubric**

Course Text Book	Semester Year	Total No. Stud./class Registered	Pass %	Fail % A grade of D or less	Withdraw %	Drop %
Beginning & Inter. Algebra <i>Martin-Gay, 5<sup>th</sup> Ed.</i>	Spring 2014					
	Fall 2014					
College Algebra; Stewart, Redlin and Watson, 3 <sup>rd</sup> ed.	Spring 2014					
	Fall 2014					
Precalculus; Stewart, Redlin and Watson, 3 <sup>rd</sup> ed.	Spring 2014					
	Fall 2014					
Calculus I; <i>Larson &amp; Edwards 6<sup>th</sup> Ed.</i>	Fall 2014					
	Spring 2015					

- **Fall 2015 PFWD Rubrics**

- For fall 2015 semester a similar PFWD rubrics will be created and data will be collected and compared

##### ii) **Students Overall Performance (Quantitative)**

- Percentage of Excellent A or Very good B grades

##### iii) Detailed analysis of the rate of success in spring/fall 2014 (pre-grant) compared to that of spring fall 2015 (post-grant) **PFWD Expected Outcomes (Quantitative)**

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

iv) **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

v) **Student feedback through survey** (*end of semester*)

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

#### 1.4 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 spring 2015.
- Survey will be given to students based on the adopted on-line texts at the end of spring 2015 and a similar survey will be given by the end of fall 2015
- Adopt on line text textbooks for Precalculus and Calculus end of spring 2015 semester.

#### 1.5 BUDGET

- **Include Personnel & Projected Expenses as appropriate for the category.**
  - Material cost, survey-monkey gold plan \$300 annually
  - Travel, workshops and conferences \$800
  - Faculty/staff additional time spent on preparation of the material \$5,000/person

#### 1.6 SUSTAINABILITY PLAN

- **What is plan for offering the course in the future, including maintenance of course materials?**
  - Continue to offer Introductory, Intermediate, and College Algebra courses using on-line texts.
  - Expand use of on-line texts to all mathematics courses offered on the UNG Oconee campus with a conservative projected student savings annually of \$200,000 (See **Note** below)
  - Continue to enhance current digital support for all math courses
  - Explore development of course textbooks
  - Expand the program on a Department Level

#### 1.7 REFERENCES & ATTACHMENTS

**PROPOSAL SUBMISSION: ALL PROPOSAL DOCUMENTS, REFERENCES, AND ATTACHMENTS MUST BE SUBMITTED IN A SINGLE EMAIL TO [ALG@GATECH.EDU](mailto:ALG@GATECH.EDU).**

**DEADLINE FOR CATEGORIES 1-3: 5:00 PM, NOVEMBER 30, 2014**

**DEADLINE FOR CATEGORY 4: 5:00 PM, DECEMBER 8, 2014**

*Note:* Number of Math classes:  
Summer 2014, 12 classes  
Fall 2014, 46 classes  
Spring 2015, 43 classes

The annual total number of Math classes is about 100, if we assume 20 students per class and \$100 per math text. Total saving in math books is \$200,000. (This is a conservative estimate)



December 8, 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, Berhanu Kidane, and Julian Allagan from my department. I am in full support of this proposal because I believe the proposal has strong merit and because Professors Goodroe, Kidane, and Allagan are talented faculty members who are well qualified to accomplish the goals of the proposal.

Michael, Berhanu, and Julian all 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  
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