

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

<b>Institution Name(s)</b>	Columbus State University				
<b>Team Members</b> (Name, Title, Department, Institutions if different, and email address for each)	Richard Stephens, Ph.D., Professor of Mathematics, Department of Mathematics and Philosophy, <a href="mailto:stephens_richard2@columbusstate.edu">stephens_richard2@columbusstate.edu</a>  Alin Stancu, Ph.D., Associate Professor of Mathematics, Department of Mathematics and Philosophy, <a href="mailto:stancu_alin1@columbusstate.edu">stancu_alin1@columbusstate.edu</a>				
<b>Sponsor, Title, Department, Institution</b>	Minh Nguyen, Ph.D, Professor and Chair of the Department of Mathematics and Philosophy				
<b>Course Names, Course Numbers and Semesters Offered</b> (Summer 2015, Fall 2015, or Spring 2016)	Introductory Statistics, Stat 1127, Spring/Summer/Fall of each year				
<b>Average Number of Students Per Course Section</b>	40 per regular year  19 per summer	<b>Number of Course Sections Affected by Implementation in Academic Year 2016</b>	15 per regular year  4 per summer	<b>Total Number of Students Affected by Implementation in Academic Year 2016</b>	676
<b>Award Category</b> (pick one)	<input checked="" type="checkbox"/> No-Cost-to-Students Learning Materials <input type="checkbox"/> OpenStax Textbooks <input type="checkbox"/> Course Pack Pilots <input type="checkbox"/> Transformations-at-Scale				

<p>List the original course materials for students (including title, whether optional or required, &amp; cost for each item)</p>	<p>Essentials of Statistics (w/CD)  <b>Edition: 4<sup>th</sup></b>    <b>Author:</b> Triola  <b>ISBN:</b> 9780321641496  <b>Copyright Year:</b> 2011  <b>Publisher:</b> PEARSON EDUCATION    REQUIRED</p>	<table> <tr><td>BUY</td><td>NEW</td><td>\$169.75</td></tr> <tr><td>BUY</td><td>USED</td><td>\$127.50</td></tr> <tr><td>RENT</td><td>NEW</td><td>\$127.31</td></tr> <tr><td>RENT</td><td>USED</td><td>\$93.36</td></tr> <tr><td colspan="3"><b>Total Cost</b></td></tr> <tr><td colspan="3">\$63,111 - \$114,751</td></tr> </table>	BUY	NEW	\$169.75	BUY	USED	\$127.50	RENT	NEW	\$127.31	RENT	USED	\$93.36	<b>Total Cost</b>			\$63,111 - \$114,751		
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<p>Plan for Hosting Materials</p>	<input type="checkbox"/> <a href="#">OpenStax CNX</a> <input checked="" type="checkbox"/> D2L <input type="checkbox"/> <a href="#">LibGuides</a> <input type="checkbox"/> Other _____																			
<p>Projected Per Student Cost</p>	<p>ZERO DOLLARS</p>	<p>Projected Per Student Savings (%)</p>	<p>100%</p>																	

## **1. PROJECT GOALS**

To develop a no-cost textbook for Stat 1127 that will be considered by all departmental faculty members as complete, appropriate and highly readable.

### **1.1 STATEMENT OF TRANSFORMATION**

In January 2012, Dr. Stephens began utilizing OERs in several courses. He became the first ALG Featured Advocate.

[http://www.affordablelearninggeorgia.org/about/featured\\_advocate](http://www.affordablelearninggeorgia.org/about/featured_advocate)

Since that time, Dr. Stephens has provided 484 students with no-cost textbooks in Stat 1127. Upon selecting appropriate OER material, he has spent hundreds of hours reviewing and editing said material during and after each semester in order to make it easier to read and more understandable for his students.

In this course, many students postpone buying a big, expensive textbook. This results in them falling behind right away. Some students never obtain the required text. Also, they are very reluctant to study chapters that have 50 to 60 pages of reading material. (The current adopted text for our department is over 700 pages long.) Taking and organizing one's notes is a complicated task.

Stat 1127 requires coverage of certain core elements. However, the instructor has some flexibility in how those concepts are covered and what optional topics are included. Dr. Stephens has been the only CSU math instructor to use OER material in this course, thus, he has greatly customized the material to conform to his instructional strategy and delivery method. Hence, the number of textbook pages that a student must study is reduced by about 75%. Also, the student may easily print the material and take notes right on those pages.

To impact the students in all regular sections of Stat 1127 at CSU, the textbook must be seen as desirable by all instructors of this course. In order to accomplish this goal, the textbook needs to be expanded in such a way as to include all optional material and pedagogical items desired by all the other instructors of this course.

### **1.2 TRANSFORMATION ACTION PLAN**

The current edition of the material from which Dr. Stephens has constructed the no-cost textbook for his Stat 1127 classes may be found at <http://cnx.org:8888/content/col110522/latest/>.

This project will not require any change in the basic syllabus for this course. To facilitate any redesign that individual instructors may deem necessary, we will provide our finished product in various formats. ( Word, Latex, Adobe )

Dr. Stephens and Dr. Stancu will each interview department members who teach this course. We will gather and incorporate into the project all content requisites requested by each instructor. Dr. Stephens will head the production of the Word format version and Dr. Stancu will head the production of the Latex format version.

Dr. Stephens will serve as subject matter expert.

Dr. Stancu will serve as external reviewer. (He is external in the sense that he does not teach statistics.) This is a most crucial role in developing a product that is more understandable to the student reader than the typical textbook. The material must be presented in a way that is clear to anyone without expertise in the given area.

### **1.3 QUANTITATIVE AND QUALITATIVE MEASURES**

Utilization of OERs allows for complete control of the course material and how it is presented. To this end, the DFW rate for Dr. Stephens in Stat 1127 has gone from 48% prior to adoption of his current OER to 16% since the adoption of his current OER. On his CSU Course Evaluation forms, students regularly voice appreciation for the no-cost course textbook.

This type of data will be collected each semester from each instructor utilizing the textbook produced from this project. Statements and suggestions from the instructors will also be solicited each semester in order to make improvements to the material.

Dr. Brian Muse has agreed to use related OERs in Stat 1127 during Spring 2105. The above type of data will be collected from his course.

Our immediate project goal is to convince at least one other instructor to use the material from this project during Summer 2015 and at least two other instructors to do so during Fall 2015.

### **1.4 TIMELINE**

January 2015 – February 2015: Collect, organize and process information from Stat 1127 instructors concerning materials and pedagogy to be added to current OER no-cost textbook used by Dr. Stephens.

March 2015 – April 2015: Incorporate new material into current chapters, new chapters and appendices. Field test additional material within the second half of Honors Introductory Statistics Stat 1127H.

May 2015 – June 2015: Collect and study data. First status report.

July 2015: Revise textbook for use in Fall 2015

August 2015 – November 2015: Coordinate and support the use of the textbook in Fall semester sections of Stat1127

December 2015: Collect and study data. Revise textbook for use in Spring 2016. Final report.

### **1.5 BUDGET**

\$5000 – Salary for Dr. Stancu      \$5000 – Salary for Dr. Stephens      \$800 – Project travel

## **1.6 SUSTAINABILITY PLAN**

Stat 1127 is offered at CSU every semester. The textbook that will be the result of this project will be offered to instructors in formats that allow for modification to be done easily. If we are successful in our attempt to have this material adopted in all regular Stat 1127 sections, then we will begin working on adapting this material to the instructional design of online delivery.

## **1.7 REFERENCES & ATTACHMENTS**

The following individuals have agreed to provide letters of support for our application.

- 1) Minh Nguyen, Chair, Department of Mathematics and Philosophy
- 2) Patrick McHenry, Associate Dean, College of Letters and Sciences
- 3) Tom Hackett, Provost and Vice President of Academic Affairs
- 4) Mark Flynn, Dean of Libraries

**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: WE WERE UNABLE TO UTILIZE ALL OF THE SPACE ON PAGE TWO, RESULTING IN THIS PROPOSAL REQUIRING FIVE PAGES INSTEAD OF THE FOUR REQUESTED.



November 23, 2014

This letter is in support of the USG Affordable Learning Georgia Textbook Transformation proposal being submitted by Associate Professor Alin Stancu and Professor Richard Stephens. Dr. Stancu and Stephens have 35 years of teaching experience between them, thirteen of which have been at Columbus State University. They have a history of utilizing Open Education Resources. In particular, Dr. Stephens has been created his own textbook for Introductory Statistics from available OERs.

We offer at least 25 sections of Stat 1127 each year, including at least 5 online sections. The adoption of a customized OER textbook applied to the specific needs of our students would most likely improve retention rates and relieve some of their financial burden. This is an effort that is supported at all university levels.

The result of this project would be offered to other instructors in a variety of formats that allow for modifications to be done easily. This would be an important step towards the adoption of a common OER in all Stat 1127 sections.

Professor Minh Nguyen \_\_\_\_\_

A handwritten signature in black ink, appearing to be 'MN' or similar initials, written over a horizontal line.

Chair, Department of Mathematics and Philosophy



To: Affordable Learning Georgia Grant Program

From: Dr. Pat McHenry   
Professor and Associate Dean

Re: Grant Application for Statistics Learning Materials

Date: November 25, 2014

I am pleased to write in support of my colleagues Richard Stephens and Alin Stancu as they apply for an Affordable Learning Georgia grant to support a no-cost textbook option for students in Statistics. As a previous Interim Chair of the Department of Math and Philosophy, I can attest that it is in the department culture to be concerned about high textbook prices. Indeed, for the past several years, faculty have put several measures in place to reduce the financial burden on students, including adopting single textbooks to serve several courses in a series, negotiating with publishers for the lowest possible price, making sure that lower cost e-texts were available in the books they adopted, and working with the bookstore to allow student rentals. The pursuit of this grant is a natural progression in their efforts to control costs for students.

Drs. Stephens and Stancu's concerns about cost are appropriately balanced by concerns for student success. A free textbook is not really free if it puts a drag on productive grade rates. This is why this proposal includes extensive groundwork to select appropriate materials and an assessment phase to confirm the selected materials are equal or better than traditional published textbooks. Both Stephens and Stancu have the necessary statistical expertise to carry out this assessment.

This proposal, which engages in the essential work of making college more affordable and of assuring student success, has the full support of the dean's office.



TO: Affordable Learning Georgia Grant Program  
FROM: Mark W. Flynn, Dean of Libraries  
DATE: November 25, 2014

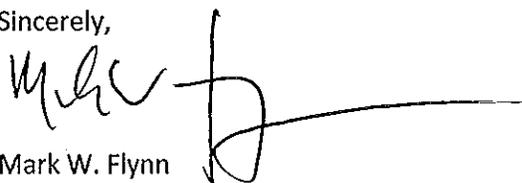
Dear ALG Colleagues,

I am writing in support of the ALG grant from Drs. Richard Stephens and Alan Stancu at Columbus State University. This grant will seek to replace a very expensive Introductory to Statistics text book with an open access alternative to be used in undergraduate statistics coursework here at CSU.

Drs. Stephens and Stancu are both faculty in teaching Mathematics at Columbus State. Dr. Stephens has been an early adopter of open texts and has more than three years' experience with teaching math using open educational resources. He has done more than anyone on the CSU campus to sustain access to free and low cost textbooks for our undergraduates. Through his efforts he has shown that utilizing open access resources can improve student performance in mathematics by making texts more accessible to low income students. He has also shared this experience and knowledge having presented at the USG Teaching and Learning Conference last Spring as part of the Affordable Learning Georgia panel. He is an ALG Featured Advocate and has also been a "champion" for open access texts willing to advocate among his faculty colleagues here at Columbus State.

Having this grant will allow CSU to demonstrate the benefit for use of open access texts to other faculty and courses within the Mathematics Department. I fully support this application to the Affordable Learning Georgia Grant program knowing Dr. Stephens dedication and commitment to sustaining an open access approach to course text adoption.

Sincerely,



Mark W. Flynn  
Dean of Libraries



November 24, 2014

TO: The Affordable Learning Georgia Grant Program

FROM: Tom Hackett, Professor  
Provost and Vice President for Academic Affairs

SUBJECT: Affordable Learning Georgia Grant Application

Please allow me to forward this letter of commitment for the proposed Columbus State University project related to a no-cost for-students alternative to the textbook currently utilized STAT 1127. Faculty in the Department of Mathematics in the College of Letters and Sciences plan to develop an open-source, open access textbook that students can use at no cost. Mathematics Professor Richard Stephens has already developed a basic text for this course but wishes to work with faculty in the mathematics department to expand the textbook "to include all optional material and teaching approaches desired by all the instructors of this course" (Stephens, 2014, Grant Proposal). It is our hope that Dr. Stephens and his team will receive support from the Affordable Learning Georgia Grant Program for this very important project.

As I have stated in previous letters supporting low and no-cost textbook alternatives, I am currently serving as a member of two state-level task forces on new models in learning. On both those task forces, and at virtually every meeting of Vice Presidents for Academic Affairs, discussion about the need low or no-cost textbook alternatives for students is on the agenda. However, though the state of Georgia has made headway in championing and developing these kinds of materials, much work remains to be done.

I am proud to say that the Department of Mathematics at Columbus State University is one of the leading departments in the state in the development of new learning models. As I outlined in a previous letter, professors in that department have pioneered increased routes to completion of mathematics requirements for students, competency-based models for online instruction, and regular reviews of analytics related to student performance. I applaud the work of my colleagues in these areas as they lead in the development of leading edge pedagogy.

cc: Dr. Houston Davis, Executive Vice Chancellor and Chief Academic Officer  
Dr. Timothy S. Mescon, President  
Dr. Dennis Rome, Dean, College of Letters and Sciences  
Dr. Minh Nguyen, Chair, Department of Mathematics  
Dr. Richard Stephens, Professor