## Application Details

## Manage Application: ALG Textbook Transformation Grants

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| **Award Cycle:** | Round 6 |
| **Internal Submission Deadline:** | Monday, August 1, 2016 |

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| **Application Title:** | 244 |
| **Application ID:** | #001136 |
| **Submitter First Name:** | Renva |
| **Submitter Last Name:** | Watterson |
| **Submitter Title:** | Vice President of Academic Affairs |
| **Submitter Email Address:** | rwatters@highlands.edu |
| **Submitter Phone Number:** | 706-802-5814 |
| **Submitter Campus Role:** | Provost / Academic Affairs Office |
| **Applicant First Name:** | Thomas |
| **Applicant Last Name:** | Harnden |
| **Applicant Email Address:** | tharnden@highlands.edu |
| **Applicant Phone Number:** | 404-660-0881 |
| **Primary Appointment Title:** | Professor of Biology |
| **Institution Name(s):** | Georgia Highlands College |
| **Submission Date:** | Monday, August 1, 2016 |

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

Katie Bridges, Instructional Designer, Division of eLearning, kbridges@highlands.edu

**Sponsor, (Name, Title, Department, Institution):**

Greg Ford, Ph.D., Dean of Natural Science and Physical Education, Georgia Highlands College

**Proposal Title:** 244

**Course Names, Course Numbers and Semesters Offered:**

BIOL 1020 Plants, Society, and the Environment

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| **Final Semester of Instruction:** | Spring 2017 |
| **Average Number of Students per Course Section:** | 30 |
| **Number of Course Sections Affected by Implementation in Academic Year:** | 6 |
| **Total Number of Students Affected by Implementation in Academic Year:** | 180 |
| **List the original course materials for students (including title, whether optional or required, & cost for each item):** | PLants and Society, levetin and McMahon, 7th Edition, McGraw Hill, ISBN 9780078023033, $222.33 |
| **Proposal Category:** | No-or-Low-Cost to Students Learning Materials |
| **Requested Amount of Funding:** | 10,800 |
| **Original per Student Cost:** | 222.33 |
| **Post-Proposal Projected Student Cost:** | 0 |
| **Projected Per Student Savings:** | 222.33 |
| **Projected Total Annual Student Savings:** | 40,019.40 |

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

All material will be located in a Lib-Guide specific for the class. It will be called "BIOL 1020 Plants, Society, and the Environment." Students will use D2L for the course and materials from the Lib-Guide will be embedded into D2L either directly or through the use hyperlinks.

**Project Goals:**

There are four primary goals related to this project:

Development of an ***informational repository*** in the form of a BIOL 1020 Lib-Guide containing free articles, electronic books, movies, animations, videos, newscasts, websites, and other educational resources - this repository will be used to create modules that support both science and course-specific learning objectives

Development of ***course modules*** that contain course-specific concepts using an inquiry based learning format that aligns with the course learning objectives - each modules will be designed to help students to develop and use analytical and critical lens regarding specific information situated in a contemporary society
Development of ***innovative exercises*** that use graphics, animations, and short videos - the diversity of exercises will aid students with various learning styles
Development of ***sustainable framework*** - a mandatory project referred to as a *Webquest* will be developed and implemented with a dual purpose of enabling a student to explore a unique course-related concept as well as use their references to continually expand the informational repository,

**Statement of Transformation:**

Describe the transformation

Resource transformation - rather than relying on a single course text, an informational repository of free resources materials will be identified and houses in a Lib-Guide
Course Transformation - the course will be concept-driven and module in nature rather than using a traditional chapter structure
Perspective transformation - students will explore various issues regarding plants and their role in today's society

Identify stakeholders affected by the transformation

Students - will save a minimum of $222.33 or more if there was a loan associated with the purchase of a traditional text
Faculty - due to the modular nature of the course and the potential plethora of resources housed in one location, faculty at any institution can teach the course from various perspectives yet still satisfy the course-specific learning objectives

Describe the impact of this transformation on the stakeholders and course success

In comparison to a static text, over time the informational repository will continually expand and include a compilation of very diverse educational materials. Traditional texts, on the other hand, will increase text costs if they include small updates in newer editions. Therefore, the savings of as a result of this project will increase over time.
This project offers an increased opportunity for student-student and student-faculty collaboration. The framework of this project enables increased collaboration and supports the notion of "Learning through Action."
Module learning will help students for focus on specific concepts more effectively and will nurture both self-interest and self-direction.

Describe the transformative impact on the course, program, department, institution, access institution, and/or multiple courses

In sum, this course will not only be cost effective but the informational repository will continually expand and enable any institution to teach the same course yet possibly offer a different lens or perspective regarding the concepts covered

**Transformation Action Plan:**

The identification, review, selection, and adoption/creation of the new course materials

The course contains eight overarching learning objectives, each are subdivided into a module containing 3-4 learning outcomes
The concepts in each module will be used to guide the adoption of resources for the informational repository
Biology faculty at Georgia Highlands College and at various colleges in the USG with a background in plant biology will be asked to review the informational repository regarding its depth and breadth of information and exercises as well as invite them to participate in adding more resources.

The course and syllabus instructional design/redesign necessary for the transformation

The course will be offered primarily online and the conceptual framework of the course will be translated into a distance-learning format
The Lib-guide for the course will be embedded in the course management system for easy access

The activities expected from each team member and their role(s): subject matter experts, instructional designer, librarian, instructor of record, et al.

Dr. Tom Harnden will serve as the SME, faculty of record, and Lib-Guide developer. Using the course learning objectives and module learning outcomes, he will gather various free resources that support those objectives and outcomes and organize them into a Lib-Guide
Ms. Katie Bridges will serve as the instructional designer. Using her background in distance education and graphic design, she will not only help develop interactive activities but will aid in the course design and delivery.

The plan for providing open access to the new materials

The informational repository will be housed in a Lib-Guide that is accessible to all USG faculty and students.

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| **Quantitative & Qualitative Measures:** | Quantitative measuresA course assessment containing objective questions tied directly to learning objectives and outcomes will be designed and implementedThere is an expectation set whereby 65% of the class will correctly answer each question on the course assessmentOutcomes of the assessment will be used to inform the course design as well as update the informational repositoryQualitative measuresA survey containing probing subjective questions will be created so as to characterize a student's perspective regarding the use of the alternative educational resources as well as the modular nature of the courseThe survey will include questions focusing on the various formats of the educational resources used (e.g., text, graphics, movies, pictures, etc...) and their effectivenessAnswers from the survey will help guide the redevelopment of the course and adoption of course materials |

**Timeline:**

Fall 2016

August through October - Dr. Tom Harnden will search for all possible educational resources that will support the learning objectives and outcomes. It is expected that the resources will be in various formats to support the myraid and of learning styles. Additionally, the information will be organized to fit the modular structure of the course. Ms. Katie Bridges will search for programs that will help in the designing of graphs, animations, and videos for the creation of exercises.
September through November - Dr. Tom Harnden will construct the Lib-Guide for the course using specific tabs for each module of the course and contents in each tab will be organized according to specific concepts covered. Ms. Katie Bridges, in consultation with Dr. Tom Harnden, will start developing exercises for specific concepts covered in the course.
October through November - Dr. Tom Harnden will construct the master course shell as well as develop both the quantitative and qualitative surveys as well as the course assessment. Ms. Katie Bridges will organize the master course shell to Quality Matters (QM) standards, load exercises into the master course shell and convert both assessments into the specific course management system format.

Spring 2017

Two sections of BIOL 1020 will be offered
Data from the assessments and surveys will be collected

Summer 2017

One section of BIOL 1020 will be offered
Dr. Tom Harnden and Ms. Katie Bridges will analyze the data from the Spring 2017 (and Summer 2017, time permitting) surveys and assessment
The analysis will the then be used to determine if any changes to the course framework needs to occur and if so, then those changes will be made prior to the next course offering in the Fall 2017

Fall 2017

Offer two sections of BIOL 1020 with any updates that were made
Collect and analyze the data from the course survey and assessment
Generate a final report summarizing the project's findings

**Budget:**

Dr. Tom Harnden, Professor of Biology - $5,000 for project work and $400 for travel

Ms. Katie Bridges, Instructional Designer, $5,000 for project work and $400 for travel

**Sustainability Plan:**

Dr. Tom Harnden will serve as faculty of record for BIOL 1020. In this role he will conduct an annual review of all aspects of the course including, but not limited to, the master course shell design and development, course Lib-Guide content and updates, and data collected from the course assessment and surveys. Furthermore, the intended Galileo WebQuest course project will help to continually expand the informational repository.

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# GEORGIA HIGHLANDS COLLEGE

FLOYD CAMPUS
3175 Cedartown Highway
Rome, GA 30161

VICE PRESIDENT
FOR ACADEMIC AFFAIRS


July 27, 2016

Dear ALG Grant Decision-Makers:

It is my pleasure to write in support of Dr. Tom Harnden and Ms. Katie Bridges who seek funding to innovate a curriculum and benefit the students at Georgia Highlands College as they do it. The proposed project represents tremendous opportunity for heightened teaching and learning experiences, reduced or no-cost text materials, and engaging studies in a vital area of science education.

As you will read, this is a sound, thorough proposal rooted in instructional design transformation, open source materials application, and modular course development. The work will generate new best practices in the field of plant biology, excellent library guides for extended understanding, as well as creative exercises and mechanisms for welcome sustainability over time. In addition, we will be able to save each student over $200 through open access to high-quality instructional materials, a significant difference for their already too-stretched college funds.

Please give this fine proposal your earnest consideration. At Georgia Highlands, we are so grateful for your backing of other worthwhile OER initiatives; I see this one as just as valuable and necessary to meet the dual mission of both access and success for our outstanding students.

Best regards,

Renva Watterson

Renva Watterson, Ed. D.

**Affordable Learning Georgia Textbook Transformation Grants**

**Rounds Six, Seven, and Eight**

**For Implementations beginning Fall Semester 2016**

**Running Through Fall Semester 2017**

# Proposal Form and Narrative

- *The proposal form and narrative .docx file is for offline drafting and review. Submitters must use the InfoReady Review online form for proposal submission.*
- ***Note: The only way to submit the proposal is through the online form in Georgia Tech's InfoReady Review at:***

  *https://gatech.infoready4.com/#competitionDetail/1752228*
- *If you are copying and pasting into InfoReady Review from this form, first convert the file to **plain text** and copy/paste from the plain text file.*
  - *In Word, go to File > Save As… > and change the file format to "Plain Text (.txt)."*
  - *Copy and paste from the .txt file.*
  - *Be sure to save both copies in case you are asked to resubmit.*
- *Microsoft Word Document formatting pasted into InfoReady Review will render the reviewer copy unreadable. **If you paste Word-formatted tables into InfoReady Review, you may be asked to resubmit your application if time permits.***
- *Italicized text is provided for your assistance; please do not keep the italicized text in your submitted proposal. Proposals that do not follow the instructions may be returned.*

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| **Submitter Name** | Renva Watterson, Ed.D |
| **Submitter Title** | Vice President of Academic Affairs |
| **Submitter Email** | rwatters@highlands.edu |

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| **Submitter Phone Number** | 706-802-5814 |
| **Submitter Campus Role** | Vice President of Academic Affairs |
| **Applicant Name** | Thomas Harnden, Ph.D. |
| **Applicant Email** | tharnden@highlands.edu |
| **Applicant Phone Number** | 678-872-8094 |
| **Primary Appointment Title** | Professor of Biology |
| **Institution Name(s)** | Georgia Highlands College |
| **Team Members** | Katie Bridges, Instructional Designer, Division of eLearning, Georgia Highlands College, Kbridges@highlands.edu |
| **Sponsor, Title, Department, Institution** | Greg Ford, Ph.D., Dean, Division of Natural Science and Physical Education, Georgia Highlands College, gford@highlands.edu |
| **Proposal Title** | First generation open resources driven flex path modular course |
| **Course Names, Course Numbers and Semesters Offered** | BIOL 1020 Plants, Society and the Environment |
| **Final Semester of** | Fall 2017 |

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| **Instruction** | | | | | |
| **Average Number of Students Per Course Section** | 30 | **Number of Course Sections Affected by Implementation in Academic Year** | 6 | **Total Number of Students Affected by Implementation in Academic Year** | 180 |
| **Award Category (pick one)** | ☐ **No-Cost-to-Students Learning Materials**<br>☐ OpenStax Textbooks<br>☐ Specific Top 50 Lower Division Courses | | | | |
| **List the original course materials for students (including title, whether optional or required, & cost for each item)** | Plants and Society<br>Estelle Levetin, The University of Tulsa<br>Karen McMahon, The University of Tulsa<br>ISBN 13: 9780078023033<br>7th Edition<br>$222.33 from McGraw-Hill | | | | |
| **Requested Amount of Funding** | $10,800 | | | | |
| **Original Per Student Cost** | $222.33 | | | | |
| **Post-Proposal Projected Per Student Cost** | $00.00 | | | | |
| **Projected Per Student Savings** | $222.33 | | | | |

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| **Projected Total Annual Student Savings** | $40,019.40 |
| **Creation and Hosting Platforms Used** | *All material will be located in a Lib-Guide specifically for the class. It will be called "BIOL 1020 Plants, Society and the Environment." Students will use D2L for the course and the lib-guide will be embedded into D2L.* |

## NARRATIVE

## 1.1 PROJECT GOALS

*List the goals you are trying to achieve with the transformation, including goals for student savings, student success, materials creation, and pedagogical transformation.*

*There are four primary goals related to this grant*

1. *Development of an **informational repository** in the form of a BIOL 1020 Lib-Guide containing free articles, electronic books, movies, newscasts, websites, and other educational resources - this repository will be used to create modules that support both science and course-specific learning objectives*

2. *Development of **course modules** that contain course-specific concepts using a question driven/inquiry based learning format and that align with the course learning objectives - each module will be designed to help students to develop and use an analytical and critical lens regarding scientific information communicated in a contemporary society.*

3. *Development of **innovative exercises** that use graphics and that are interactive in nature – these types of exercises will aid students with various learning styles*

4. *Development of **sustainability** - a mandatory project of a Galileo and/or web quest will be created that will have a dual purpose of both enabling a student to explore a unique course related concept but also will add to and expand the informational repository*

## 1.2 STATEMENT OF TRANSFORMATION

- ***Describe the transformation****.*
  - *Resource transformation – rather than relying on a single course text, an informational repository of free resource materials will be identified and housed in a lib-guide called "Plants, Society, and the Environment"*
  - *Course transformation – the course will be concept driven and modular in nature rather than a traditional text chapter structure*
  - *Perspective transformation – students will explore various issues regarding the cultivation and use of plants in today's society (e.g. monocultures, sustainability, economics, medicine, etc…).*
- ***Identify stakeholders affected by the transformation.***
  - *Students – will save a minimum of $222.33 or more depending upon whether they have to repay a loan for that purchase*
  - *Faculty – due to the modular nature of the course and the potential plethora of resources, faculty can teach the course from a unique perspective yet still satisfy the division an course-specific learning objectives*
- ***Describe the impact of this transformation on stakeholders and course success.***
  - *In comparison to a static text, over time the informational repository will continually expand which increase the diversity of educational information and resources*
  - *Module learning will help students to focus on specific concepts more effectively and will nurture both self-interest and self-directedness*
- ***Describe the transformative impact on the course, program, department, institutions, access institution, and/or multiple courses.***
  - *In sum, this course will not only be cost effective but the informational repository will continually expand and enable any instructor at any institution to teach the same course yet possibly offer a different lens or perspective regarding the concepts covered*

## 1.3 TRANSFORMATION ACTION PLAN

*Action plans must address:*

- ***The identification, review, selection, and adoption/adaptation/creation of the new course materials.***
  - *The course contains eight overarching learning objectives, each are subdivided into a module containing 3-4 specific learning objectives*
  - *The concepts in each module will be used to guide the adoption of resources for the information repository*
  - *Biology faculty at various colleges in the USG with a background in plant biology will be contacted and ask to serve as voluntary consultants regarding the depth and breadth of information for the course as well as reviewers of resources that would be added to the informational repository*
- ***The course and syllabus instructional design/redesign necessary for the transformation.***
  - *The course will be offered primarily online and the conceptual framework of the course will be translated into a distance-learning format*
  - *The lib-guide for the course will be embedded in the course management system for easy access*
- ***The activities expected from each team member and their role(s): subject matter experts, instructional designer, librarian, instructor of record, et al.***
  - *Dr. Tom Harnden will serve as the SME and lib-guide developer. Using the course and modular learning objectives, he will gather various free electronic resources that support those learning objective and then construct an organized course lib-guide*
  - *Ms. Katie Bridges will serve as an instructional designer. Using her background in distance education and graphic design, she will not only help develop interactive activities but will aid in course design and delivery.*
- ***The plan for providing open access to the new materials****.*
  - *The informational repository will be housed in a lib-guide and all updates will be provided on the lib-guides main page*

## 1.4 QUANTITATIVE AND QUALITATIVE MEASURES

- *The quantitative and qualitative measures of impact on student success and experience. The quantitative and qualitative data collected will be utilized in your final report as well as within ALG program communications.*
- ***Quantitative measures***
  - *A course assessment containing objective questions tied directly to major course and modular learning objectives will be designed and implemented*
  - *There is an expectation set whereby 65% of the class will correctly answer each question on the course assessment*
  - *Outcomes of the assessment will be used to inform course design and update the informational repository*
- ***Qualitative measures***
  - *A survey containing probing subjective questions will be created so as to characterize a student's perspective regarding the use of alternative educational resources*
  - *The survey will include questions focusing on the various formats of educational resources (e.g. text, pictures, graphs, movies, podcasts, etc…) used in the course as well as their effectiveness*
  - *Answers from the survey will help guide the continual development of the course and the adoption of educational resources*

## 1.5 TIMELINE

*This is a timeline of milestone dates for your transformation project through the end of the first semester the transformed course(s) is/are offered to students. Your interim reports will utilize this timeline to indicate if the project is on schedule. When submitting this timeline in InfoReady Review, do not copy and paste tables, as this will render the proposal unreadable.*

- *Timeline: Fall 2016 until Fall 2017*
- ***Fall 2016***
    - *August through October*
        - *Dr. Tom Harnden will search for all possible educational resources that will support both course and modular learning objectives. It is expected that the resources will be in various electronic formats to support a myriad of learning styles. Additionally, the information will be organized to fit the modular structure of the course.*
    - *September through November*
        - *Dr. Tom Harnden will construct the lib-guide for the course using specific tabs for each module of the course and each tab organized according to the various types of educational resources*
        - *Ms. Katie Bridges, in consultation with Dr. Tom Harnden, will develop various graphic driven exercises to support both course and modular learning objectives*
    - *October through December*
        - *Dr. Tom Harnden will construct the master course shell as well as develop both the quantitative assessment and qualitative survey*
        - *Ms. Katie Bridges will organize the master course shell to Quality Matters (QM) standards, load exercises into the master course shell, and convert both the assessment and survey into the course management format (i.e. convert the documents from a Word file into the format for D2L)*
- ***Spring 2017***
    - *Two sections of BIOL 1020 will be offered*
    - *Data from the assessment and survey will be collected*

- ***Summer 2017***
    - *One section of BIOL 1020 will be offered*
    - *Dr. Tom Harnden and Ms. Katie Bridges will analyze the data from the Spring 2017 assessment and survey in the beginning of the summer and at the end of the summer analyze the data from the Summer 2017 assessment and survey*
    - *The analysis will then be used to determine if any changes to the course, informational repository, assessment, and/or survey need to occur*
    - *If changes need to occur, then changes will be made prior to the third course offering in Fall 2017*
- ***Fall 2017***
    - *Offer 1-2 sections of BIOL 1020 with updates*
    - *Collect and analyze the data from the Fall 2017 assessment and survey*
    - *Generate final report summarizing study findings*

## 1.6 BUDGET

*Project members request the first level of funding ($10,800) appropriate for the transformation of a single course. Awarded monies will be distributed as follows:*

*Dr. Tom Harnden, Professor of Biology – $5000 + $400*
*Ms. Katie Bridges, Instructional Designer - $5000 + $400*

- *Single Course awards can provide up to $5000 for release time/overload/salary/replacement per team member for each of up to two team members for a maximum of $10,000 total plus $800 for overall project expenses, including travel for at least two team members to attend a required grant kick-off meeting.*

*When submitting the budget in InfoReady Review, do not copy and paste tables, as this will render the proposal unreadable.*

## 1.7 SUSTAINABILITY PLAN

*What is plan for offering the course in the future, including maintenance of course materials?*

*Dr. Tom Harnden will serve as the faculty of record for BIOL 1020. In this role he will conduct an annual review of all aspects of the course including, but not limited to, the master course shell design and development, course lib-guide content, and data collected from the course assessments and surveys. Furthermore, the intended Galileo and/or web quest course project will help to both expand the informational repository and increase student interest regarding the subject matter.*

## 1.8 REFERENCES & ATTACHMENTS

***This could include any citations, references, your administrative letter(s) of support, etc. Letters of support must be provided from the sponsoring area (unit, office, department, school, library, campus office of the Vice President for Academic Affairs, etc.) that will be responsible for receipt and distribution of funding. Letters must reference sustainability. In the case of multi-institutional affiliations, all participants' institutions/departments must provide a letter of support.***