Affordable Materials Grants, Round 19:
Transformation Grants
(Spring 2021-Spring 2022)

Proposal Form and Narrative

Notes

- The proposal form and narrative .docx file is for offline drafting and for our review processes. Submitters must use the online Google Form for proposal submission. • The only way to submit the official proposal is through the online Google Form. The link to the online application is on the Round 19 RFP Page.
- The italic text provided below is meant for clarifications and can be deleted.

The Round 18 Kickoff will include an asynchronous training module, required for all team members to complete, followed by the synchronous Kickoff Meeting on March 26, 2021 from 1pm-4pm. At least two team members from each awarded team (unless the award is for one individual) are required to attend the synchronous Kickoff Meeting.

Applicant and Team Information

*The **applicant** is the proposed Project Lead for the grant project. The **submitter** is the person submitting the application (which may be a Grants Officer or Administrator). The submitter will often be the applicant—if so, just list leave the submitter blank.*

Requested information	Answer
Institution(s)	**Georgia Southern University**
Applicant name	**Diana Botnaru**
Applicant email	**dbotnaru@georgiasouthern.edu**
Applicant position/title	**Professor, Human Anatomy and Physiology**
Submitter name	
Submitter email	
Submitter position/title	

Please provide the first/last names and email addresses of all team members within the proposed project. Include the applicant (Project Lead) in this list. Do not include prefixes or suffixes such as Ms., Dr., Ph.D., etc.

Team member	Name	Email address
Team member 1	**Diana Botnaru**	**dbotnaru@georgiasouthern.edu**
Team member 2	**Matthew Syno**	**msyno@georgiasouthern.edu**
Team member 3	**Jody Langdon**	**jlangdon@georgiasouthern.edu**
Team member 4	**Samuel Wilson**	**sjwilson@georgiasouthern.edu**
Team member 5	**Nicholas Siekirk**	**nsiekirk@georgiasouthern.edu**
Team member 6	**Dawn Cannon-Rech**	**dcannonrech@georgiasouthern.edu**

If you have any more team members to add, please enter their names and email addresses in the text box below.

Deborah Walker, dwalker@georgiasouthern.edu

Project Information

Requested information	Answer
Priority Category / Categories *Projects in these categories will receive three extra points in the final score for fitting a priority of these particular rounds of Transformation Grants. The type of funding for the project is determined by the funding categories criteria above. As of Round 18, projects can be a part of more than one category. Note that the below categories only indicate priority, not which applications qualify for a grant. Select all that apply.*	• *Collaborative Projects with Professional Support* • *Departmental Scaling Projects* • *Student participation in material creation, adaptation and evaluation*

Requested Total Amount of Funding *$30,000 maximum total award per grant*	*$29,999.73*
Final Semester of Project	*Spring 2022*

Requested information	Answer
Using OpenStax Textbook? *This is to indicate to OpenStax that they can provide additional support and resources to your team during the adoption process.*	*Yes, we plan to adopt the OpenStax Textbook.*

Impact Data

Please fill in the data below with impact data in below with one course (all sections) in each table, and only include courses and instructors that are specifically part of the scope of this grant proposal. Add or remove tables as needed. **Please only put a single averaged or totaled (as appropriate) number in each box. Do not put ranges or mathematical equations in any of these boxes.** If the materials used by different instructors in a course vary drastically, it is possible to enter one course per instructor.

For a multi-course project, if a significant amount of students are assumed to take courses in a sequence and only one textbook is used for these courses, please take this into account in your total *(i.e. only include that book in the first course they would purchase it for OR adjust the number of students affected. Please explain in the notes section if making such adjustments).*

Course 1

Notes: This is a two-sequence lab course KINS 2511 and KINS 2512. We are listing both courses in one table.

Row #	Requested information	Answer
N/A	Course title and number	Two-course sequence - KINS 2511 and KINS 2512 Human Anatomy and Physiology Laboratory
N/A	Course instructors	Mathew Syno - instructor of record During fall and spring semesters the course is taught by teaching assistants (TA). During the summer semester, the course is taught by KINS instructors.

1	Average number of students enrolled per section	30
2	Average number of affected course sections scheduled in a summer semester	KINS 2511 - 7 sections (210 students) KINS 2512 - 7 sections (210 students)
3	Average number of affected course sections scheduled in a fall semester	KINS 2511 - 26 sections (780 students) KINS 2512 - 12 sections (360 students)
4	Average number of affected course sections scheduled in a spring semester	KINS 2511 - 19 sections (570 students) KINS 2512 - 19 sections (570 students)
5	Total number of course sections scheduled in an academic year *Add up rows 2-4.*	*KINS 2511 - 52* *KINS 2512 - 38* *Overall total sections: 90*

Row #	Requested information	Answer
6	Total number of student section enrollments per academic year *Multiply row 1 and row 5.*	*KINS 2511 - 1,560* *KINS 2512 - 1,140* *Total for both - 2,700*
7	Original required commercial materials *Include each title, author, price for a new copy purchased from either your campus bookstore, the publisher, or Amazon, and a URL to the book showing the price.*	*Color Atlas of Anatomy: A Photographic Study of the Human Body (Color Atlas of Anatomy a Photographic Study of the Human Body) Lippincott Williams & Wilkins*
8	Original cost per student section enrollment *Add up the cost of all materials in row 7.*	*$73.80 for hardcopy* *https://www.amazon.com/Color-Atlas-Anatomy-Photographic-Study/dp/0781790131/ref=sr_1_5?dchild=1&keywords=rohen+atlas+of+anatomy&qid=1614279532&sr=8-5*
9	Average post-project cost per student section enrollment	$40
10	Average post-project savings per student section enrollment *Subtract row 9 from row 8.*	*$33.80*

11	Projected total annual student savings per academic year *Multiply row 10 and row 6.*	*$52,728 (assuming that all KINS 2512 students already have the book and are excluded from calculation)*

Narrative Section

1. Project Goals

Goals for a Transformation Grant project go beyond just cost savings. Include goals for student savings, student success, materials creation, and pedagogical transformation here.

The goal of the project is to adopt and/or create low-cost and no-cost course materials for all sections of a two-semester undergraduate Human Anatomy and Physiology (HAP) laboratory course (KINS 2511 and KINS 2512) at Georgia Southern University based on a weekly module format.

Objectives:

1. Pedagogical transformation
    a. Curriculum alignment
        i. Pivot the course to a weekly module format
        ii. Incorporate learning outcomes into weekly module
        iii. Align supplementary materials with the outcomes
        iv. Incorporate a physiology component through virtual physiology labs
        v. Integrate assessments into weekly modules
        vi. Customizing a low-cost online homework platform to fit the needs of the class
        vii. Ensure a better alignment between the laboratory component and the lecture
2. Supplementary/ancillary materials creation
    a. Develop weekly lab modules
    b. Develop/record videos of lab models identifying relevant anatomical structures required for the lab for the weekly modules
    c. Develop a picture repository of lab models identifying relevant anatomical structures required for the lab weekly modules
3. Students success
    a. Improved course design, access to supplemental materials and reduction in the financial burden of purchasing required texts will be assessed on student satisfaction, performance and retention.
4. Student savings
    a. Adopt no-cost materials (videos, weekly modules and OpenStax textbook) and low cost alternatives for assessment purposes such as homework (such as McGraw Hill or other)

2. Statement of Transformation

Transformation Grants are awarded to teams focused on creating impactful changes. This section allows teams to describe why the project should be awarded. Include the following:

- *A description of the current state of the course, department, and/or institution if relevant.*
- *An overall description of the project and how it will impact the course, department, and institution as described previously. Include references to scholarly literature to support the claims of your impact if possible.*

The Human Anatomy and Physiology (HAP) lab course is a two-sequence undergraduate course (KINS 2511 and KINS 2512) required of all allied health majors at Georgia Southern including nursing, exercise science, nutrition, athletic training, public health (and others). The course enrolls 30 students per section and is delivered primarily in a face-to-face format (with the exception of the required switch to remote learning). The laboratory introduces new course material and reinforces topics discussed in the lecture classes (KINS 2531 and KINS 2532). Labs include the identification of structures on a variety of available resources (models and human cadavers) and demonstration of physiological concepts through lab activities. KINS 2511 covers the structure and function of several of the body's systems including: cells, tissues, the integumentary system, skeletal system, muscular system, and nervous system. KINS 2512 covers the structure and function of circulatory, endocrine, digestive, urinary, immune, and reproductive systems.

In the spring and fall semesters, the courses are taught by teaching assistants with Matt Syno as the instructor of record. In the summer, the courses are taught by qualified instructors from the Department of Health Sciences and Kinesiology.

The textbook requirements for students included purchasing an atlas, while students were expected to come to the lab and study anatomical structures on the models and cadavers. Students who missed class could come to an open lab (second hour of each lab), if there were available seats, as priority was given to students enrolled in the respective lab. Models were not available to students outside the HAP lab and/or class time. Our interactions with students revealed that the majority of them would forgo the purchase of the atlas due to cost.

As a required course for undergraduate allied health majors, the HAP laboratory component has seen increasing enrollments. This trend is bound to continue, as Waters College of Health Professions reported a 7% increase in enrollment from last year and is looking at expanding the size of the nursing school. In addition, the exercise science major is the largest major in the college. Students in both majors make the majority (about 80%) of those enrolled in this course. Due to space limitations, opportunities for open labs are decreasing and some sections may consider moving online. No matter the course format, the project would redesign the two-semester laboratory course (KINS 2511 and KINS 2512) at Georgia Southern University and create no-cost course materials and teaching resources for students in all sections. It would impact 2,700 students annually with a minimum of $53,000 annual cost savings for students. The project will eliminate the need for a textbook, standardize the course across all sections/ instructors, and create course materials that can be useful to students, teaching assistants and instructors alike during and outside class time. In addition, curricular alignment between outcomes, content and assessment, as well as better alignment between the lab and lecture class, will have an impact on student success in the course. This is of particular importance to students in KINS 2511 classes, where the pass rate was 62% in fall 2019.

All but one major in the Department of Health Sciences and Kinesiology requires that students pass it with a "C" or better before taking advanced kinesiology classes such as structural kinesiology and exercise physiology. This course is also important for nursing majors and impacts their progression into pathophysiology courses, prior to applying for nursing school. Improving student performance in this class would ensure timely progression in their major. Moreover, many nursing and exercise science students need to review anatomy and physiology as they take advanced classes like pharmacology or motor control, to name a few. Since the project would create course materials targeted to meet the needs of our majors, students will be able to access them freely when a review of anatomy and physiology is needed. By involving two faculty members who teach advanced kinesiology classes, we would also underscore the importance of this class beyond just the class itself, but as an important foundation for their entire major.

3. Action Plan

Transformation Grant projects are work-intensive and require project management in order to be successful. This section allows teams to describe how the team will fulfill the goals of the project. This section must include:

- *The role(s) of each team member in the project with details as to the major tasks team members will complete, with an estimate of how long each task will take (e.g. number of hours).*

The project will involve the faculty members at Georgia Southern who are teaching the undergraduate Human Anatomy and Physiology classes (lecture and lab), in addition to other kinesiology faculty who teach advanced kinesiology classes. The individual roles are explained below.

Project lead - Diana Botnaru teaches the HAP lectures during the regular semesters and lectures and lab during summer semesters. She will oversee the entire project, coordinate team activities, submit the semester status reports and final report, serve as a point of contact for team members, library personnel and research office, participate in course redesign and assignment of weekly modules for the lab course.

Lab modules lead - Matthew Syno is the anatomy and physiology lab director and is the instructor of record for all laboratory sections. He will serve as the lab modules lead and be responsible for the final collection of lab modules. He will also participate in course redesign, development of the assigned* weekly modules for the lab course (including associated materials such as presentations with pictures, videos** and assessments).

Team member - Samuel Wilson will be responsible for participating in course redesign, development of the assigned* weekly modules for the lab course (including associated materials such as presentations with pictures, videos** and assessments).

Team member - Nick Siekirk will be responsible for participating in course redesign, development of the assigned* weekly modules for the lab course (including associated materials such as presentations with pictures, videos** and assessments).

- *Modules will be divided between members and assigned during summer 2021,

assuming a total number of 30 modules for both KINS 2511 and 2512.
- **Two team members will be recording the videos.

Assessment lead - Jody Langdon will develop and implement the assessment plan, analyze the data and submit results to the project lead for the final report.

Library liaison - Dawn Cannon-Rech will assist in identification of similar existing and teaching materials, identification of learning resources such as databases, portals, etc., guidance and support in copyright, fair use, publishing, open access, author rights, and related areas and distributing the newly created resources on the GSU library website.

Center for Teaching Excellence liaison - Deborah Walker will assist with instructional design.

Undergraduate student(s) - will provide subject matter expertise and content and media development and evaluation assistance.

• *A review of existing open, no-cost, and/or low-cost course materials for the course(s).*
The team members will also work with our library liaison to identify additional resources.

- OpenStax - no-cost textbook for Anatomy and Physiology. Available at https://openstax.org/details/books/anatomy-and-physiology. We plan to adopt this textbook for the lab classes.
- Visible Body - A virtual dissection program that offers 3-D capability and access is paid for by the university library.
- McGraw Hill Connect - offers a low-cost package ($40) that includes access to Anatomy and Physiology Revealed (APR), virtual labs and test banks with labeling questions.
- UGA Lab Manual - no-cost lab manual on Galileo Open Learning Materials. This manual does not fit the needs for our lab, but will be examined as an additional resource.

• *The plan for the selection, adoption, adaptation, and/or creation of new course materials (if applicable). Include plans for open licensing and plans for making your materials accessible.*

We plan to adopt OpenStax (no-cost) as the main textbook required for the course. The team will develop weekly modules and create ancillary materials based on the lab models (pictures and/or videos, as appropriate). In addition, a low-cost platform (such as McGraw Hill) will be added to supplement the course and to provide students with access to assessments (e.g. homework) and physiology lab opportunities that can also be completed virtually and can complement the anatomy component of the lab.

• *The plan for redesigning your course(s), including any instructional design work, curriculum alignment, course accessibility changes, etc.*

The course will be pivoted to a weekly module format and will include:
- Curriculum alignment.
    - Each weekly module will include learning outcomes (following and/or adapting

HAPS outcomes as appropriate), required material and activities and types of assessments. Weekly modules will be compiled into an accessible file form.
    - A better alignment between the lab and lecture classes (sequence of topics, etc.)
- Created materials.
    - Recorded videos will meet accessibility requirements.
    - PowerPoint presentations (if any) will meet accessibility requirements.
    - Created materials will allow students to complete, review and practice the required structures and/or lab activities outside regular class time, which will provide additional study support in face-to-face labs.

• *The plan for providing open access to the new materials. Affordable Learning Georgia will host any newly created materials in our repository; please indicate if you are using other platforms in addition to the repository to host them.*

The project team will work with Dawn Cannon-Rech from the Georgia Southern Library to share the materials on the library website in addition to the ALG repository.

4. Quantitative and Qualitative Measures

All Transformation Grant projects must measure student satisfaction, student performance, and course-level retention (drop/fail/withdraw rates), but teams and institutions will do this in varied ways. Outstanding applications will include measures beyond the minimum to gain meaningful insights into the impact of the project. Include the following:

• *Each quantitative or qualitative measure to be used, along with a description of the methods and/or tools used to gather and analyze data.*
• *If the team needs IRB (Institutional Review Board) approval, please indicate this here. Each institution's IRB functions differently, and teams will need to know how their institution's IRB evaluates and approves of institutional research.*

All HAP lab sections will participate in this transformation process and be included in the assessment. During the Spring 2022 semester, students will be assessed in KINS 2511 and 2512. In addition, faculty teaching the lab courses will also participate in the assessments. Student satisfaction, student performance, course level retention, faculty satisfaction, as well as student engagement will be collected in the following ways:

- Student satisfaction: A survey developed by Jaggers et al. (2018) will assess elements of student satisfaction with open-end resources, including their perceptions of access, quality, and usefulness of the course materials.

- Student performance: Since regular assessments are given in the course, they will be utilized to assess student performance. We will compare these measures to those collected in previous semesters to determine if improvements in performance are evident based on the new course materials.

- Course Level Retention: Starting in Spring 2022, long term retention of students will be collected, both within their courses and their majors.

- Faculty Satisfaction: A survey developed by Bollinger & Wasilik (2008) will be used to assess student, instructor, and institution related factors related to implementation and use of the course materials.

- Student Engagement: Using back-end features of Folio (D2L), we will collect how much time students spend in each aspect of the new course materials to determine how heavily they are utilized.

- For all data, IRB approval will be sought and informed consent will be required prior to any data collection, if a decision to publish is made. IRB approval is required only if data is to be published.

5. Timeline

This section allows teams to describe how the project will progress from its inception to the Final Report. Please provide a list of major milestones, events, and deadlines, aligned with your Action Plan and the final semester of your project. Include the submission of your Final Report in this list.

Do not put this timeline in the form of a table, as it will not transfer well to Google Forms for the official application—a bullet-point list is acceptable.

Major milestones for the project ending in Spring 2022:

March 26, 2021, 1pm-4pm: Attendance by at least two team members at a required kick-off training/implementation meeting

Summer semester 2021: dedicated to planning for Goal 1 and creating a plan with specific tasks for team members.

- Completion of existing content review for adoption or adaptation for weekly modules in collaboration with the library liaison
- Final decision on the course format, the final template for the weekly modules (e.g. outcomes, content, materials and types of assessment) and the overall lab and lecture alignment.
- Final decision on a low-cost online platform selection.
- Development of project task list.
- Summer 2021 project status report.

Fall semester 2021: dedicated to finishing Goal 1 and meeting Goal 2.

- Content creation
    - Weekly modules and ancillary materials are created and forwarded to lab module lead

December 2021

- Collection of completed weekly lab modules drafts presented to the entire team for review
- Fall 2021 project status report

Spring semester 2022 - dedicated to rolling out the developed content and ancillary materials

and meeting Goal 3 for assessment purposes.

- New content offered in KINS 2511 and KINS 2512
- Assessment of implementation and review of data
- Revision of content, as needed
- Make created content available under a Creative Commons Attribution License (CC-BY), and accessible to the public through the GALILEO Open Learning Materials repository
- Final project report
- Participation in post-project surveys and/or any other activities required by ALG.

6. Budget

Please enter your project's budget below. Include personnel and projected expenses, keeping in mind that this funds the estimated time in your Action Plan. The maximum amounts for the award are as follows:

• $5,000 maximum per team member for salary, course release, travel, etc. • Additional project expenses allowed, but must be adequately justified in this section • $30,000 maximum total award per grant

- *Personnel salary subtotal 16,775. 70*
    - *Diana Tudor Botnaru $4,009.71*
    - *Jody L Langdon $3,079.38*
    - *Matthew J Syno $2,910.60*
    - *Nicholas Joseph Siekirk $2,461.93*
    - *Samuel Jackson Wilson $2,458.04*
    - *Student $1,856.04*
- *Personnel fringe subtotal $4,492.63*
- *Total F&A costs $8,731.40*
- *TOTAL $29,999.73*

The Center for Teaching Excellence will provide a camera and a tripod for recording videos.

Do not put this budget in the form of a table, as it will not transfer well to Google Forms for the official application—a bullet-point list is acceptable. Please keep all funding guidelines from the corresponding RFP in mind.

7. Sustainability Plan

Transformation Grants should have a lasting impact on the course for years to come. In order for this to happen, a Sustainability Plan needs to be in place after the end of the project. Please include here your plans for offering the course in the future, including:

• The maintenance and updating of course materials
• The commitment of the department(s) or institution(s) to continue the use of affordable materials
• Any possible expansion of the project to more course sections in the future
• Future plans for sharing this work with others through presentations, articles, or other scholarly activities

All sections of the Human Anatomy and Physiology (HAP) course are targeted by this proposal. The departmental scaling is supported by the interim department chair as evidenced by the support letter. The project team includes the HAP lab director, which will ensure continuity for future semesters and expansion to new sections, if new sections are established. The course materials will be updated by the course instructors and the project lead will update them in OER Commons, as needed. The team also plans to work with a library liaison and provide the information on the GSU library website.

After the project is implemented, the team will look to disseminate the findings through multiple venues, which will include the department - as the HAP course is a foundational course for kinesiology majors - and teaching and learning conferences, such as the SoTL Commons conference. Upon successful implementation, plans will also be made for a SoTL project about the impact on student learning and submission of a manuscript to journals such as Advances in Physiology education, provided that appropriate IRB approval is granted. Diana Botnaru and Jody Langdon have extensive experience with SoTL projects, including Georgia Southern IRB requirements for such projects.

Creative Commons Terms

I understand that any new materials or revisions created with ALG funding will, by default, be made available to the public under a Creative Commons Attribution License (CC-BY), with exceptions for modifications of pre-existing resources with a more restrictive license.

Accessibility Terms

I understand that any new materials or revisions created with Affordable Learning Georgia funding must be developed in compliance with the specific accessibility standards defined in the Request for Proposals.

Letter of Support

The Department Chair from the corresponding project, or the Department Chair's direct report such as the Dean or Provost, must provide a signed Letter of Support for the project. This letter should acknowledge the following:

- *The department will provide support for fund disbursement in correspondence with the Grants/Business Office.*
- *The department approves of the work on the proposal by the applicant(s).*
- *The department acknowledges the sustainability of the use of these affordable resources after the grant work is complete.*

In the case of multi-institutional affiliations, all participants' institutions must provide a letter of support.

Please provide the name and title of the department chair (or other administrator) who provided you with the Letter of Support.

Dr. John Dobson
Interim Department Chair
Department of Health Sciences and Kinesiology, Waters College of Health Professions
Statesboro Campus-Hollis Building – Room 2115

Grants or Business Office Letter of Acknowledgment

Institutional Grants/Business Offices will be responsible for fund disbursement, often in correspondence with the Department Chair, including expense and travel reimbursement. Applicants will need to provide a short Letter of Acknowledgment stating that the Grants/Business Office knows about the applicant's intent to apply for an Affordable Materials Grant. Either the Department Chair or the Project Lead can work with the Grants/Business Office to get this signed letter.

In the case of multi-institutional affiliations, all participants' institutions must provide a letter of acknowledgment.

Please provide the name and title of the grants or business office representative who provided you with the Letter of Acknowledgment.

Bruxanne Hein
Executive Director
Georgia Southern University Research and Service Foundation
261 Forest Drive
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