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Application Summary

Competition Details

Competition Title:	Textbook Transformation Grants, Round Twelve (Fall 2018-2019)
Category:	University System of Georgia
Award Cycle:	Round 12
Submission Deadline:	09/13/2018 at 11:59 PM

Application Information

Submitted By:	Soma Mukhopadhyay
Application ID:	2600
Application Title:	389
Date Submitted:	09/11/2018 at 8:30 AM

Personal Details

Institution Name(s):	Augusta University
Applicant First Name:	Soma
Applicant Last Name:	Mukhopadhyay
Applicant Email Address:	smukhopadhyay@augusta.edu
Applicant Phone Number:	513-316-1045
Primary Appointment Title:	Lecturer
Submitter First Name:	Soma
Submitter Last Name:	Mukhopadhyay
Submitter Email Address:	smukhopadhyay@augusta.edu
Submitter Phone Number:	513-316-1045
Submitter Title:	Lecturer

Application Details

Proposal Title

389

Final Semester of Project

Fall 2019

Requested Amount of Funding

\$10,799.00

Type of Grant

No-or-Low-Cost-to-Students Learning Materials

Course Title(s)

BIOL 2111 (Human Anatomy & Physiology - I) & BIOL 2112 (Human Anatomy & Physiology - II)

Course Number(s)

BIOL 2111 & BIOL 2112

Team Member 1 Name

Lisa Ruggiero-Wagner

Team Member 1 Email

liwagner@augusta.edu

Team Member 2 Name

Team Member 2 Email

Team Member 3 Name

Team Member 3 Email

Team Member 4 Name

Team Member 4 Email

Additional Team Members (Name and email address for each)

N/A

Sponsor Name

Dr Richard Griner

Sponsor Title

Associate Professor and Department Chair

Sponsor Department

Department of Biological Sciences

Original Required Commercial Materials (title, author, price)

Not Applicable

Average Number of Students per Course Section Affected by Project in One Academic Year

i) BIOL 2111 - 28/section ii) BIOL 2112- 28/section

Average Number of Sections Affected by Project in One Academic Year

i) For Fall Semester: BIOL 2111=10 sections & BIOL 2112=5 sections. ii) For Spring Semester: BIOL 2111=8 sections & BIOL 2112=7 sections

Total Number of Students Affected by Project in One Academic Year

i) BIOL 2111 = 494 ii) BIOL 2112 = 336

Average Number of Students Affected per Summer Semester

i) BIOL 2111= 56 ; ii) BIOL 2112 = 56

Average Number of Students Affected per Fall Semester

i) BIOL 2111 = 280 ii) BIOL 2112 = 140

Average Number of Students Affected per Spring Semester

i) BIOL 2111 = 220 ii) BIOL 2112 = 196

Original Total Cost per Student

\$40.00

Post-Project Cost per Student

\$0

Post-Project Savings per Student

\$40.00 (approx)

Projected Total Annual Student Savings per Academic Year

\$37,680.00

Using OpenStax Textbook?

No

Project Goals

1. Project Goals

BIOL 2111 & BIOL 2112 (Human Anatomy & Physiology –I & II) are required courses for students who wish to pursue their career in a health-related field (e.g. – Pre-Med, Physician Assistant, Nursing, Physical Therapy, Nuclear Imaging, etc.). Lab curriculum in these courses provides hands on experience and includes dissection of preserved animals and organs to expose students to anatomical details and to prepare them for their future professional fields. Understanding the concept and eventually making connections to the human body is the primary goal of dissection laboratory activities. But for the majority of students the dissection experience is not only an added level of difficult activity, but their first experience with dissection as well.

The cat has been used as a dissection specimen in our A&P I & II Labs. But, due to the shortage of cat specimens over the last 3 years, many A&P programs all over the country (including our department) have had to find other specimens or methods (models) for dissection. After a review of alternatives which included fetal pig, mink, rabbit and human cadaver, our initial conclusion is that the rabbit would be the most suitable pedagogical model (See Statement of Transformation below for details).

The next challenge was the availability of a lab manual and atlas to support student learning. Not many resources exist for rabbits as a dissection model and available dissection guides are old and inadequate. We know textbooks are crucial for students especially at the undergraduate level. However, increasing costs of textbooks is another concern. We intend to create an Open Access Resource; this new work will be created under the Creative Commons Attribution License and made accessible through Galileo Open Learning materials repository.

Goal 1: Development of New Materials

Development of an entirely new (nonexistent) learning resource for Human Anatomy and Physiology I & II laboratory courses: "Rabbit Anatomy: A Photographic Atlas and Dissection Guide".

Goal 2: Gateway to Completion

Because most students are engaging their first thorough dissections in A&P I/A&P II laboratories, they are often unsure of what they are seeing and struggle to succeed. Professor Ruggiero-Wagner is currently serving on the Biology 2111 (A&PI) Gateway To Completion (G2C) committee at our institution to examine ways to assist students and faculty in teaching, learning and student success in this gateway course. The photographic Atlas created will provide an additional innovative, open resource tool to aid in student success.

Statement of Transformation

A. Model Transformation:

While the ideal model for human anatomy and physiology is the human cadaver, our university department does not have the facilities or budget at this time to move to this model for learning.

Based on our initial research (from academic publishers laboratory manuals and internet research) into other dissection models (the fetal pig is underdeveloped for muscle & vasculature; mink posed homology and odor issues), and non-availability of cats, we introduced the rabbit model to our students last year. While the rabbit proved to be more than adequate as a specimen, we noticed students struggled due to the limited availability of supplemental learning resources for this model (See B. below)

B. Existing Lab Manual and Atlas Resources for Rabbit dissection and anatomy are as follows:

1-Reinthal, P. (2015). An Illustrated Dissection Guide to the Rabbit. Tuscon: Ranaco. (provided by supplier – Fisher Scientific)

2- Rowett, H.G.Q. (1957). Dissection Guides: IV-The Rabbit. New York: Holt, Rinehart and Winston.

3- Wingerd, B. (1984). Rabbit Anatomy and Dissection Guide. Minneapolis: Blue Door. [Reprinted (2012)] (ISBN 1-59984-038-3)

C. Problems with these existing resources:

- Additional expense to students beyond required textbooks and lab manual
- Few exist, and most are old publications, or reprinted old publications as listed above
- These resources are text heavy (Reinthal & Wingerd) and some content needs to be updated
- The images are sketches and do not have color photographs of the specimens

For Example:

D. Gateway to Completion (G2C)

Our objective is to create a no cost resource that will support independent student learning (visual and hands-on) in the laboratory surrounding challenging dissections which comprise approximately 27-30% of A&P I (BIOL 2111) Lab (3-4 of the 13 lab class meeting dates) and 46% of A&P II (BIOL2112) lab (6 of the 13) in an effort to increase student success. A&P I (BIOL 2111) has been identified as a target/cohort course for the G2C at Augusta University.

Courses impacted by transformation are:

BIOL 2111 & BIOL 2112 (Human Anatomy & Physiology - I & II)
Department of Biological Sciences
Augusta University

Course Descriptions (from Augusta University Catalogue)

BIOL 2111 - An Introduction to physical and chemical principles necessary for understanding human anatomy & physiology. A study of cellular and tissue levels of organization, followed by a study of the skeletal, muscular and nervous systems.

BIOL 2112 - A continuation of Biology 2111, dealing with the circulatory, respiratory, digestive, excretory, endocrine and reproductive systems and their interrelationships.

Description of the Project and Impact on the Course, Department, and Institution

- Due to the insufficiency of appropriate resources we would like to create this new learning material - Rabbit Anatomy: A Photographic Atlas and Dissection Guide for students in our Human Anatomy & Physiology -I & II classes (labs).
- BIOL 2111 & BIOL 2112 are offered every Fall, Spring and Summer Semesters. Once developed, the Atlas will be shared with all other Faculty members and adopted by the department.
- Due to increased costs, students sometimes do not purchase textbooks which impact their performance Hill P. (2016). Students Are Spending Less on Textbooks, but That's Not All Good. The Chronicle of Higher

Education. Retrieved from:

<https://www.chronicle.com/article/Students-Are-Spending-Less-on/235340> .

McKenzie L. (2017) Study: Higher Textbook Prices Lead to Poor Grades. Inside Higher Ed. Retrieved from:

<https://www.insidehighered.com/quicktakes/2017/09/20/study-high-textbook-prices-lead-poor-grades>

The Atlas will be a No-Cost-to-Students Learning Material, which will save **\$37,680** annually for our students at Augusta University.

- Current college students are iGen students who spend most of their time online. Most of the students prefer to access the learning resources using their electronic devices even in the class period. In an effort to keep up with student need and study habits we decided to create this new Lab reference and study tool online.
- It will be a customized resource to match with our curriculum which will be easy to modify and update as needed.
- We will update as we use it and get student feedback on how it is working. Others, both within the USG and elsewhere, can adapt the materials to their students' needs -- and the digital format will make that relatively easy.
- This photographic rabbit atlas as a digital resource will be easily accessible and used by other professors not only in the University System of Georgia, but by other professors globally as a new work created under the Creative Commons Attributions License.

Watson, C.E., Domizi, D.P., & Clouser, S.A. (2017). Student and Faculty Perceptions of OpenStax in High Enrollment Courses. International Review of Research in Open and Distributed Learning. Volume 18, Number 5.

Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/2462/4299>

Transformation Action Plan

The Team Consists of:

Dr. Soma Mukhopadhyay (team lead and instructor of record for Biol 2111 & Biol 2112)

Lisa Ruggiero-Wagner (Course Director for Biol 2112 and instructor of record for Biol 2111 and Biol 2112). Professor Ruggiero-Wagner is also serving on the Gateway to Completion (G2C) Committee at Augusta University for Biology 2111.

Consultants:

Dr. Richard Griner (Chair, Department of Biological Sciences);

Dr. Deborah Richardson (Director, Office of Faculty Development and Teaching Excellence).

Team Member Activities:

Stage 1: Further review of existing resources with the proposed model (Rabbit) (Refer to Section 2.B.)

Professor Ruggiero-Wagner

Stage 2: Development of Rabbit, Cat and Human systems and structures overview. Create a 'Crosswalk' for homology between the three specimens.

Professor Ruggiero-Wagner

Stage 3: System approach dissection of rabbit specimens to create photo plates

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Development of graphics and anatomical maps

Dr. Mukhopadhyay

Stage 4: Peer review by departmental faculty

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Stage 5: Improvement, modifications and completion of atlas based on peer review Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Stage 6: Adoption of Open-Access resource for student educational experience

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Stage 7: Data collection, analysis and submit final report

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Stage 8: Presentation of Outcome

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Open Access Platform for the New Materials:

- GALILEO

- Brightspace/D2L Learning Management System

Quantitative & Qualitative Measures

We will consult with Dr Deborah Richardson, Director, Office of Faculty Development and Teaching Excellence to design surveys to distribute to faculty and students. These surveys will include

- an end-of-course version of the ASPEL (Assessment of Student Perceptions of Engagement and Learning) that Dr. Richardson developed and has used to assess student responses to activities and resources in a variety of courses (Humanities, Physics, Psychology);
- mid-term “start-stop-continue” (SSC) assessment that will ask for open-ended (qualitative) input from both faculty members and students; and
- end-of-course SSC aimed at seeking advice for using the atlas in future courses. The “start-stop-continue” (SSC) assessment would ask respondents to indicate what is working well with the use of the atlas (“continue”), what is not working well (“stop”), and what could make it work better (“start”).

The ASPEL asks students to report (on 5-point Likert scales) how much they enjoyed and how much they learned from multiple components of the course. For example, we could ask them to report their perceptions with regard to lectures, textbook, and atlas, thereby allowing us to compare the relative value of each component of the course – from the students’ perspectives. We may also be able to identify various aspects of the atlas (e.g., graphics, text) that can be evaluated separately, allowing a finer analysis of the value of components of the atlas.

The midterm SSC, depending on time available for the assessment, may be conducted using a focus group methodology with the classes that are using the atlas. In that case, Dr. Richardson or an assistant would visit the class, have the students complete the SSC in groups, and then conduct a full-class focus group seeking input from the groups. This methodology has been used in the past to evaluate responses to changes in Humanities courses and provided much valuable input. This midterm SSC will be followed with a report to students that summarizes their feedback and reports any planned changes in response to their input.

We will also compare performance of students (e.g., grades) using the new atlas to the performance of students in previous semesters who did not have access to the atlas. Student progression and retention data (drop/fail/withdraw: DFW) will be evaluated, allowing us to compare data for students from prior semesters that did not use the atlas with data for students who are using the atlas. This will be an ongoing analysis across multiple semesters. (NOVEMBER-DECEMBER 2019)

We will seek IRB approval for all aspects of the data collection during Summer 2019.

Timeline

- STAGE 1: JANUARY 2019 Further review of existing resources with the rabbit model. (Refer to Section 2. B.)
- STAGE 2: JANUARY-FEBRUARY 2019 Development of Rabbit, Cat and Human systems and structures overview for use in dissection atlas. Create a ‘Crosswalk’ for homology between the three specimens
- STAGE 3: FEBRUARY-MAY 2019 Systems approach dissection of rabbit specimens to create photo plates and anatomical maps for atlas
- For Human Anatomy & Physiology I: Muscular system For Human Anatomy & Physiology II: Endocrine, Cardiovascular, Respiratory, Digestive, Urinary and Reproductive Systems
- Stage 4: MAY 2019 Peer review of newly developed resource by departmental faculty
- Stage 5: JUNE- AUGUST 2019 Improvement, modifications and completion of atlas based on peer review. Development of surveys (qualitative & quantitative); IRB approval
- Stage 6: AUGUST-NOVEMBER 2019 Adoption of Open-Access resource (as a pilot) for student educational experience
- Stage 7: NOVEMBER 2019 Data collection
- Stage 8: DECEMBER 2019 Data analysis and submit final report

Budget

Itemized Total

1. Compensation for Personnel: \$ 9999.00

Soma Mukhopadhyay: \$ 5275

Lisa Ruggiero-Wagner:\$ 4724

2. Supplies: \$ 314.00

Fisher Science Education™ Preserved Specimens:

Rabbit Triple Skinned (Catalog No: S1060S)

\$65.50/rabbit X 4 = \$ 262.00

Shipping & Tax = 52.00

3. Travel \$ 486.00

(To attend the Mandatory Kick Off Meeting)

Soma Mukhopadhyay: \$ 243

Lisa Wagner: \$ 243

Total requested Budget \$ 10,799.00

Sustainability Plan

We will use this Rabbit Atlas for Human Anatomy & Physiology courses (BIOL 2111 & BIOL 2112) beginning Fall 2019 (Pilot). Both of these courses are offered every semester (as detailed in the Project information section). The Atlas will be used after modifications (if any) and it will be shared by all the instructors in our Department for adoption.

The Atlas will be available through Galileo as well as Brightspace/D2L (Learning Management System of our University). Students will have access to this resource from day one of the semester. Improvements and additions will be made on the basis of peer feedback and surveys.

We will present our work at the University Faculty Forum and submit the proposal for conference presentation.

Acknowledgment

Grant Acceptance

[Acknowledged] I understand and acknowledge that acceptance of Affordable Learning Georgia grant funding constitutes a commitment to comply with the required activities listed in the RFP and that my submitted proposal will serve as the statement of work that must be completed by my project team. I further understand and acknowledge that failure to complete the deliverables in the statement of work may result in termination of the agreement and funding.



AUGUSTA
UNIVERSITY

September 7, 2018

Dear Review Committee,

I enthusiastically support the application for an Affordable Learning Georgia Textbook Transformation Grant by Dr. Soma Mukhopadhyay and Ms. Lisa Ruggiero-Wagner. Both of these excellent faculty teach BIOL 2111 & 2112 Human Anatomy & Physiology I and II at Augusta University (AU). Enrollment in these courses exceeds 800 students each academic year who are preparing for future healthcare programs such as Nursing, Medicine, Physical Therapy and numerous other programs that are also offered by AU.

A recent shortage in the availability of our traditional dissection model, the domestic cat (*Felis domesticus*), has become a nationwide problem, and both we and our peers have aggressively sought suitable alternatives. Our faculty, led by Dr. Soma Mukhopadhyay and Ms. Lisa Ruggiero-Wagner, have identified a very appropriate substitute model, the domestic rabbit (*Oryctolagus cuniculus*). In many ways, this model surpasses the cat in regards to its muscular and vascular similarities to the human. Thus, our faculty have decided to make a long-lasting commitment to incorporating this model into our curriculum moving forward. Unfortunately, there are very few resources available to guide students in the dissection of this species, and those that are available are of inferior quality. For this reason, Dr. Soma Mukhopadhyay and Ms. Lisa Ruggiero-Wagner have developed a proposal to create an illustrated dissection guide to provide to students at no cost. This guide will incorporate photos, drawings, and text to assist the students in the physical dissection and to guide them in making the cross-walk from rabbit anatomical structures to the corresponding human anatomical structures.

The timing of this project coincides exactly with the evaluation and redesign of the BIOL 2111 Human Anatomy & Physiology I that has just begun through the Gateways 2 Completion project sponsored by the USG Board of Regents. The materials created through this funded grant will be focused specifically on the learning objectives of our course and on the needs of our students, and there will be significant communication between Dr. Soma Mukhopadhyay and Ms. Lisa Ruggiero-Wagner and those faculty who are members of the G2C Team. Thus, this project will have a direct ability to both impact and be impacted by the G2C process. Moreover, the continuing work of the G2C Team will provide a built-in assessment of this new resource as they evaluate the impact of the course redesign they initiate.

Thank you for your consideration of this proposal to develop a no-cost resource for our students that will be used for many years to come.

Sincerely,

Richard Griner, Ph.D.
Associate Professor and Chair

DEPARTMENT OF BIOLOGICAL SCIENCES

Mailing Address:
1120 15th Street, SCI W2015
Augusta, Georgia 30912

Office Address:
2500 Walton Way, SCI W2015
Augusta, Georgia 30904

T (706) 737-1539

augusta.edu

Textbook Transformation Grants, Round Twelve (Fall 2018-2019)

Grant Title: Rabbit Anatomy: A Photographic Atlas and Dissection Guide

Submitted by: Soma Mukhopadhyay & Lisa Ruggiero-Wagner

Department of Biological Sciences, Augusta University

Narrative Section

1. Project Goals

BIOL 2111 & BIOL 2112 (Human Anatomy & Physiology –I & II) are required courses for students who wish to pursue their career in a health-related field (e.g. – Pre-Med, Physician Assistant, Nursing, Physical Therapy, Nuclear Imaging, etc.). Lab curriculum in these courses provides hands on experience and includes dissection of preserved animals and organs to expose students to anatomical details and to prepare them for their future professional fields. Understanding the concept and eventually making connections to the human body is the primary goal of dissection laboratory activities. But for the majority of students the dissection experience is not only an added level of difficult activity, but their first experience with dissection as well.

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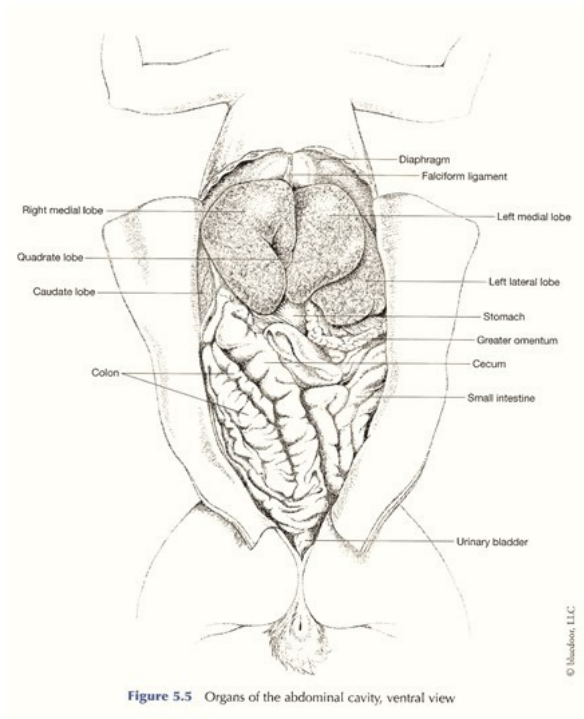
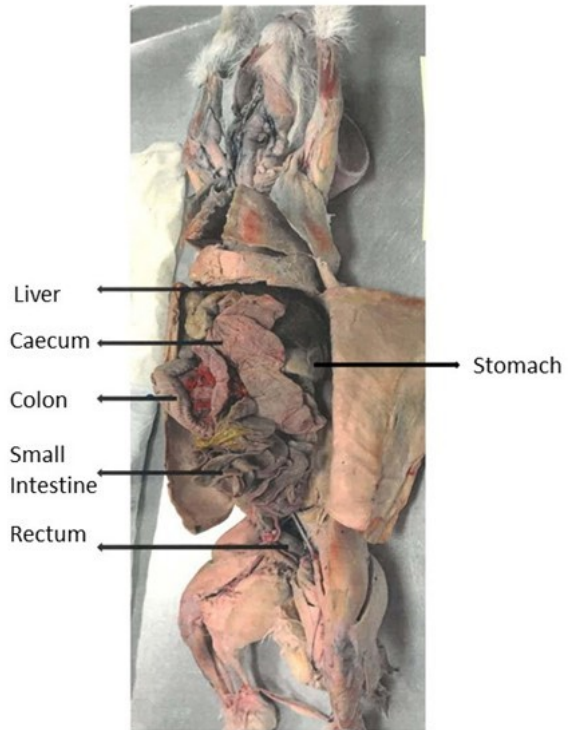


Diagram from Rabbit Anatomy and Dissection Guide by Bruce Wingerd



Rabbit: Digestive System
Photoplate developed by
Soma Mukhopadhyay

D. Gateway to Completion (G2C)

Our objective is to create a no cost resource that will support independent student learning (visual and hands-on) in the laboratory surrounding challenging dissections which comprise approximately 27-30% of A&P I (Biol 2111) Lab (3-4 of the 13 lab class meeting dates) and 46% of A&P II (Biol2112) lab (6 of the 13) in an effort to increase student success. A&P I (Biol 2111) has been identified as a target/cohort course for the G2C at Augusta University.

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 - McKenzie L. (2017) Study: Higher Textbook Prices Lead to Poor Grades. *Inside Higher Ed*. Retrieved from: <https://www.insidehighered.com/quicktakes/2017/09/20/study-high-textbook-prices-lead-poor-grades>

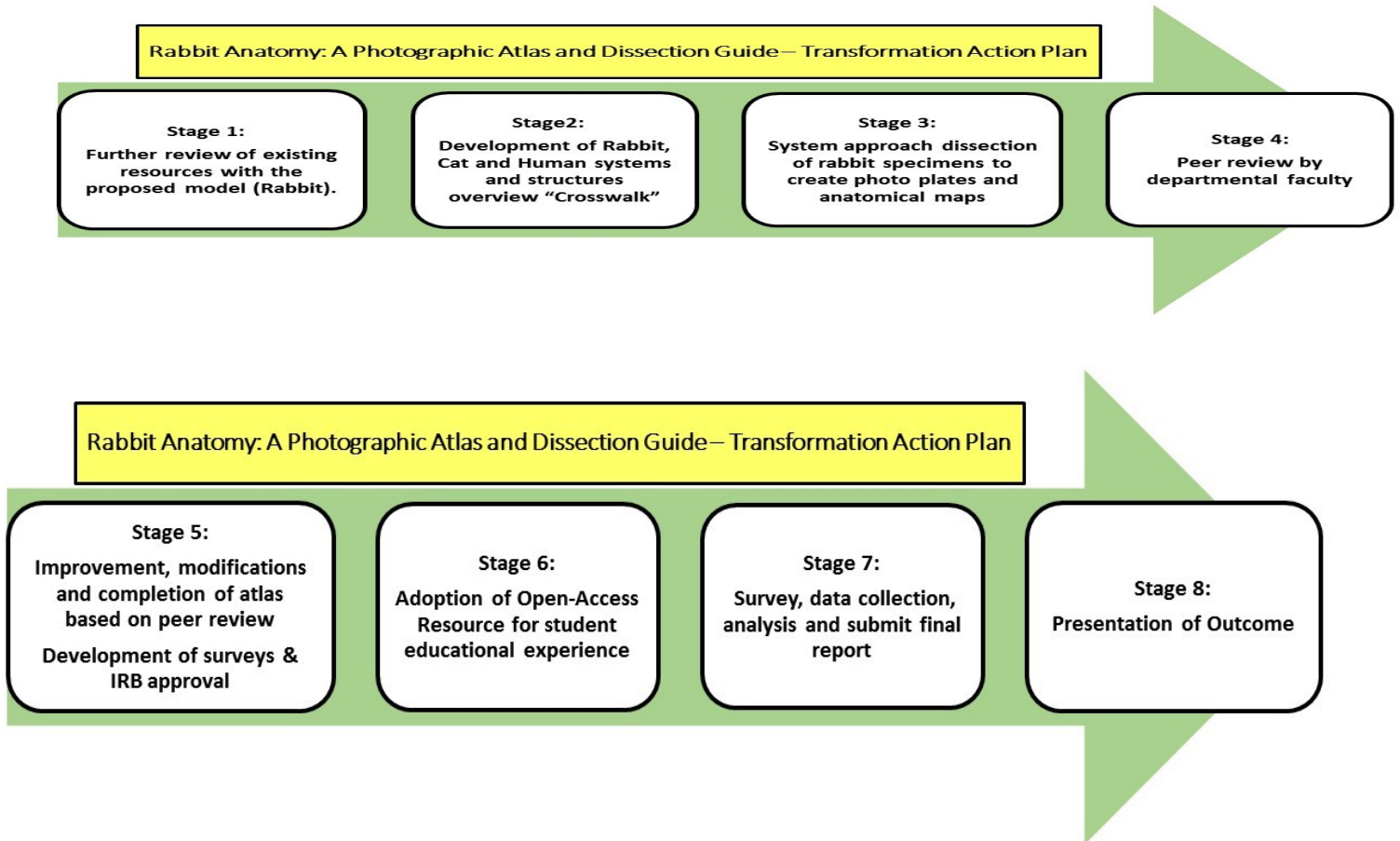
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- It will be a customized resource to match with our curriculum which will be easy to modify and update as needed.
- We will update as we use it and get student feedback on how it is working. Others, both within the USG and elsewhere, can adapt the materials to their students' needs -- and the digital format will make that relatively easy.

- This photographic rabbit atlas as a digital resource will be easily accessible and used by other professors not only in the University System of Georgia, but by other professors globally as a new work created under the Creative Commons Attributions License.

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3. Transformation Action Plan



The Team Consists of:

Dr. Soma Mukhopadhyay (team lead and instructor of record for Biol 2111 & Biol 2112)
Lisa Ruggiero-Wagner (Course Director for Biol 2112 and instructor of record for Biol 2111 and Biol 2112). Professor Ruggiero-Wagner is also serving on the Gateway to Completion (G2C) Committee at Augusta University for Biology 2111.

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Team Member Activities:

Stage 1: Further review of existing resources with the proposed model (Rabbit)
(Refer to Section 2.B.)

Professor Ruggiero-Wagner

Stage 2: Development of Rabbit, Cat and Human systems and structures overview. Create a 'Crosswalk' for homology between the three specimens.

Professor Ruggiero-Wagner

Stage 3: System approach dissection of rabbit specimens to create photo plates

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Development of graphics and anatomical maps

Dr. Mukhopadhyay

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Dr. Mukhopadhyay & Professor Ruggiero-Wagner

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Dr. Mukhopadhyay & Professor Ruggiero-Wagner

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Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Stage 7: Data collection, analysis and submit final report

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Stage 8: Presentation of Outcome

Dr. Mukhopadhyay & Professor Ruggiero-Wagner

Open Access Platform for the New Materials:

- GALILEO
- Brightspace/D2L Learning Management System

4. Quantitative and Qualitative Measures

We will consult with Dr Deborah Richardson, Director, Office of Faculty Development and Teaching Excellence to design surveys to distribute to faculty and students. These surveys will include

- an end-of-course version of the ASPEL (Assessment of Student Perceptions of Engagement and Learning) that Dr. Richardson developed and has used to assess student responses to activities and resources in a variety of courses (Humanities, Physics, Psychology);
- mid-term “start-stop-continue” (SSC) assessment that will ask for open-ended (qualitative) input from both faculty members and students; and
- end-of-course SSC aimed at seeking advice for using the atlas in future courses. The “start-stop-continue” (SSC) assessment would ask respondents to indicate what is working well with the use of the atlas (“continue”), what is not working well (“stop”), and what could make it work better (“start”).

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We will also compare performance of students (e.g., grades) using the new atlas to the performance of students in previous semesters who did not have access to the atlas. Student progression and retention data (drop/fail/withdraw: DFW) will be evaluated, allowing us to compare data for students from prior semesters that did not use the atlas with data for students who are using the atlas. This will be an ongoing analysis across multiple semesters. (NOVEMBER-DECEMBER 2019)

We will seek IRB approval for all aspects of the data collection during Summer 2019.

5. Timeline

- STAGE 1: JANUARY 2019 Further review of existing resources with the rabbit model. (Refer to Section 2. B.)
- STAGE 2: JANUARY-FEBRUARY 2019 Development of Rabbit, Cat and Human systems and structures overview for use in dissection atlas. Create a 'Crosswalk' for homology between the three specimens
- STAGE 3: FEBRUARY-MAY 2019 Systems approach dissection of rabbit specimens to create photo plates and anatomical maps for atlas
 - For Human Anatomy & Physiology I: Muscular system
 - For Human Anatomy & Physiology II: Endocrine, Cardiovascular, Respiratory, Digestive, Urinary and Reproductive Systems
- Stage 4: MAY 2019 Peer review of newly developed resource by departmental faculty
- Stage 5: JUNE- AUGUST 2019 Improvement, modifications and completion of atlas based on peer review. Development of surveys (qualitative & quantitative); IRB approval
- Stage 6: AUGUST-NOVEMBER 2019 Adoption of Open-Access resource (as a pilot) for student educational experience
- Stage 7: NOVEMBER 2019 Data collection
- Stage 8: DECEMBER 2019 Data analysis and submit final report

6. Budget

Itemized	Total
1. Compensation for Personnel:	\$ 9999.00
Soma Mukhopadhyay: \$ 5275	
Lisa Ruggiero-Wagner:\$ 4724	
2. Supplies:	\$ 314.00
Fisher Science Education™ Preserved Specimens:	
Rabbit Triple Skinned (Catalog No: S1060S)	
\$65.50/rabbit X 4 = \$ 262.00	
Shipping & Tax = 52.00	
3. Travel	\$ 486.00
(To attend the Mandatory Kick Off Meeting)	
Soma Mukhopadhyay: \$ 243	
Lisa Wagner: \$ 243	
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Total requested Budget	\$ 10,799.00

7. Sustainability Plan

We will use this Rabbit Atlas for Human Anatomy & Physiology courses (BIOL 2111 & BIOL 2112) beginning Fall 2019 (Pilot). Both of these courses are offered every semester (as detailed in the Project information section). The Atlas will be used after modifications (if any) and it will be shared by all the instructors in our Department for adoption.

The Atlas will be available through Galileo as well as Brightspace/D2L (Learning Management System of our University). Students will have access to this resource from day one of the semester. Improvements and additions will be made on the basis of peer feedback and surveys.

We will present our work at the University Faculty Forum and submit the proposal for conference presentation.