Affordable Materials Grants, Round 20:

Continuous Improvement Grants

(Fall 2021-Fall 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, including uploading this document.
* The only way to submit the official proposal is through the Google Form. The link to the online application is on the [Round 20 RFP Page](https://www.affordablelearninggeorgia.org/about/rfp_r20).
* The italic text provided below is meant for clarifications and can be deleted.

The Round 20 Kickoff will include an asynchronous training module, required for all team members to complete, followed by the synchronous Kickoff Meeting on December 10, 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

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| --- | --- |
| Requested information | Answer |
| Institution | University of Georgia |
| Applicant name | Bridget Garner |
| Applicant email  | garnerb@uga.edu |
| Applicant position/title | Associate Professor of Clinical Pathology |
| 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.

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| --- | --- | --- |
| Team member | Name | Email address |
| Team member 1 | Bridget Garner | garnerb@uga.edu |
| Team member 2 | Kristina Meichner | meichner@uga.edu |
| Team member 3 | Samantha Schlemmer | sschlemmer@uga.edu |
| Team member 4 | Jaime Tarigo | tarigo@uga.edu |
| Team member 5 | Educational Resources (College of Veterinary Medicine) Medical Illustrator | vmerc@uga.edu |

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

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# Project Information

| Requested information | Answer |
| --- | --- |
| Type of Project | * *Creation of ancillaries for existing OER courses*
 |
| Requested Amount of Funding*$10,000 maximum total award per grant* | $2,000 per content expert x 4 = $8,000$2,000 per medical illustrator x 1 = $2,000GRAND TOTAL = $10,000 |
| Course Titles and Course Numbers | Diagnostic Pathology VPAT 5400 |
| Final Semester of Project | * *Fall 2022*
 |
| Currently Existing Resource(s) to be Revised/Ancillaries Created*Please provide a title and web address (URL) to each of the currently existing resources that you are revising, creating new ancillary materials for, or replacing. If replacing, please include a title and web address (URL) to the new OER as well.* | EClinPath websiteThis website serves as an online textbook of Veterinary Clinical Pathology under a Creative Commons License. You can access it here:<https://eclinpath.com> |

# Project Goals

 The goal of this project is to create ancillary, clinical case-based materials for VPAT 5400 (Diagnostic Pathology). Diagnostic Pathology is a continuously taught core clinical rotation that is required of all veterinary students who graduate from the University of Georgia College of Veterinary Medicine. Each year approximately 125-150 fourth-year clinical veterinary students are immersed in hands-on instruction focusing on laboratory diagnostics and microscopy. More specifically, this covers a variety of core clinical pathology topics including hematology, cytology, clinical biochemistry, urinalysis, immunophenotyping and molecular diagnostics. Textbooks covering each of these topics are readily available, but there are few textbooks that cover all these subjects in a single resource. This limitation, combined with the increasing concern about veterinary educational debt, makes the use of an Open Educational Resource (OER) prudent. The EClinPath website (<https://eclinpath.com> herein referred to as ECP) is a robust, comprehensive online resource under a Creative Commons license for veterinary students learning about laboratory diagnostics, and it addresses all the themes discussed in VPAT 5400. Additionally, veterinary students have been shown to prefer educational resources that are familiar and fast1, which are both features of ECP. For all these reasons, ECP can serve as an educational resource that replaces traditional textbooks in this rotation. With that said, ECP does not provide in-depth clinical cases, and to the authors’ knowledge, few if any other veterinary clinical pathology OERs exist. As a result, the grant proposal team would like to develop ancillary, clinical case-based materials to supplement ECP. These are to be produced with the intent of providing accessible resources for students (content outlines, case data PowerPoints, study guides, closed-captioned instructional videos and medical illustrations), but also to provide quality instructional materials for faculty.

Clinical rotations provide an active learning environment that is comparable to a flipped classroom approach. Students are expected to prepare for cases ahead of time, and interactions with instructors (either faculty, residents or interns) are often focused on relating the background knowledge to real-time clinical cases in the University of Georgia Veterinary Teaching Hospital. Our vision is that students will refresh their knowledge by reviewing ECP materials that have been targeted in the content outlines, and then come to VPAT 5400 ready to apply that knowledge to real-life clinical cases we develop using this grant. The grant team members will thoroughly review all the materials available in ECP as well as compile verbal and written feedback (primarily through conversations with current students and course evaluations from previous students) to help generate a needs assessment on the specific topics to be covered. The grant team members will generate a comprehensive list of ancillaries to meet instructional goals, and then they will consider content, formatting and aesthetics in order to make informed decisions about which ancillaries can be reasonably and effectively made. There will be 3 tiers of content for clinical cases for a total of 40 cases prepared. Different species will be included to represent the proportions that are representative of the UGA VTH caseload:

Tier 1. Hematology, clinical biochemistry, urinalysis and sample submission cases (n=20)

Tier 2. Tier 1 and cytology cases (n=15)

Tier 3. Tier 1 +/- Tier 2 and advanced diagnostics such as flow cytometry cases (n=5)

The topics will be divided among the four content experts (all Diplomates of the American College of Veterinary Pathologists), and each person will lead the development of their assigned cases with the professional support of the team at the Veterinary Medical Educational Resources Center (VMERC) and feedback from the other content experts. The VMERC team, which includes Medical Illustrators and a videographer, have worked with many veterinary faculty (including Bridget Garner) to create aesthetically-pleasing and accurate teaching materials. Each content expert will create 10 cases to ensure the scope of work is reasonable and the quality is high, and they will draw from their experiences working with similar cases in the Veterinary Teaching Hospital to create these teaching cases. Team members will ensure all supporting ancillaries adhere to the required accessibility design principles for documents, video, images, and PowerPoints.

Once the materials have been drafted, edited and finalized, they will be uploaded to the VPAT 5400 eLearning Commons page for use in all sections of this rotation for Fall 2022. The grant team comprises all faculty involved in teaching this related content in VPAT 5400, so we are committed to a department scaling approach to piloting these new materials. At the conclusion of the semester, the faculty will reconvene to compile instructor and student feedback about the new materials and make any necessary changes arising from the groups’ recommendations. Student performance on the end-of-rotation examination will be compared between new and old materials, and their individual scores on two traits (1. pathologic basis of veterinary disease knowledge and 2. diagnostic planning skills) will also be compared. Student course evaluations will be reviewed to see if there is a change in their scoring of the effectiveness of the rotation. Faculty feedback will focus on student engagement and perceived comprehension. Beginning Spring 2023, instructors will begin each clinical rotation by confirming all internet links are working and the materials are visible to students on eLearning Commons. Any relevant changes in medical terminology, diagnostic testing or laboratory data interpretation that may affect the accuracy or applicability of these ancillaries will be discussed by the faculty as soon after notification as possible, and if necessary, amendments to the materials will be made.

 These new ancillary materials will impact student learning in several ways. One short-term affect is that students who have not been using ECP content to interpret their clinical cases will have more opportunities to do so. Veterinary students prioritize familiarity when choosing their educational resources, and creating these ancillaries will allow learners to better navigate ECP using a methodical strategy. Making these ancillaries available on OpenALG and the GALILEO Open Learning Materials repository will allow students and instructors at regional and national veterinary training institutions as well as graduate veterinarians to use them. Conclusions made and lessons learned from this process will be shared at upcoming American Society of Veterinary Clinical Pathology Annual Meetings (specifically the Educational Session) and/or upcoming Open Education Conference meetings.

1. Garner BC, Hartle DY and Creevy KE. The Educational Resource Preferences and Information-Seeking Behaviors of Veterinary Medical Students and Practitioners. J Vet Med Educ 2019; 46(4): 470-480.

# Action Plan

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| **Team Member** | **Actions** | **Estimated Time** |
| Bridget Garner (Project lead and Content expert) | Create grant proposal and reports as needed; serve as the liaison for grant correspondence.Develop Tier 1 and Tier 2 ancillaries.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials.Consolidate files and materials into accessible documents in Microsoft Word, PowerPoint and/or PDF format(s).Ensure the Creative Commons Attribution License is added to all ancillary materials and materials are made accessible through OpenALG and the GALILEO Open Learning Materials repository. Post materials on eLearning Commons for use by all instructors in VPAT 5400. | 80 hours |
| Kristina Meichner (Content expert) | Develop Tier 1, Tier 2 and Tier 3 ancillaries.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials. | 70 hours |
| Samantha Schlemmer (Content expert) | Develop Tier 1 and Tier 2 ancillaries.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials. | 70 hours |
| Jaime Tarigo(Content expert) | Develop Tier 1, Tier 2 and Tier 3 ancillaries.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials. | 70 hours |
| Medical Illustrator | Meet with content experts to develop medical illustrations, animations and/or ‘How-to’ videos for topics such as:* Body cavity effusion mechanisms
* Gamblegrams for acid-base interpretation
* How-to obtain images for microscopy with a smart phone
* How-to aspirate lymph nodes and mass lesions and prepare high quality smears

Descriptive alternative text or figure captions will be included with all images. All videos will include accurate captioning. | 70 hours |

# Timeline

**December 10, 2021**

* Attend kick-off meeting

**December 2021**

* Generate list of currently available resources
* Compile verbal and written student feedback on current course structure and materials used
* Generate needs assessment for supporting ancillary materials separated into two categories: content expert vs. medical illustrator driven

**January-February 2022**

* Divide ancillary topics between content experts
* Content experts meet with medical illustrator to brainstorm on initial list of projects
* Agree on formatting design and overall appearance of materials
* Conduct additional team member meetings for collaborative work and planning (at least two)

**March-May 2022**

* Content experts continue with development of ancillary materials, create links to relevant sections of ECP and rectify accessibility concerns
* Content experts and medical illustrator continue discussion on relevant projects
* Continue collaboration among team members throughout; first draft of all ancillary materials due at end of spring semester

**June-July 2022**

* Content experts provide feedback on others’ first drafts
* Revision of ancillary materials continues; conduct additional team member meetings for collaborative work and planning (at least two)
* Finalize medical illustration projects
* Finalize all materials by August 1, 2022

**August-November 2022**

* Distribute revised materials to all instructors of VPAT 5400, upload them to eLearning Commons and implement new material in all sections
* Conduct collaborative team meetings as needed
* Attach Creative Commons Attribution License to all materials

**December 2022**

* Compile feedback from instructors on new content
* Review students’ course evaluations to see if overall teaching effectiveness scores improved with implementation of new material
* Review students’ performance on end-of-rotation examination to see if pathologic basis of veterinary disease knowledge and diagnostic planning skills scores improved with implementation of new material
* Review students’ performance on individual evaluations to see if scores improved with implementation of new material
* Upload ancillaries to Galileo Open Learning Materials and OpenALG
* Generate and submit final grant report

# Budget

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| --- | --- | --- |
| **Team Member** | **Actions** | **Budget Amount** |
| Bridget Garner (Project lead and Content expert) | Create grant proposal and reports as needed; serve as the liaison for grant correspondenceDevelop new cytology, urinalysis and chemistry case-based materials.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials.Consolidate files and materials into accessible documents in Word, PowerPoint and/or pdf format(s).Ensure the Creative Commons Attribution License is added to all ancillary materials and materials are made accessible through OpenALG and the GALILEO Open Learning Materials repository. Post materials on eLearning Commons for use by all instructors in VPAT 5400. | $2,000 salary and fringe |
| Kristina Meichner (Content expert) | Develop new hematology, cytology and advanced diagnostics case-based materials.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials. | $2,000 salary and fringe |
| Samantha Schlemmer (Content expert) | Develop new hematology, cytology and chemistry case-based materials.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials. | $2,000 salary and fringe |
| Jaime Tarigo(Content expert) | Develop new hematology, cytology and advanced diagnostics case-based materials.Meet with the ERC team to incorporate medical illustrations, animations and videos into the case-based materials. | $2,000 salary and fringe |
| Medical Illustrator | Meet with content experts to develop Medical Illustrations, animations and/or ‘How-to’ videos for topics such as:* Body cavity effusion mechanisms
* Gamblegrams for acid-base interpretation
* How-to obtain images for microscopy with a smart phone
* How-to aspirate a lymph node and prepare high quality smears

Descriptive alternative text or figure captions will be included with all images. All videos will include accurate captioning. | $2,000  |
| TOTAL |  | $10,000 |

# Creative Commons Terms

I understand that any new materials or revisions created with Affordable Learning Georgia 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 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.

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| Dr. Jesse Hostetter, Department of Pathology Department Chair |

# Grants or Business Office Acknowledgment Form

Institutional Grants/Business Offices will be responsible for fund disbursement, often in correspondence with the Department Chair, including expense and travel reimbursement. All applicants will need to provide a signed Acknowledgement Form, the template for which is linked on the RFP page, 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 form.

In the case of multi-institutional affiliations, all participants’ institutions must provide this form.

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

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| Rachel Baker, College of Veterinary Medicine Grants Coordinator  |