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

*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 leave the submitter blank.*

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| --- | --- |
| Requested information | Answer |
| Institution | Georgia Southern University |
| Applicant name | Weitian Tong |
| Applicant email | wtong@georgiasouthern.edu |
| Applicant position/title | Tenure-track Assistant Professor of Computer Science |
| Submitter name | Weitian Tong |
| Submitter email | wtong@georgiasouthern.edu |
| Submitter position/title | Tenure-track Assistant Professor of Computer Science |

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 | Weitian Tong | wtong@georgiasouthern.edu |
| Team member 2 | Lixin Li | lli@georgiasouthern.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 | * *Revision of open educational resources (OER) used in existing courses* |
| Requested Amount of Funding  *$10,000 maximum total award per grant* | $4,000 |
| Course Titles and Course Numbers | CSCI 3230 Data Structures  CSCI 3236 Theoretical Foundations |
| 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.* | * Data Structures <https://alg.manifoldapp.org/projects/data-structures-southern> * Theoretical Foundations <https://alg.manifoldapp.org/projects/theoretical-foundations-compsci-ancillary> |

# Project Goals

Thanks to the support from Affordable Learning Georgia (ALG) in Round 13, we initiated adopting open educational resources (OER) in our department and successfully developed no-cost-to-students learning materials for two core Computer Science courses, i.e., CSCI 3230 Data Structures and CSCI 3236 Theoretical Foundations.

Due to the COVID pandemic since early 2020, the class delivery mode has changed a lot. To improve the adaptiveness and flexibility of current OER materials used in CSCI 3230 and CSCI 3236, we propose to include more hands-on, up-to-date, and no-cost learning materials and to provide a better organization of our learning materials. The overarching goal of this project is to make CSCI 3230 and CSCI 3236 course materials adaptive and sustainable and help students to achieve better self-paced learning effectiveness in face of unpredictable situations such as the COVID pandemic.

# Action Plan

Dr. Weitian Tong will serve as the project lead. Two investigators (PIs) will work together for the project implementation. More specifically, Drs. Weitian Tong and Lixin Li will be mainly responsible for CSCI 3230 and CSCI 3236 respectively.

PIs plan the following activities or tasks in three stages for the improvement of the no-cost learning materials.

**Stage 1: Preparation (Estimated Hours: at least 15 hours)**

* Each PI will review the existing course materials for inaccurate and/or outdated information, such as broken links, outdated examples in slides, and misleading questions in assignments, etc.
* Each PI will exam whether the current learning modules reflect the up-to-date course learning outcomes and program outcomes.
* Each PI will search for no-cost and publicly accessible learning materials, particularly hands-on examples and problems.

**Stage 2: Implementation (Estimated Hours: at least 25 hours)**

* Each PI will fix all accessibility issues in the current learning materials.
* Each PI will update the learning modules based on changes in course learning outcomes and program outcomes.
* Each PI will screen and identify high-quality learning materials among all the resources found in Stage 1 for each learning module.
* Each PI will update ancillary materials such as assignments, quizzes, lab problems, projects, and test banks to better align with the learning outcomes.
* Each PI will update lecture notes and self-study guidelines to help students review course contents and key learning points.
* Each PI will reorganize these learning materials and redesign the course schedule for better self-paced learning effectiveness.
* PIs will develop surveys to collect students' feedback on the updated learning materials.

**Stage 3: Further improvement and Finalization (Estimated Hours: at least 10 hours)**

* PIs will double-check all learning materials and ensure these course materials are in compliance with the specific accessibility standards defined by Affordable Learning Georgia, particularly under a Creative Commons Attribution License (CC BY).
* PIs will fine-tune the learning materials according to students’ feedback.
* PIs will work together on delivering the final report.
* PIs will disseminate the updated course materials in OpenALG and the GALILEO Open Learning Materials repository.

# Timeline

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| **Dates** | **Milestone** |
| December, 2021 | * Online Kickoff Meeting * **Complete “Stage 1 – Preparation”** * Semester Status Report |
| January-May, 2022 | * **Partially Complete “Stage 2 – Implementation”** * Semester Status Report |
| June-July, 2022 | * **Complete “Stage 2 – Implementation”** * Semester Status Report |
| August-December, 2022 | * **Complete “Stage 3 – Further improvement and Finalization”** * Complete and deliver the Final Report |

# Budget

Each PI will spend at least 50 hours complete this project and will be compensated $2000 for summary salary.

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| **Investigator** | **Summer compensation** |
| Dr. Weitian Tong | $2,000 |
| Dr. Lixin Li | $2,000 |

# 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

*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. David Williams, Acting Chair, Department of Computer Science, Georgia Southern University |

# Grants or Business Office Acknowledgment 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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| Tina Leggett, Assistant Director, Office of Research Services, Georgia Southern University |