**Affordable Learning Georgia Affordable Materials Grants  
Continuous Improvement Grants Final Report**

*(or Mini-Grants, for R17 and earlier)*

# General Information

Date: 08/13/2024

Grant Round: ALG Round 23

Grant Number: M229

Institution Name(s): Kennesaw State University

Team Members (Name, Title, Department, Institutions if different, and email address for each): Donal Privitera (Lecturer, Information Technology Department), Jack Zheng (Associate Professor, Information Technology Department), William Forsyth (Senior Lecturer, Information Technology Department), Jamie Jamison (Lecturer, Information Technology Department)

Project Lead: Maria Valero

Course Name(s) and Course Numbers: IT3883 Advanced Application Development, IT3703 Introduction to Data Analytics and Technology, IT1113 Programming Principles, IT 4153 Advanced Database

Final Semester of Project: Summer 2024

***If applicable to your project:***

Average Number of Students Per Course Section: N/A

Number of Course Sections Affected by Implementation of Revised Resources: 4

Total Number of Students Affected by Implementation of Revised Resources: N/A

# Project Narrative

*Describe the course of your revision or ancillary creation project, including*

* *A summary of your project’s purpose, plan, and timeline.*
* *The original works which were revised or added to, with links. For example, if you revised an open textbook, give the title, author, and link.*
* *A narrative description of how the project’s plan was carried out.*
* *Lessons learned, including anything you would do differently next time.*

**Purpose:**  
The purpose of this project was to revise and update open educational resources (OER) for four critical courses within the BSIT Z-Degree at Kennesaw State University. These courses—IT 3883 Advanced Application Development, IT 4153 Advanced Database, IT 3703 Introduction to Data Analytics and Technology, and IT 1113 Programming Principles—required revisions to ensure they remained current with industry best practices, were fully accessible to all students, and provided high-quality, no-cost learning materials.

**Plan:**  
The project plan involved the following key steps:

* **Course Material Revision:** Each course's existing OER was reviewed and updated to align with current industry standards and practices. This included updating lecture notes, assignments, labs, quizzes, and other ancillary materials.
* **Accessibility Enhancements:** All materials were revised to comply with the accessibility standards set by Affordable Learning Georgia (ALG).
* **Development of Ancillary Materials:** Additional learning materials such as quizzes, study guides, and lab exercises were created to enhance student engagement.
* **Collaboration and Coordination:** Faculty developers, instructional designers, and a student reviewer worked collaboratively to ensure the successful completion of the project.

**Timeline:**

* **May 2023:** Project kick-off, initial review of existing OER materials, and accessibility training.
* **December 2023:** Completion of the majority of revisions, including accessibility updates.
* **April 2024:** Finalization of all course offerings with updated OER materials, student feedback collection.
* **May 2024:** Publishing the revised OER materials on a public website and compiling the final project report.

**The Original Works Which Were Revised or Added To, with Links**

The following are the original works that were revised as part of this project:

* **IT 4153 Advanced Database:** [IT4153 Advanced Database](https://alg.manifoldapp.org/projects/advanced-databases-ancillary-materials)
* **IT 3703 Introduction to Data Analytics and Technology:** [IT 3703 Introduction to Data Analytics and Technology](https://alg.manifoldapp.org/projects/introduction-to-data-analytics-and-technology-curated-resources)
* **IT 1113 Programming Principles:** [IT1113 Programming Principles](https://facultyweb.kennesaw.edu/brutherf/alg_it1113.php)

These resources were thoroughly revised to reflect the latest trends and technologies in the field, and to meet the specific learning objectives of each course.

**Narrative Description of How the Project’s Plan Was Carried Out**

The project began with an initial review of the existing OER materials in May 2023. Each faculty developer was responsible for revising their assigned course materials. Throughout the summer and fall of 2023, the team worked to update content, ensuring it reflected the latest industry practices. For example, in IT 3883, new topics on advanced Python features and modern software development techniques were added. In IT 4153, materials related to database security and data warehousing were revised and updated.An instructional designer provided guidance on ensuring all materials met accessibility standards. This included revising slides, captioning video lectures, and making sure all online resources were compliant with ADA requirements.The student reviewer played a crucial role in providing feedback on the usability and effectiveness of the revised materials. Their insights were invaluable in making final adjustments before the courses were offered in the Spring 2024 semester.By April 2024, all revised materials were in place, and student feedback was collected. The feedback was overwhelmingly positive, with students appreciating the updated content and the no-cost nature of the materials. The final step involved publishing the revised materials on a public website, making them accessible to other educators and institutions.

### **Lessons Learned, Including Anything You Would Do Differently Next Time**

**Lessons Learned:**

* **Time Management:** While the project was successful, managing time effectively was crucial, especially with unexpected delays such as the illness of a team member. It emphasized the need for a buffer in the timeline to accommodate unforeseen circumstances.
* **Collaboration is Key:** Regular communication among team members was essential in keeping the project on track. Future projects could benefit from more frequent check-ins, particularly during critical phases like accessibility compliance and student feedback collection.
* **Student Involvement:** Engaging students early in the process as reviewers was beneficial. Their perspectives ensured the materials were not only accurate but also user-friendly and engaging.

**What We Would Do Differently:**

* **Extended Pilot Phase:** Implementing a longer pilot phase for the revised materials could provide more comprehensive feedback before the final implementation.
* **More Iterative Review Process:** Instead of waiting until the end of each phase to review progress, a more iterative approach with regular small-scale reviews could have caught minor issues earlier, reducing the need for last-minute adjustments.

# Materials Description

*Describe all the materials you have created or revised as part of this project. These descriptions may be used in the* [OpenALG](https://alg.manifoldapp.org/) *repository description field. Include the* [*open license your materials will be shared under*](https://creativecommons.org/share-your-work/)*—for most materials, this will be an Attribution 4.0 License (CC BY) as required in the Grants Request for Proposals.*

### **Materials Created or Revised**

As part of this ALG grant project, we created and revised a variety of open educational resources (OER) for four courses in the BSIT Z-Degree at Kennesaw State University. These materials have been designed to be fully accessible, up-to-date, and aligned with industry standards.

1. **IT 3883 Advanced Application Development**
   * **Materials Created:** Revised lecture notes, updated lab exercises, new quizzes, and a revised term project focused on advanced Python topics, agile development methodologies, and modern software development techniques.
   * **License:** Attribution 4.0 International (CC BY).
2. **IT 4153 Advanced Database**
   * **Materials Created:** Updated course modules including lecture notes, PowerPoint slides with enhanced lecturer notes, revised assignments, and additional resources on SQL procedures, database security, and data warehousing.
   * **License:** Attribution 4.0 International (CC BY).
3. **IT 3703 Introduction to Data Analytics and Technology**
   * **Materials Created:** Comprehensive updates to 11 course modules, including revised web resources, updated lecture notes, and lab materials aligned with the latest trends in data analytics.
   * **License:** Attribution 4.0 International (CC BY).
4. **IT 1113 Programming Principles**
   * **Materials Created:** Updated slide presentations, and revised examples to enhance the learning experience and ensure accessibility compliance.
   * **License:** Attribution 4.0 International (CC BY).

All materials created or revised under this project will be stored and accessible through the OpenALG repository and will be shared under the Attribution 4.0 International (CC BY) license, allowing others to freely use, adapt, and share the resources with proper attribution.

# Materials Links

*If you are hosting your materials in places other than OpenALG, please provide these links in this section. Otherwise, leave blank. Note: we cannot access D2L or Canvas links.*

* 1. **IT 3883 Advanced Application Development** [IT 3883 Advanced Applications Design and Development](https://kennesawedu-my.sharepoint.com/:f:/g/personal/mvalero2_kennesaw_edu/Ehv9WzyK_HtOnwggvldCESUBuOc1oRbB4azSM6asogXnzA?e=V4BwE9)
  2. **IT 4153 Advanced Database** [IT 4153](https://kennesawedu-my.sharepoint.com/:f:/g/personal/mvalero2_kennesaw_edu/EoqMDiCA57pLrqKrcW3fhyMBLbt67XeQN7Xq1x4ls6mqvg?e=V0etri)
  3. **IT 3703 Introduction to Data Analytics and Technology** [https://idi.kennesaw.edu/it3703/](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fidi.kennesaw.edu%2Fit3703%2F&data=05%7C02%7Cmvalero2%40kennesaw.edu%7Ccc023a929b2349e6c1dc08dcbbbf61af%7C45f26ee5f134439ebc93e6c7e33d61c2%7C1%7C0%7C638591681292988430%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=mfYo7bo%2F9LAaekehR5%2BzuP37rvEMVMSLvepB%2BG38V58%3D&reserved=0)
  4. **IT 1113 Programming Principles** [https://4m9.net/public/IT1113/](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2F4m9.net%2Fpublic%2FIT1113%2F&data=05%7C02%7Cmvalero2%40kennesaw.edu%7C1c741a166d6e43b09d1408dcaaa3f16d%7C45f26ee5f134439ebc93e6c7e33d61c2%7C1%7C0%7C638572868307405517%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=riOSr2%2FqqutrTkKKEFvAHyTGvVmFR0UGZ72OaTxUeSs%3D&reserved=0)

# Future Plans

* *Describe any planned or actual papers, presentations, publications, or other professional activities that you expect to produce that reflect your work on this project.*
* *Describe any plans to revise or add to these materials in the future.*

As a result of this project, the following professional activities are planned:

1. **Conference Presentations:**
   * A presentation titled "Enhancing IT Education Through Accessible OER Materials" will be delivered at the Open Week at KSU
2. **Workshops and Training:**
   * A workshop will be conducted for faculty members at Kennesaw State University to share best practices in developing and using OER materials in IT courses. This workshop will be part of the ongoing professional development initiatives at the university.

### **Future Plans for Revision or Expansion**

There are plans to continue refining and expanding the OER materials developed during this project:

1. **Ongoing Updates:**
   * The materials will be reviewed annually to ensure they remain current with evolving industry practices and technological advancements. This will involve updating content, resources, and accessibility features as needed.
2. **Expansion to Additional Courses:**
   * Based on the success of this project, there are plans to expand the adoption of OER materials to additional courses within the BSIT program. This may include foundational courses and specialized electives to further reduce costs for students.
3. **Collaboration with Other Institutions:**
   * We are exploring opportunities to collaborate with other institutions within the University System of Georgia to share and further develop these OER materials. This collaboration could lead to the creation of a shared repository of IT resources accessible to all institutions within the system.