PROVOST’S LEARNING INNOVATIONS GRANTS

2016 CALL FOR PROPOSALS

The Provost’s Learning Innovations Grants (PLIG) program was developed to broaden and enrich the learning experience of RIT students by funding faculty-initiated projects that enhance student learning. More than 200 RIT faculty projects have received funding since the program was initiated in AY 2000-2001. (Examples of previously funded projects are available at the PLIG website, rit.edu/ili/plig).

The launch of the Innovative Learning Institute (ILI) in 2012, and its charge to assist in the creation of exceptional learning experiences for students, led to an evaluation of PLIG and a revitalization of the program to:

• Better support dissemination of individual faculty learning to the wider faculty population
• Provide funding for the implementation of successful pilot projects
• Integrate funding with Institute priorities
• Support the scholarship of teaching and learning

The 2016 Application Form is found on page 3 of this document.

I. ELIGIBILITY

The principal applicant(s) must be tenured or tenure-track RIT faculty. PLIG 2016 projects can include visiting assistant professors, lecturers, adjunct faculty, staff, students, and other contributors.

II. PLIG TYPES

There are two types of grants—Exploration and Focus Grants—for PLIG 2016. Full details are available at rit.edu/ili/plig.

III. USE OF GRANT FUNDS

Provost’s Learning Innovations Grants for 2016 may range from $1,000-$5,000.

Examples of the use of PLIG funds include:

• Course release (reasonable, actual replacement costs for full-time, tenure-track or tenured faculty members removed from teaching)
2016 Provost’s Learning Innovations Grants

• Development of new technology-based learning tools and/or environments
• Technologies or equipment required by the project that are not normally provided by the department/college
• Resources for research design and consultation, data collection and aggregation, instrument development and/or purchase, secure data storage, data analysis, and report generation
• Travel to support research activity and/or meet with potential funding sources

IV. PLIG TIMELINE

The grant timeline assumes that most recipients will use Summer 2016 to plan and develop their PLIG funded project for delivery or implementation during the Fall 2016 and/or Spring 2017 semester(s). The full timeline is at rit.edu/ili/plig.

V. SELECTION COMMITTEE AND EVALUATION CRITERIA

Applications for PLIG funds are evaluated by the PLIG selection committee according to the following criteria:

• Utility (solves a defined problem, has potential to benefit many courses/faculty)
• Creativity (is a novel approach or application, represents a new paradigm)
• Efficacy (uses an evidence-based approach, impact to student learning and/or the student experience can be demonstrated)

Details on proposal evaluation and selection committee membership is on the website (rit.edu/ili/plig).

VI. QUESTIONS OR COMMENTS

Please email plig@rit.edu with any questions or comments.
PROVOST’S LEARNING INNOVATIONS GRANTS

2016 APPLICATION

INSTRUCTIONS

Complete this form in its entirety and email it to plig@rit.edu no later than January 27, 2016. Please note to save and rename this document substituting your name (in place of “NAME”) in the file name.

Ask your Department Head to complete the Department Head Certification and return the signed copy along with your application. Note: the signed copy may be scanned and emailed.

If you have any questions about completing this application, please email them to plig@rit.edu or call Michael Starenko at 585-475-5035.

APPLICANT INFORMATION

This application is for a:

- [x] FOCUS GRANT
- [ ] EXPLORATION GRANT

Principal Applicant Name: Manlu Liu __________________________________ Email: manluliu@saunders.rit.edu

Faculty Title: Tenured __________________________________ Phone: 5854753984

(Full-time, tenured and tenure track only)

College: Saunders College of Business ____________ Department: MIS, Marketing and Digital Business

Department Head name: Victor Perotti ______________________________ Email: vperotti@saunders.rit.edu

Proposed Project title: Design and Implementation of an Innovative “Flipped” Learning Platform for Database Management

Total funds requested (requests of $1,000 to $5,000 will be considered): 4,300.00

Others involved in the project (if any): ____________________________

________________________
BUDGET

There is a fillable PDF worksheet to calculate your budget. You can download the worksheet at rit.edu/plig.

- The total shown on this worksheet must match the “Total funds requested” in the Applicant Information section of this application form.
- If awarded, additional funds will be provided to cover any benefits and ITS expenses associated with the salary budget requested.
- Note that any equipment or other materials purchased with grant funds are the property of your department and revert to the department after your project is completed.

TIMELINE

Please indicate any variances to the planned PLIG 2016 schedule and your reasons. If you do not intend to deviate from the schedule, you may leave this section blank.

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<th>Task</th>
<th>Date</th>
<th>Proposed variance and reason</th>
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<tr>
<td>Full project plan submitted</td>
<td>Aug. 24, 2016</td>
<td></td>
</tr>
<tr>
<td>Preliminary findings submitted</td>
<td>Jan. 25, 2017</td>
<td></td>
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<tr>
<td>Summary of final findings submitted</td>
<td>Aug. 23, 2017</td>
<td></td>
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<tr>
<td>Final budget accounting submitted</td>
<td>Aug. 23, 2017</td>
<td></td>
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<tr>
<td>Faculty Teaching and Learning Commons posting</td>
<td>On or before Oct. 24, 2017</td>
<td></td>
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<tr>
<td>Participation in Teaching and Learning Services PLIG dissemination event</td>
<td>On or before Nov. 17, 2017</td>
<td></td>
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</tbody>
</table>
STATEMENT OF UTILITY (two pages maximum)

Using the proposal evaluation criteria outlined in the Evaluation section of the website (rit.edu/illi/plig), please provide an overview of the project you are proposing, including:

- Project objectives
- An explanation of the teaching/learning problem(s) it is designed to address
- An explanation of the significance of the project to student outcomes and/or the student experience.
- A brief description of how the project integrates with activity already underway at RIT in the priority area and/or how this approach has been successfully used at RIT already.

1. Project objectives

The objective of this project is to create an asynchronous-individualized learning platform to allow me to deliver the materials for database management courses in a “flipped” classroom. The intricate concepts and the painstaking procedures of the lab session will be presented in an online format by developing an asynchronous-individualized learning platform. This will allow me to flip the classroom in the sense that it allows me to focus on those concepts and procedures that are the most challenging and difficult for the students. It also allows me to focus on those practical issues students will likely face in the practicum when they apply their learnings in a real-life case involving alternative business scenarios.

2. An explanation of the teaching/learning problem(s) it is designed to address

The students demand of taking database management systems courses have been increasing significantly during the past three years. Database management courses are important not only for MIS students but also for other disciplines students. Students became more competitive in the job market with the skills that students learned from database management courses. The students who take database management courses come from various disciplines including MIS, Accounting, Finance, Marketing, printing media, engineering, game design, computer science etc.

Several issues are typically encountered if the materials are to be delivered to different background students in a traditional classroom. First, it is difficult to find the “right” pace to conduct the lecture sequence that satisfies all students with different learning capabilities. While the average student might find a pace appropriate, the best of the students will find it too slow and the least equipped students will find it too fast. Second, it is hard for students to follow the painstaking procedures involved in the construction of the database system. In this regard, even the best of the students would find it difficult to retain all the requisite materials presented in a traditional classroom, which, in turn, makes it difficult for students to connect the theories (i.e., lecture materials) to the practicum where they need to build a complete database application in Access from the ground up under alternative business scenarios.

At the Management Information System department of the Saunders College, we choose to expose our students to the theory and practice of database management using Access as the initial platform. We do so by teaching students how to develop a complete database application from the ground up using real business scenarios in Access. The module that delivers this content typically consists of two main parts including 1) lectures /demonstrations of how to create tables, entity relationship diagram, queries, forms, reports, and finally, how to develop user interface and add security to the developed database; and 2) a practicum in which students are asked to build a complete database application in Access with alternative business scenarios. It normally takes six weeks in a semester to complete both parts in this module; and students generally perceive this module as the most rewarding, but also the most challenging, portion of the course. It is rewarding because the technologies, skills, and concepts learnt in this module greatly enhance the marketability of the students post-graduation.
However, the intricate nature of the topics also makes it challenging and particularly time-consuming to master, even for the best of the students.

To ease student learning, I will create a sequence of online workshops by using Adobe Connects and Camtasia in this platform. The online workshops painstakingly will demonstrate every single step involved in the creation a complete database system in Access from the ground up (i.e., the first main part of the aforementioned module). They will be presented in ten pre-recorded files from Access Workshop Part 1 to Access Workshop Part 10. All online workshops will be caption, which is convenient for NTID students to use. These files will be uploaded to MYCOURSES. Students will be asked to view these online workshops before the designated lecture and to discuss the relevant concepts and practices in the designated lecture.

3. An explanation of the significance of the project to student outcomes and/or the student experience.

Since the workshops will be delivered via MYCOURSES, students will have a great deal of flexibility in planning their own learning. Not only are students able to access the workshops 24/7, they will be able to start the workshop sequence anytime he/she sees fit during the semester within the parameters as set forth in the syllabus. Moreover, students will be able to find the “right” pace that suits his/her own learning style. This is so because I will use Adobe Connect to record the workshops and will present them as videos. Accordingly, students will be able to adjust the videos at his/her own pace by using “pause”, “play back”, and “play forward” functions. On top of the online workshops, I will also create a step-by-step, detail tutorial to accompany the workshops. This will provide a highly individualized learning platform that reduces learning anxiety and facilitates student learning.

4. A brief description of how the project integrates with activity already underway at RIT in the priority area.

This project is proposing a flipped classroom model, which has been encouraged and promoted from the highest levels of Administration at RIT. I believe that this project is fully integrated with the learning missions of the University.

I am testing some online modules in my classroom. Based on students feedback, students really enjoy the blended learning. This project will help me to create a platform which can be used by all database management courses.
STATEMENT OF CREATIVITY (three paragraphs maximum)

Provide a brief description of how this is a novel approach, or a new application of an existing mode or model of teaching and learning, and/or research about how teaching and learning represents an entirely new paradigm. (Please note that special consideration will be given to proposals that demonstrate a new use/application of a model, system, or technology already in use at RIT.)

This asynchronous-individualized learning platform is a fully new approach to teach database management courses. The traditional classroom approach has difficulty in creating effective learning for students with different background. The technology taught in database management courses could be very challenge to some least equipped students. This asynchronous-individualized learning platform could help to create effective learning for all students who take database management courses.

The asynchronous-individualized learning is important for two reasons. 1. Students will be able to access the workshops 24/7, they will be able to start the workshop sequence anytime he/she sees fit during the semester within the parameters as set forth in the syllabus. 2. Students will be able to find the “right” pace that suits his/her own learning style.

In addition, this platform allows the instructor to leverage his/her time by focusing on those concepts and procedures that are the most challenging and difficult for the students, and those practical issues students will likely face in the practicum when they apply their learnings in a real-life case involving alternative business scenarios.
STATEMENT OF EFFICACY (two pages maximum)

Provide a brief description of the experiment/research design, methodology, and methods of data collection you will use to gauge efficacy.

Data Source:

I will use two data sources.

For evaluating the students learning before the asynchronous-individualized platform is developed, I will use the data that have been collected in Fall 2015-2016 and are being collected currently in Spring 2015-2016 in four different classes. The dataset will include about 90 students.

For evaluating the students learning after the asynchronous-individualized platform is developed, I will use the data that will be collected in Fall 2016-2017 and Spring 2016-2017 in five different classes. The dataset is estimated to include about 90 students.

Research Design:

I will use three approaches to evaluate the students learning before and after the asynchronous-individualized platform is developed.

1. Survey. Students are asked to fill in the survey with specific questions about their learning experience in database management courses.
2. Feedback. Students are asked to provide feedback about their learning experience in database management courses.
3. Exams. The workshop related questions in the exam will be used to compare the learning outcomes before and after the asynchronous-individualized platform is developed.

Analysis:

Both qualitative and quantitative analysis will be conducted to determine the efficacy of the asynchronous-individualized platform. I am primarily interested in comparing the learning experience before and after the asynchronous-individualized platform is developed for students who do not have any IS background before they take database management courses.
DISSEMINATION PLAN (optional)

Provide details about the journal, conference, show, or other external vehicle with strong potential for dissemination of your results. Include supporting documentation, such as preliminary interest or acceptance, with your application, if available. *(Please note that special consideration will be given to proposals that have a defined opportunity for external dissemination, such as an academic journal or professional conference.)*

ILI will arrange channels for disseminating results within RIT.
ADDITIONAL CONSIDERATIONS

Please address these questions, if needed.

Will your project require assistance for extensive or unusual media, multimedia, simulation, and/or software development? If so, please explain?

The need for assistance for extensive or unusual media, multimedia, simulation, and/or software development is not foreseen at this time.

All courses offered by RIT must be accessible to students with disabilities, according to Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990 (rit.edu/studentaffairs/disabilityservices/info). Is your proposed teaching approach accessible to all students, with reasonable accommodation? If not, please explain.

The entire focus of this project is to make a database management classroom more accessible to all students, including, but not limited to, deaf and hard-of-hearing students.

RIT abides by the Family Educational Rights and Privacy Act of 1974 (FERPA), which prohibits instructors from making students' identities, course work, and educational records public without their consent (rit.edu/xVzNE). Will any data gathering or sharing for your project raise any FERPA issues? If so, please explain.

All data collected will be scrubbed of any student identifiers before being reported, presented, or published.
DISSEMINATION AGREEMENT

By completing this grant application, I agree to provide the materials described here, in support of disseminating what is learned from this project to other faculty at RIT.

I also agree to return all/a portion of the funds that I receive for this project to RIT if I fail to complete or provide the materials described here.

- Full project plan (including roles and responsibilities, milestone dates, and pertinent project details)
- Overview of preliminary findings (may include experiment/study design, lessons learned, initial data collection, and/or literature review summary)
- Final project summary (including data collection, lessons learned, implications for further study, and which may be in the form of an article abstract, conference presentation outline, or short report)
- Teaching and Learning Commons posting (a summary of findings and examples of teaching designs or materials)
- Participation in a faculty dissemination event
- Final budget accounting (reconciliation of budget provided with your application and the actual project expenses)

By submitting this application, I accept this agreement. [Applicants initials]
DEPARTMENT HEAD CERTIFICATION

I support this PLIG application and budget, and verify that the principal applicant ______________________ is a full-time, tenured or tenure-track faculty member in good standing in my department.

Department Head Name (PRINT): ____________________________ Email: __________________

Department Head Signature: ________________________________ Date: ________________
DEPARTMENT HEAD CERTIFICATION

I support this PLIG application and budget, and verify that the principal applicant, Manli Liu, is a full-time, tenured or tenure-track faculty member in good standing in my department.

Department Head Name (PRINT): Victor Reeves

Department Head Signature:

Email: vjddk@rit.edu

Date: 2-8-16
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**Total Award Request** $4,300