



Project Rhea: student-driven learning

Faculty Mentor: Prof. Mireille Boutin, Purdue University

What is Rhea?

- ✓ An online learning tool
- ✓ Developed by students

What is it used for?

- Sharing learning material created by students and other members of the Purdue community;
- Connecting students with one another, with past students, with alumni, with faculty, with industry, ... with the whole world!

What makes it special?

- Content is publicly available;
- Anybody within the Purdue community can contribute content;
- All contributions are signed and dated;
- Features many useful software tools;
- Software and server are managed by students.

"Rhea embodies a new teaching paradigm in which students take on a leading role. Inventing and developing the technology that enables students to step into this new role is actually part of the paradigm!"

Project History

Spring 2007: Prof. Boutin conceives the idea of a learning website developed "for students, by students" to increase academic related connections and communication.

Summer 2007: The first Rhea team member, Katherine Bauman, builds a wiki for sharing learning material and discussing homework.

Fall 2007: Dennis Snell, William Ehlhardt, Tom Moffit and other students in ECE301 find creative ways to use the wiki and add the latex equation posting functionality.

2008: Stephen Rudolph, Deen King-Smith, Mike Walker and other student volunteers take the lead; move to a dedicated server; use of Mediawiki as backbone; addition of code display functionality; better browser compatibility.

2009: Funding from the Motorola Foundation; development of dropbox for homework collection by Zach Mason; writer-in-residence program begins; Ben Brame takes the lead.

2010: Double-blind peer review functionality added to dropbox; ASSIMI software deployed by Shiv Biddanda; Alumni liaison program in place; first version of ROAR for online homework with automatic grading, by Aakash and Dhruv Lamba.

2011: Andrew Haddad takes the lead. Software Bounty program funded by the Motorola Foundation.

Take a Tour!

Examples of student-created learning material:

- Guide to partial fraction expansion

https://www.projectrhea.org/rhea/index.php/Partial_Fraction_Expansion



- How to make MATLAB talk

https://www.projectrhea.org/rhea/index.php/Digital_Speech_Generation



- Collective table of formulas

https://www.projectrhea.org/rhea/index.php/Collective_Table_of_Formulas



Example of Connections:

- Virtual Q/A sessions with Alumni

https://www.projectrhea.org/rhea/index.php/Ryne_Rayburn_intro_and_questions_ECE400S12



Some Classroom Uses

- Extra credit projects such as
 - essays,
 - video tutorials,
 - alternate textbook reviews,
 - etc.
- Double-blind peer-grading.
- Collective problem solving.
- Connecting class with Alumni.

www.projectrhea.org