

Title: WeBWork Calculus Forum

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Leader	Department	University
Jason Aubrey	Mathematics	University of Missouri
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Richard Bayne	Mathematics	Howard University
Katie Cerrone	Mathematics	University of Akron, Summit College
Darwyn Cook	Mathematics	Alfred University
Nicole Engelke	Mathematics	West Virginia University
Michael Gage	Mathematics	University of Rochester
Patricio Jara	Mathematics	Tennessee State University
Gulden Karkakok	Mathematics	University of Northern Colorado
Gavin LaRose	Mathematics	University of Michigan
Barbara Margolius	Mathematics	Cleveland State University
Felipe Martins	Mathematics	Cleveland State University
Mike May	Mathematics	Saint Louis University
Paul Pearson	Mathematics	Hope College
Joseph Petrillo	Mathematics	Alfred University
Arnie Pizer	Mathematics	University of Rochester (emeritus)
Paul Seeburger	Mathematics	Monroe Community College
John Travis	Mathematics	Mississippi College
Aaron Wangberg	Mathematics	Winona State University

Focus area: Calculus Teaching and Learning (in which the WeBWork system plays a part). WeBWork is an NSF and Mathematical Association of America supported open source online homework system originally developed at the University of Rochester by Arnie Pizer and Mike Gage and now supported by a group of dedicated developers and used by hundreds of colleges and universities throughout the country and to a lesser extent, throughout the world. This PI Forum will work with calculus educators who use the WeBWork homework system to allow for easier sharing of ideas that involve homework because the group is already using the same system, but at the same time the group is large and diverse involving all types of institutions of higher learning and some high schools as well.

Ultimate Goal: Improved student understanding of calculus concepts

Expected Outcomes: shared public space on WeBWorK MAA wiki (url: webwork.maa.org/wiki) dealing with calculus instruction: what works and what doesn't; shared private space available to forum participants for sensitive institution specific materials that may still be of interest to the larger group (eg. I tried this approach and 70% of my students demonstrated little or no understanding of concept x); collection of shared materials with some information on how they are used and with what success (model courses already in the works are an example of this type of material); WeBWorK questions intended for assessment of specific calculus concepts that might be incorporated in traditional WeBWorK assignments and ultimately used in a manner similar to a concepts inventory (allowing programs to assess performance against objective standards and national norms), database of who employs what practices in teaching calculus that can be used for consultation for programs concerning changes: eg who has a coordinated calculus and who not, who has mandatory placement, what placement system is used, are gateway exams employed at your institution, etc.

Recruitment Plans: Recruit through WeBWorK consultants, WeBWorK MAA course email lists.

Meeting Schedule and Tentative Topics:

Meeting	Topic	Date	Time
Meeting 1	Calculus Teaching and Learning	Thursday June 6, 2013	2:00PM-3:30PM
Meeting 2	What to share and how to share it	Thursday August 8, 2013	2:00PM-3:30PM
Meeting 3	Calculus Retention	Tuesday September 24, 2013	3:00PM-4:30PM
Meeting 4	Placement Testing	Tuesday November 19, 2013	4:00PM-5:30PM

Desired Participant Characteristics: Participants should be faculty interested in calculus instruction who use or plan to use the WeBWorK homework system.

Application Process: Those who want to join the forum should email Barbara Margolius (b.margolius@csuohio.edu) or Felipe Martins (l.martins@csuohio.edu). The email should describe how WeBWorK is used at the applicant's institution or what the plans are for its use, and what the applicant hopes to learn or share regarding calculus instruction.