

Mar 7th, 3:10 PM - 3:30 PM


Math 1113 Precalculus Emporium: A Multi-Institutional Online Pre-Calculus Course

Kris Biesinger
University of Georgia

Chuck Kotal
University of Georgia

Nathan Moon
Georgia Institute of Technology

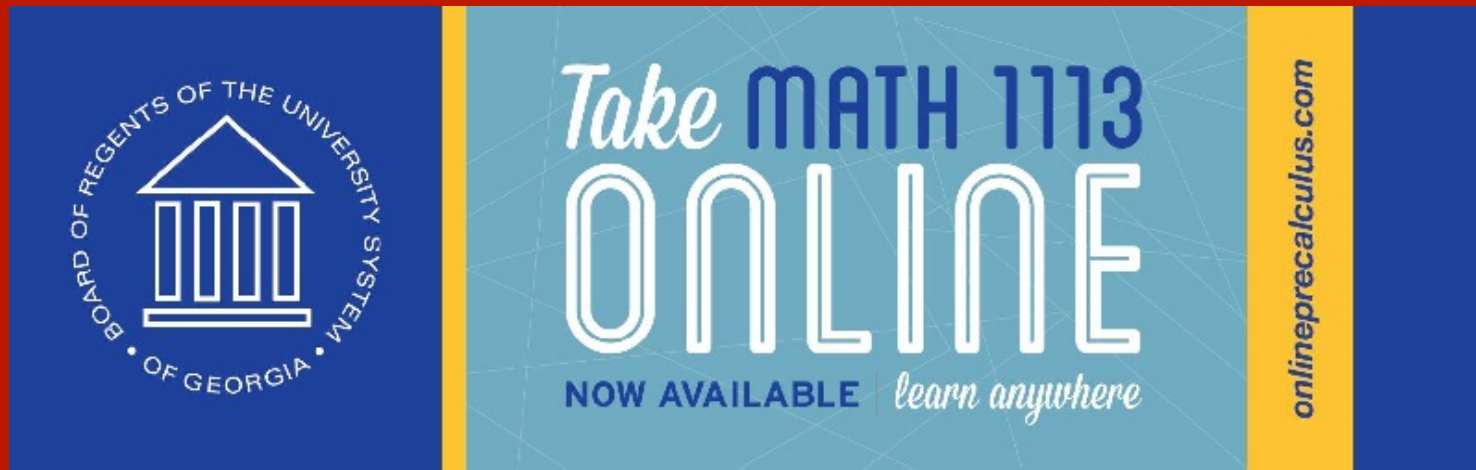
Follow this and additional works at: <https://digitalcommons.georgiasouthern.edu/stem>

 Part of the [Higher Education Commons](#), [Instructional Media Design Commons](#), [Online and Distance Education Commons](#), and the [Science and Mathematics Education Commons](#)

Recommended Citation

Biesinger, Kris; Kotal, Chuck; and Moon, Nathan, "Math 1113 Precalculus Emporium: A Multi-Institutional Online Pre-Calculus Course" (2014). *Interdisciplinary STEM Teaching & Learning Conference*. 58.
<https://digitalcommons.georgiasouthern.edu/stem/2014/2014/58>

This event is brought to you for free and open access by the Conferences & Events at Digital Commons@Georgia Southern. It has been accepted for inclusion in Interdisciplinary STEM Teaching & Learning Conference by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact digitalcommons@georgiasouthern.edu.



Kris Biesinger – Project Manager
Charles Kotal – Project Lead
Nathan Moon – Evaluator

USG Initiatives

Complete
College
Georgia

N

L

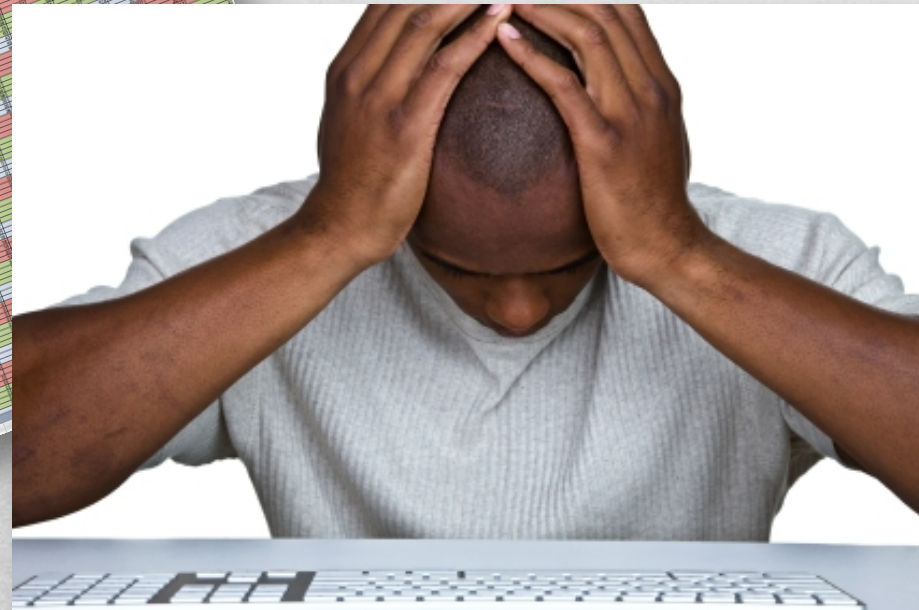
M

NEW LEARNING MODELS

A Critical Need – MATH 1113 Precalculus

37.7%
Do Not Succeed

The image shows a screenshot of a spreadsheet application, likely Microsoft Excel, displaying a large table of student performance data for the course MATH 1113. The table is organized into columns for various metrics, including 'Number of Students', 'Percentage of Students', and 'Not Yet Posted'. The rows are color-coded in alternating green and red, possibly representing different performance levels or categories. The spreadsheet interface includes a menu bar at the top with options like 'Home', 'Insert', 'Page Layout', 'Formulas', 'Data', 'Review', and 'View'. The title bar indicates the file name is 'MATH 1113'. The data is presented in a grid format with multiple columns and rows, showing a detailed breakdown of student outcomes.



USG 2013 System average percentage of D, F, W and WF (excluding Not Posted)

A Promising Approach: The Emporium Model



“While not effortless, the [emporium model] is as close to a silver bullet as one can get in the complex world of teaching and learning.”

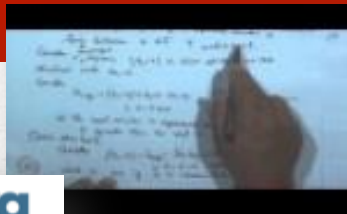
(The Math Emporium: Higher Education’s Silver Bullet, Twigg, 2011)

Emporium Success Factors

- Require active learning. Emphasis on doing as opposed to listening to how to do math.
- Ensure sufficient time on task. Math activity is required (lab hours/exercises).
- Build in ongoing assessment and prompt (automated) feedback.
- Monitor student progress and intervene when necessary.
- Provide one-on-one, on-demand assistance from highly trained personnel.



The **National Center** for
Academic Transformation



GUIDED PRACTICE



Video Lectures

Review Questions

Programming Exercises

Discussion Forums

Course Schedule

Course Information

Course FAQ

Course Badges

Online Installation

Sub-forum

General Discussion

Study Groups

Programming Exercises

Quizzes

Video Lectures

Course Material Feedback

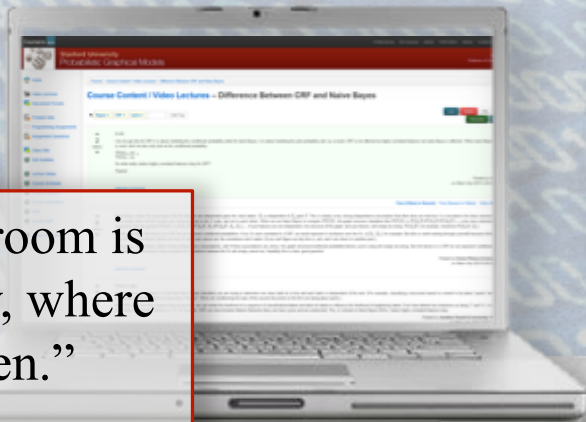
Technical Feedback

Meet your fellow students

Get help with the course material

Tell us about a problem!

CONTEXT



Sub-forum

Participant Bios

Ask the Instructor

Ask the TA

General Discussion

Study Groups

Lectures

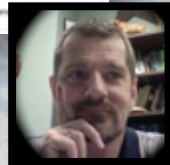
Course Material Feedback

Technical Feedback



TUTORIALS & TUTORS

“The virtual classroom is a space, a territory, where learning can happen.”



PROCTORED TESTING

USG Virtual Emporium

Online Precalculus Course Project

Institutional Partners

Georgia State University
Georgia Perimeter College
Middle Georgia State College
University of Georgia
Valdosta State University

Design & Delivery

Georgia Tech
Coursera Development
Accessibility Guidance
Project Evaluation

Timeline & Goals

Timeline:

- Develop Course in Fall 2013
- Offer Pilot Course in Spring 2014

Goals:

- Up to 300 Students from 5 Institutions
 - Evaluate Impact of the Model
 - Continue to Improve the Model
 - Scale to More Institutions
 - Modify Teaching Support Model
-

Who Are the Instructors?



Allison Arnold, UGA



Peggy Moch, VSU



Sutandra Sarkar, GSU



Sharon Evans, GPC



Barry Monk, MGSC



Kevin Yeomans, GPC

What Are the Platforms?

coursera



ProctorU

smarthinking

WebAssign.

Student Perceptions/Feedback

- Helpfulness, Timeliness of Instructors
- Discussion Forums and Study Halls as Positive to Learning Outcomes
- Technology of Less Concern than Instructional Materials
- Interest in More Video Content and Direct Instruction

Next Steps

- Review Evaluative Data
- Refine Course (Platforms and Materials)
- Expand Number of Participating Institutions and Continue to Pilot in Fall 2014
- Address Faculty Load & Responsibilities
- Develop Long-Term Business Model

Questions?

For More Information, Contact:

Dr. Kris Biesinger, Project Manager

krisb@uga.edu

Dr. Nathan Moon, Evaluator

nathan.moon@cacp.gatech.edu

MATH 1113 Online Project Acknowledges the Support of the Office of
College Access and Success, University System of Georgia