

Modeling in Calculus: Early and Often

PREP Workshop

College of Idaho

July, 2013

Outline of the Week

Monday	Arrival and Introductions
Tuesday	Introduction to Software and the Process of Modeling
Wednesday	Tools for Modeling
Thursday	More Tools for Modeling
Friday	Show and Tell

Daily Schedule

7:00 – 8:00	Breakfast
8:15 – 11:30	AM session
11:30 – 12:30	Lunch
12:45 – 5:00	PM Session
5:00 –	Free Time, Dinner, Evening Activities

Work + Shop = Workshop

Shopping

- lots of examples
- big picture discussion (pedagogy, curriculum)
- sources for more materials, examples, etc.

Working

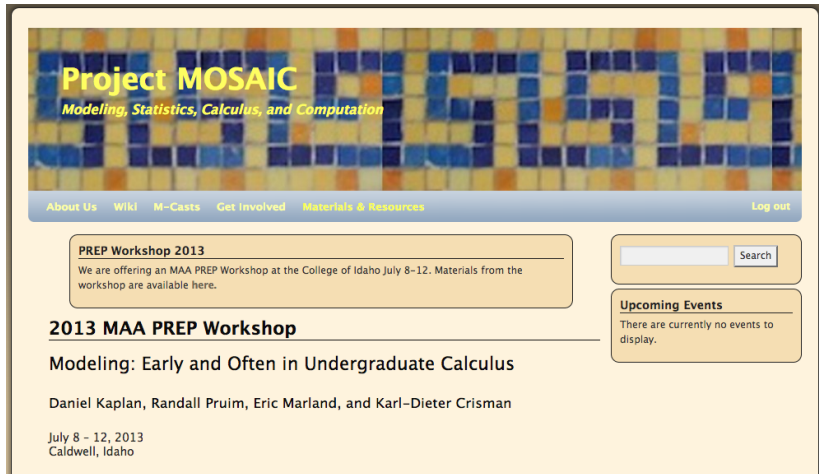
- Time each day for you to work on your own stuff
- We hope everyone will have at least one thing (class demo, student project assignment, curriculum revision, test problems, etc.) to report on Friday.

All Work and No Play ...

- Tuesday evening – *Sweeny Todd*
- Wednesday evening – Dinner at Bitner Vineyard
- Thursday evening – *Much Ado About Nothing*

Information Please

<http://mosaic-web.org/>



The screenshot shows the Project MOSAIC website. The header features a mosaic background with the text "Project MOSAIC" in large yellow letters and "Modeling, Statistics, Calculus, and Computation" in smaller yellow letters below it. A navigation bar contains links: "About Us", "Wiki", "M-Casts", "Get Involved", "Materials & Resources", and a "Log out" button on the right. Below the navigation bar, there are two main content areas. The left area has a box titled "PREP Workshop 2013" with the text: "We are offering an MAA PREP Workshop at the College of Idaho July 8-12. Materials from the workshop are available here." Below this box is the heading "2013 MAA PREP Workshop" followed by "Modeling: Early and Often in Undergraduate Calculus" and the names "Daniel Kaplan, Randall Pruim, Eric Marland, and Karl-Dieter Crisman". At the bottom left, it says "July 8 - 12, 2013" and "Caldwell, Idaho". The right area has a search box with a "Search" button and a box titled "Upcoming Events" with the text: "There are currently no events to display."

Project MOSAIC
Modeling, Statistics, Calculus, and Computation

About Us Wiki M-Casts Get Involved Materials & Resources Log out

PREP Workshop 2013
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2013 MAA PREP Workshop
Modeling: Early and Often in Undergraduate Calculus
Daniel Kaplan, Randall Pruim, Eric Marland, and Karl-Dieter Crisman
July 8 - 12, 2013
Caldwell, Idaho

Upcoming Events
There are currently no events to display.

Nick Horton (Smith)



Eric Marland (Appalachian St.)



Danny Kaplan (Macalester)



Danny Kaplan (Macalester)



Karl-Dieter Crisman (Gordon)



This is not a picture of Randy Pruim



Inchworm



More Introductions

1. Pair up with someone not from your institution.
2. Find out some information about them.
 - Name
 - Favorite course to teach
 - Something person likes about their hometown or home institution
 - Something they like to do that is completely unrelated to mathematics
3. Be prepared to introduce your partner to the rest of us in a few minutes.

What is Modeling? What is Calculus?

Take a moment to draft definitions of **modeling** and **calculus**.

What makes Modeling Mathematical?

Look at your definition of modeling. Does the insertion of the word mathematical change things? If so how?

If you had already mentally inserted the word mathematical, the do this exercise backwards – what changes when you remove the word mathematical?

State of Calculus

In groups of 3 or 4, discuss the current state of calculus at your institution

- What sorts of students are taking your calculus courses?
- What is your favorite section in calculus (and why?)
- What is your least favorite section in calculus (and why?)
- What do you want students to get from their calculus course?
- What's an important calculus topics for which you have trouble finding realistic applications?

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Be prepared to report back one interesting thing someone else in your group said.

Lake Michigan Sunset

