Improving Student Outcomes in Gateway Courses

Office of Teaching, Learning, and Technology
Introductions

Gateway support team
- Katherine Beydler, PhD: Assistant Director, Center for Teaching, OTLT
- Pinar Celik, PhD: Lead Instructional Designer, DOE
- Anna Smith: Learning Analytics Specialist, Research and Analytics, OTLT
- Jamie Tanas: Course Improvement Coordinator, Instructional Services, OTLT

Faculty Lead: College Algebra
- Cindy Farthing, PhD: Associate Professor of Instruction, Dept. of Mathematics

What we do:
- Provide support for technological tools, learning analytics data, instructional and andragogical support for large introductory "gateway" courses
What are Gateway Courses?

- Foundation Level
- High-Risk
- High Enrollment
- Inequitable outcomes
Current Gateway Projects

- College Algebra-PIF funded project initiated in December 2018.

- Hawkeye Introductory Courses-P3 (public-private partnership) funded project in CLAS-Initiated Spring 2021
  - Computer Science
  - Mathematics
  - Statistics and Actuarial Sciences
  - Chemistry
  - Health and Human Physiology
What are the challenges?

<table>
<thead>
<tr>
<th>Active Learning in large courses</th>
<th>Identifying Students who need support</th>
<th>Communication with students</th>
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<tbody>
<tr>
<td>Large Instructional Teams</td>
<td>Students Learning to Learn (metacognition)</td>
<td>Mastery Based Learning</td>
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Our Process

**Post-semester analysis**
Engagement, feedback, and outcomes, compare to prior semesters

**Pedagogical development of teaching teams**
- Connect student data to classroom learning experiences
- Discuss using tech tools to facilitate student success
- Facilitate peer learning through regular meetings

**Pre-design analysis**
Identify achievement gaps, critical points in the semester, problem areas

**Pedagogical support for implementation of goals**
- Pre-semester teaching workshops
- Feedback from instructors on teaching challenges

**Provide critical data to instructors**
Created (near) real-time dashboards

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Faculty Perspective

- Expertise and cooperation of team focused on improving course and teaching is very helpful.
  - Colleagues to work through challenges and find solutions
  - Additional support for TA training and analyzing data frees up time to focus on improving content for course
  - Make connections between other faculty and departments working on course design

- Additional data highlights trends in student engagement; allows us to give more than anecdotal evidence.

- OTLT expertise about instructional technology has improved the course for instructors and students
  - Improved ICON organization – merged all sections into one course
  - Created surveys to schedule retake exams for 250 students.
Thank you!

Please join us in the breakout room for questions!

- Interested in learning more?
- Would you like to work with us?

- Contact us at:
  teaching@uiowa.edu