Montana Mathematics Initiatives

Robert Mokwa | Montana State University

Montana Board of Regents
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Primary Goals:

• Teach mathematics content and skills that will be of value to students in their lives and careers

• Increase and accelerate student success in mathematics
Enrollment in College Algebra

Math 121 enrollment by major clusters:
Fall 2009 – Spring 2015
n = 16,626

- STEM majors
- Health Science
- General studies/undeclared majors
1- Math Pathways: Recommendations

1. Provide clear pathways for students who pursue non-STEM majors

2. Enhance offerings of *algebraic-light* math courses for students in non-calculus meta-majors

3. Re-assess math requirements for non-STEM Majors

4. Strengthen advising processes for math/stats courses

5. Strengthen communications – both internal and external
1- Math Pathways: Accomplishment

M 105Q – Contemporary Mathematics
Corequisite approach –

Improve the success of students who enter college but are not ready for college level math (and/or writing) courses
Too many students start college in remediation

Nationally:
- 61% in 2-year institutions
- 28% in 4-year, non-flagship institutions

Montana (Math or English):
- 52% in 2-year institutions
- 47% in 4-year, non-flagship institutions
- 21% in 4-year, flagship institutions
Few Graduate or Transfer

Of 2-year students enrolled in remediation:

Nationally:
- 11% graduate in 3 years
- 18% transfer to 4-year institution, in 4 years

Montana (Math or English):
- 15.3% graduate in 3 years
- 16.4% transfer to 4-year institution, in 4 years
Remediation

Student attrition is at the heart of the matter...
Student Attrition in Developmental Math Sequence (*MUS data*)

**STEM**
- Progression of Students Placed into M095, M096, M097, or M098
  - Fall 2009 – Spring 2015
  - Placed into Dev Math: 3501
  - Continued to College Math: 1578
  - 8.6% Success: 300

**Non-STEM**
- Placed into Dev Math: 8925
- Continued to College Math: 3372
- Earned a Degree: 869
- 9.7% Success

*Note*: Images in the diagram represent approximately 300 students.
Corequisite at Scale

The corequisite model represents an alternate approach to non-credit-bearing developmental courses.
Corequisite Courses are College Courses

➤ Corequisite students are treated as college students on day one

➤ Students complete gateway courses and enter programs of study in their 1st academic year

➤ Corequisite students are learning college-level content with integrated academic support
What is a corequisite course?

Corequisite = Gateway + Developmental

Imbedded Class Support:
- additional class instructional time
- additional course hours

Sequenced:
- 5 weeks prep + 10 weeks of gateway content

Class plus...
- self-paced computer lab
- EdReady support
- mandatory tutoring
Success of Corequisite Programs at Scale (CCA 2016)

22% National average for developmental success

- Colorado: 64%
- Georgia: 71%
- Indiana: 64%
- Tennessee: 64%
- West Virginia: 68%

(Source: Complete College America)
Montana Corequisite At-Scale

Timeline…

- **March 30, 2016**: Corequisite at Scale Leadership Academy (CCA)
- **May 2016**: Assemble Montana Task Force; communicate initiative; identify data needs
- **July-Aug 2016**: Examine existing pilot programs; identify potential challenges and solutions; collect and assess data
- **Sept 30 (tentative)**: Conduct state-wide corequisite summit and workshop
- **Oct-Dec 2016**: Communicate recommendations and develop implementation plan
- **Spring-Fall 2017**: Refine corequisite models; expand pilot offerings; assess and finalize programming details
- **Spring 2018**: Full scale implementation
Keys to a successful process:

- Engage faculty
- Establish a sense of urgency
- Communicate – plan ahead with positive messaging
- Use an information-driven approach
- Join forces across sectors and campuses
- Emphasize the common ground ➔ student success
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Questions?