

Math Pathways Task Force

November 21, 2014

10:00am-12:00pm

Colorado Department of Higher Education
1560 Broadway -Suite 1600 - Denver, CO 80202

Call-in Number: 1-877-820-7831; Access code: 473156#

To join the webinar: <http://connect.enetcolorado.org/gecouncil/>

Meeting Notes in Red

Objectives: Approve Goal and Mission Statement. Define the problems the task force wants to address, form working groups, and assign responsibilities.

1. Greetings and Introductions

In attendance: Dean Allison (UNC), Rick Miranda (CSU), Steve Aldrich, (ASU), Sandy Gilpin (FLC), Rick Ott (CMU), Dave Ruch (MSU Denver), Casey Sacks (CCCS), Rob Tubbs (UCB), Alexis Venter (ACC), Frank Zizza (CSU-Pueblo), Bruce Vandal (Complete College America), Maia Blom (CDHE) & Ian Macgillivray (CDHE)

2. Last meeting's notes are posted at

<http://highered.colorado.gov/Academics/Groups/Math%20Pathways%20Task%20Force/schedule.html>

3. Approve Overall Goal & Mission Statement

a) ~~DRAFT-Approved~~ Overall goal (~~Copied directly from the Ohio Mathematics Initiative~~)

Develop expectations and processes that result in each institution of higher education in Colorado offering pathways in mathematics that yield (1) increased success for students in the study of mathematics; (2) a higher percentage of students completing in a timely manner the appropriate gateway math course(s) for their intended degree programs; and (3) effective transferability of credits for students moving from one institution to another.

b) ~~DRAFT-Approved~~ Mission Statement

The mission of the Colorado Math Pathways Task Force is to

a) Convene math faculty leaders to decide how well gateway math courses are aligned with programs of study;

b) Draft a public statement on the importance of better alignment of gateway math courses with programs of study;

c) Identify and/or suggest alternative gateway math courses, that are rigorous and of quality in content and competencies, and that are more appropriately aligned with the math skills students need to succeed in their programs of study; and

d) Work with representatives from academic disciplines and advisors to review ~~their~~ math requirements and ~~adopt~~ consider alternative courses to college algebra for non-calculus based majors.

4. Defining the Problems the Task Force Wants to Address
 - a. Review the results of last meeting's brainstorming of the goals and challenges.
 - b. Discuss what we see as the essential problems we want to address. How can these be identified in subtopics in order to make the work manageable? (Take time to work in groups to refine the list of essential subtopics.)
 - c. Form small working groups to do work outlined in the *Defining the Problem Template*.

Discussion probably went too quickly to thinking of solutions rather than identifying essential problems. Reminder that in April 2015 the public statement about better alignment of gateway math courses is due. Reminder also that the Task Force shouldn't worry about how identified problems will get solved at this point—that will come in the next phase later in 2015 and into 2016. Notes from this discussion include:

- Quality of courses
- What are the courses nationwide (Algebra, Stats, non-technical, others or versions of these?)
- Placement and advising
- Involving K-12
- Identify the versions/flavors of the gateway courses we want to explore and maybe endorse.
- Transfer / Articulation and communication between 2 years and 4 years
- Make a plan to engage the state math community and the academic departments (MAA, CCTM, CDHE: 2to2 and 2to4 presentation and discussions, conference between K-12 and post secondary?)
- Supporting public statement to build support around math pathways with an evidence base. Get feedback from math chairs and ask to sign on eventually. Use MAA conference as venue to talk through with chairs and bring in Uri to back up Task Force statement. Not sure if we want to broach content.
- How to articulate the problem with data? Look at failure rates in college algebra courses. Look at who's taking what courses and if makes sense for degree program. Progression data (can also do back tracking to see where students in Calcs came from). *J.S. at CSU may have data to help. K.R. at UCD too. How are the Pre-Calc students doing in calc compared to college algebra and other?
- Degrees with Designation (DwD's). Philosophy/guidance (for faculty, advisors, & high school counselors) on selecting the appropriate gateway math course. 4.
- Too often course cut-scores drive students' course selection, and need to be fixed at the state level. College ready cut scores in CCHE Remedial Policy (important guidance for high school graduation guidelines and supports college/career readiness for high school graduates)
- Making a plan to engage math community, departments, math organizations, conferences, getting feedback.
- Students change their minds about majors, so the alternate pathways need to be flexible enough to allow for students to pivot between STEM and non-STEM majors.

From the above, we fleshed out these 5 “essential problems” and will use the “Defining the Problem Template” to get members’ feedback between now and the next meeting:

1. Are students in the right gateway math course(s)? -- Rob (UCB) & Dean (UNC) & Shelly (Aims) & Steve (ASU)
2. What should the gateway math courses be? – Alexis (ACC)& Rick M. (CSU) & Sandy (FLC)
3. Communication between 2- and 4- years about transfer/articulation of gateway math courses. -- Alexis (ACC) & Dave (MSU Denver) & Alexander (CSU)
4. Placement and advising within an institution into the appropriate gateway math course. -- Casey (CCCS) & Rick O. (CMU) & Frank (CSU-Pueblo)
5. Quality and consistency of gateway math courses intra- and inter-institutionally. (We will wait on this one because we think it will get fleshed out more as we address the first 4.)

5. Please send Ian:

a) List of Math Courses by Degree Program at Each Institution. Have not received from: ~~CMU, FLC, MSU Denver, UCB,~~ & UCD.

b) Cut Scores for Gateway Math Courses in the Remedial Policy Table. Have not received from: Aims, ~~CCCS, CMU, MSU Denver,~~ UCB (Ian will follow up with UCB), ~~UCD, UNC~~

6. Other Business?

MAA Rocky Mountain section meets at Colorado College, Colorado Springs on April 17-18, 2015. Should the Task Force try and schedule a meeting that weekend and invite Uri from The Dana Center?

Conference website: <https://www.coloradocollege.edu/other/maa/>

7. Next meeting

- a) Idea for subsequent meetings is to meet less frequently but for a longer period of time.
- b) Next meeting date: January 23, 10AM-2PM (Amy Getz, our Dana Center “consultant,” will attend)