

04/18/2014 Faculty-to-Faculty Conference – Breakout Session – MATH FOR LIBERAL ARTS

SMART = **S**tudent centered; **M**easureable; **A**ttainable; **R**elevant; **T**ime bound

Brought up the community college for math 120 Math for Liberal Arts

- An issue -The four years do not have a common course for math for liberal arts
- Need a common idea for 120 for Liberal Arts

Need to identify a math class for artist and literature based majors.

- What math requirements are needed for people with degrees that are not STEM
- Employers expect some skills
- History in 80s and 70s a lot of people took college algebra. Students took math history for the math requirement.

College algebra may not be appropriate for everyone, i.e. history---liberal artist strengths research discuss argue , there write argumentative essays relating today.

State wants schools to have common courses from one school to another. Discussed using community college outcomes as a starting place to work from to build a common course. The course needs to be a specified course that is for non-stem pathways. (Ian's note added 5/2/14: I wouldn't say the state wants "common courses." Rather, what the state hears the faculty saying, and the state agrees, it would increase student learning and transfer if there were "common student learning outcomes" for Pathways courses.)

What do we have to ---based on what do we agree; Conversation on what is the same:

- All community colleges cover financial – let's start with financial
- 4 year some do loans other does a finance piece, and inferential stats piece, not believe any study
- Real world math percentages increase decrease, not stem not statistics,
- Do we need set theory, need logic. Could do set theory as critical thinking,
- Asks of students what do you like, they liked logic,

The group through discussion agreed to:

Finance, - payments, amortizations, annuity,

All school use finance let's start there

- Consumer finance
 - Used the community colleges outline
 - Brain storm

- Added student loans and personal budgeting,
- State goal setting, income, using credit,

Conversation changed to expectations on group.

Think about putting the outcomes up then can pair down. The expectation is to brain storm might take a year.

This will be displayed to all colleges to view and discuss. This would be done on blackboard.

2 Statistics would be common – read and create a report

- Next all agree added sampling method statistics needs to be general an intro, should there be more depth?, group felt general.

3 set theory and logic discussion

Some are concerned with logic could it be just theory

Side bar conversation

People did not agree on the set theory and logic as a topic. Went back to items to agree upon.

Probability is a common – grabbed and added to the template.

Outcome vs an event

Went back to discussion on Logic and number theory. Did not have a consensus.

- For problem solving logic is necessary – critical thinking inductive deductive set logic number theory and the real number system metric
- Q does the each course have to be the same
- This is a terminal course
- Could this be a pre req for another course. Could we say this is a set up for another course to follow
- Could we help students by putting elements in this course.
- Econ is needed to 121
- However down the road could we set up material to help students with later in their academics
- Conversation on alignment now for following courses in 121
- 120 and 135 are they rigorous
- This class is for the arts and humanities

- What should math be for an artist or social science
- Some colleges have a watered down college algebra course

Conversation strayed away from set theory and logic. Other states have common requirements for math for liberal arts. Nebraska UMKC

- Or a math history course
- Looked at other states and the topics with their liberal courses
- Looked at UMKC – logic, sets and counting, probability, statistics
- State of Colorado personal finance is what is in social studies and how is in math
- The money part – at the college level the maturity to have meaningful conversation about money
- The money part is important for citizenship.
- CC has a course aligned how do we fit the four year
- When the two years made course –criteria math faculty to judge if something is worthy of GT
- Discussion on other courses too much variety for the four year—some are watered down algebra some use a math history...some courses that are approved for non stem look very different.
- The differentiation occurred in the past, now they are trying to be more similar. We have gone from being a difficult to transfer from school

80% is not what should be covered in a class, teacher will cover most of them. The 80% is there a difference by more than 80% two courses are two different titles but have 80% the same then they are the same course.

Discussion on mathematical modeling ---should the algebra be optional.

Conversation regarding adding all topics from the community colleges and letting each discuss their specifics ideas for the course.

- Keep consumer math and financial piece but make the other sections optional
- Can this be taught for understanding with more topics – or can the list be shorter and go for understanding—realistic time constraints.
- One four year does the optional topics only
- It is a terminal course—gen ed gt category is only for gen ed requirement. But not a major requirement
- If the courses are different and we are accepting transfer then do we have to change courses to all be the same
- Large population that never completed a math class and need to for a degree, effective graduation degrees
- Employers complain about grade cannot do basic math, write well or speak well. The expectation out of college would be ----if the alignment is complete then there would be a common end

- What if put out all topics on for the state faculty to discuss

We all agree on consumer math, stats, probability,

Added Problem solving the overarching is communication

Does anyone want to add

Adams has a different course

Conversation on adding all CCs topics for everyone to view and decide

This way all course would be represented

On black board,

Final thoughts, put up all topics for discussion and let the colleges view for:

What is in your course currently?

What do you think it should be?

Here are some choices

What else do you think it should be?