

Math Issues Committee Meeting

Friday, February 19, 2010

Tunxis Community College, Room 7-206 (Library, large conference room)

Present: Kathy Bavelas (GWCC), Martin Brock (NCC), Joachim Bullacher (QVCC), Elaine Dinto (NVCC), Paul Edelen (MCC), Teresa Foley (ACC), Pat Hirschy (ACC), Joy Mark (QVCC), Sue Ricciuti (TxCC), Pam Wahl (MxCC)

Pat, continuing to serve as Chair in Miguel's absence, **called the meeting to order** at 11:00 a.m.

Minutes of the 12/11/09 Math Issues Committee meeting were approved unanimously.

OLD BUSINESS

1. Placement policies, procedures, and instruments —

Adding ACT to placement menu

Discussion continued from last meeting on ACT scores. A motion was made to include ACT scores for math placement in the system placement procedures, initially using the cut-off scores used by the CSU system; it is recommended that this placement be reviewed in the spring of 2011. The motion was approved unanimously by Committee members.

Homework: Bring this proposal back to your campus for discussion/vote.

Continued discussion / MI member results of Accuplacer self-test

ACC	Pat's results showed that it is easy to place into MAT*137, but difficult to place out.
NVCC	Several faculty members at NVCC self-tested. Results showed that students with a strong elementary algebra background taking the EA subtest place correctly into MAT*137. However, results also showed that while very weak elementary algebra students taking the EA subtest (3 or 4 of 12 questions correct) can place into MAT*095, they can do so without having to demonstrate basic arithmetic skills (operations with fractions, decimals, signed numbers, work with proportions and percents). Also of concern is that one result showed a mediocre elementary algebra student placing into MAT*137 (similar to Pat's findings), and another showed a "good guesser" (answering only a particular 4 out of 12 questions correctly on the EA subtest) being placed into MAT*137, verifying what Joachim had already reported.
QVCC	Joachim took Accuplacer 4 times to try to determine how many correct questions were needed to place into 137; the number seemed to vary according to specific questions. He commented that one time he answered only (a particular) 4 of 12 questions correctly on the EA subtest and placed into IA.
TXCC	Sue took Accuplacer 4 times with variable accuracy in placement. She reported that Accuplacer now has a diagnostic test, which she took (it is still in the development stages); once the development process is complete, perhaps it can be used in conjunction with the placement test. Diagnostic areas for the AR test include computation with integers and fractions; computation with decimal numbers; problems involving percent; estimation, ordering, and number sense; word problems and applications. Diagnostic areas for EA include real numbers; linear equations, inequalities, and systems; quadratic expressions and equations; algebraic expressions and equations; word problems and applications

A template for Accuplacer cutoffs for all colleges did exist (it is from these documents that the current band of scores for entrance into intermediate algebra and the minimum score for placement out of intermediate algebra were determined). Elaine will check to see if these documents exist in electronic form.

Homework: Continue with Accuplacer self-testing; try the diagnostic, if possible. Contact your placement testing coordinator to determine if we can we access/make use of the diagnostic. Pat will follow up with Lori.

Continued discussion of ATB (Ability to Benefit) Policy

GWCC	Uses Accuplacer AR score of 34 to define ATB if no high school diploma; policy rarely used
MCC	None
NVCC	None; placement into MAT*073
NWCC	None; placement into MAT*075
NCC	None
QVCC	Cutoff 34; "opportunity to benefit" has 2 coordinators; entering student may/may not have a high school degree. Students have a support system, meet with coordinators regularly. They have a 100% retention rate in the first course and a higher graduation rate than the general population!
TXCC	Uses Accuplacer AR score of 34 to define ATB if no high school diploma; policy rarely used

Concern: What can we do for students who score particularly low on Accuplacer, and cannot pass our courses? They need more help than some colleges are able to provide (Lori has data for Tunxis)
Homework: Consider ways to document need. Besides Quinebaug Valley, do other colleges have successful programs in place?

Discussion of AMATYC **Placement Position Paper** was tabled.

2. Degree math courses with MAT*095 prerequisite for terminal degree

College	ACC 1	CCC 2	GWCC 3	HCC 4	MCC 5	MXCC 6	NVCC 7	NWCC 8	NCC 9	QVCC 10	TRCC 11	TXCC 12
Degree math course(s) with MAT*095 prerequisite for terminal degree	109	none	109 115, 123, 135	135	109	104	121 135	135	121		135	135

Continuation of last month's MAT*109 discussion took place.

Manchester is revising the college general education requirements. In order for MAT*109 (*Quantitative Literacy*) to fulfill the new requirements, MCC will add more modeling to the course; currently they use the Moore textbook. There is a big jump from this level to inferential statistics, and students taking the course are not looking to transfer at this time. The course fits in well with *New Life Vision's* probability and statistics initiative.

Middlesex CC's MAT*104 (*Quantitative Reasoning*) is similar to Manchester's MAT*109. While it does not have a MAT*137 prerequisite, but is a good option for many students.

Note: The purpose of the *Quantitative Literacy/Quantitative Reasoning* courses is to aid students in understanding mathematics. Students need more than the algebra of linear functions/expressions; many intermediate algebra courses are a collection of a lot of skills only and do not include modeling.

Note regarding *Circle 2: Outcome Strands* from *New Vision* document — vision is for a change in conceptual understanding, not in quantity; Committee members think this will be difficult to accomplish in 3 credit hours. (<http://dm-live.wikispaces.com>)

3. Intermediate Algebra — Criteria to differentiate various MAT 13x course

College	Intermediate Algebra course # and # of credits	Place in curriculum (prerequisite to college algebra, college algebra w/ trig, precalculus)	Content: Cover exponentials and logs, and to what extent?	Use of technology	Function approach	Modeling (find model for data; make connections to real world topics)
ACC	137 3	precalculus	yes to both	graphing calculator required	yes	some exposure to modeling; do many apps
CCC	137 3	precalculus; considering college algebra	exp fcns and log fcns covered, w/ domains; do not solve equations	no	no; briefly introduce fcns, name exposure, discuss domains	no; do many apps
GWCC	137 3	college algebra with/without trig (172/175)	briefly cover exponential fcns; no logs	graphing calculator required	no; do discuss fcns	no; do many apps
HCC	137 3	precalculus	no	yes	no; briefly introduce fcns, name exposure, discuss domains	no; no apps
MCC	138 3	precalculus; considering college algebra	exponentials	yes	yes	yes, emphasis on modeling
MXCC	137 3	college algebra, then to precalculus	no	very little	no; just a bit toward the end	very little modeling; use of apps for most topics
NVCC	137, 137C, 137A 3	college algebra, then trigonometric functions	exponentials (more so in 137A); no logs	yes	yes in 137A; discuss fcns in 137 and 137C, but not heavy concentration	modeling in 137A; apps in all, more so in 137A
NWCC	137 3	precalculus	yes, including solving exponential and log equations and			

			graphing fcns			
NCC	136 4	college algebra	no	calculators are prohibited until higher level courses	no; briefly introduce fcns, name exposure, discuss domains	no modeling
QVCC	137 3	precalculus; will go to college algebra	no	no	no; briefly introduce fcns, name exposure, discuss domains	no; apps
TRCC	137 3	precalculus	yes to both	graphing calculators	no; considering a change	no; many apps
TXCC	137 3	college algebra w/ C+ or better; finite math if C or C-; then precalculus	no	scientific calculator okay; grapher prohibited	no; briefly introduce fcns, name exposure, discuss domains	no; some apps

Homework: Committee members agreed to continue review of above Intermediate Algebra chart (check for accuracy, look for patterns) addressing number of credits, place in curriculum, content (exponentials and logs), use of technology, function approach, modeling.

Other discussion regarding intermediate algebra:

- If MAT*137 is to remain a credit course, the level of the course must remain high. Will MAT*137 become a developmental course, meaning that students will then all need a course above this level? Will high schools take over the 137?
- Colleges that currently offer college algebra include Gateway, Middlesex, Naugatuck, Norwalk, Tunxis; students then go to trigonometric functions or precalculus.
- MAT*137 serves many purposes and leads to all college level transfer courses: statistics, liberal arts, math for elementary education, precalculus.
- Should topics needed specifically for college algebra be moved out of MAT*137? Rationale: precalculus students are spending too much time reviewing.
- MCC looked at data: people who place directly into precalculus do better than those who came from MAT*137/138.
- At MXCC, in precalculus, material includes polar, sequences and series, and sometimes vectors.
- Would it make sense to have different course numbers for intermediate algebra serving students entering college algebra vs. those entering precalculus? Would a change in number affect transfer to any 4-year institution?

Homework: Bring syllabi for 137 to look specifically at content. Paul will bring examples of modeling used in Manchester's 138.

NEW BUSINESS was tabled.

ANNOUNCEMENTS

Kathy reported that Miguel's recovery has gone well and that he is back teaching; Committee members continue to wish him well.

The meeting adjourned at 12:35 p.m.

Respectfully submitted by



Elaine Dinto