Mathematics Discipline Meeting  
Wednesday, Sept. 2, 2015  
Minutes

Present: Clayton Akatsuka, Jean Okumura, Navtej (Johnny) Singh, Jody Storm, Weiling Landers  
The meeting was called to order at 9:05 am in the Mana’o Conference Room 107.

1. Student Success Council Task Force  
   o Jody and Clayton attended the Aug. 20th meeting.  
   o Non-STEM Pathway

   ➢ Change the name to College Pathway.  
   ➢ Math 75 (3 cr) with no prerequisite  
     ❖ Title: Introduction to Mathematical Reasoning  
     ❖ Catalog Description – This course prepares students for Math 100, Math 111, and Math 115. Course topics include ratio and percent, unit conversion, graphs, data interpretation, basic algebra, solving linear equations, and working with formulas with special emphasis on pattern recognition and problem solving.  
     ❖ SLOs
       1. Solve applied mathematical problems, judge reasonableness of results, and communicate conclusions using appropriate terminology and symbols.  
       2. Recognize and express mathematical patters in various forms and contexts.  
       3. Campuses may add more SLOs.

   ➢ Topics (Themes) – Comprises 80% of the course.  
     • Critical Thinking and Problem-Solving Strategies  
     • Number Sense  
     • Linear Equations in One and Two Variables  
     • Evaluating and Manipulating formulas  
     • Proportional Reasoning  
     • Graphical Representations  
     • Dimensional Analysis  
     • Basic Probability  
     • Operations on Real Numbers  
     • Geometry and Measurement  
     • WOVEN THROUGHOUT
       ✓ Applications  
       ✓ Reading mathematics (math vocabulary)  
       ✓ Communicating mathematics  
       ✓ Appropriate use of technology  
       ✓ Pattern Recognition

   ➢ Math 75X (4 cr) will have more depth than Math 75.
Math 78 (1 cr)
  ❖ Title: College Math Companion
  ❖ Catalog Description – This course provides students concurrently enrolled in Math 100, Math 111, or Math 115 with Just-In-Time support with special emphasis on pattern recognition and problem solving. Course topics are tailored to the concurrent course and may include ratio and percent, unit conversion, graphs, data interpretation, basic algebra, solving linear equations, and working with formulas.

  ❖ SLOs
  1. Demonstrate mathematical reasoning skills needed to successfully complete a companion college math course (Math 100, 111, or 115).
  2. Campuses may add SLOs.

  ❖ If student places into Math 25, they will take 100/111/115 with co-requisite support. So, student has some algebraic ability at least with “linear things.”

  ❖ Campuses may decide whether or not to offer Math 78.

  ❖ Curriculum may be tailored to support the concurrent course (Math 100, 111, or 115).

  ➢ STEM Pathway

    ➢ Change name to Algebra Pathway.

    ➢ The group eliminated Math 82L.

Math 82 (4 cr)
  ❖ Title: Algebraic Foundation

  ❖ Catalog Description – Math 82 covers elementary algebra topics. Topics include linear equations and inequalities, graphing, linear systems, properties of exponents, operations on polynomials, factoring, rational and radical expressions and equations, quadratic equations, and applications.

  ❖ SLOs
  1. Use algebraic techniques to analyze and solve applied problems
  2. Graph linear and quadratic equations.
  3. Solve equations, inequalities, and systems.
  4. Campuses may add more SLOs.

  ❖ Topics – Comprises 80% of the course.
  • Perform operations with polynomials
  • Solve linear equations
  • Solve linear inequalities
  • Solve systems of linear equations in two variables by substitution, elimination, and graphing.
  • Set builder and interval notation
  • Cartesian coordinate system
  • Graph linear equations using a table of values, by slope-intercept form, and by using intercepts
  • Graph and identify equations of horizontal and vertical lines
  • Identify parallel and perpendicular lines
  • Write the equation of a line in $y = mx + b$ form
  • Graph parabolas using a table of values.
  • Simplify expressions with integer exponents using the product, power, and quotient rules
• Scientific notation
• Factor polynomials
• Use the Pythagorean Theorem
• Perform operations on rational expressions
• Simplify complex fractions
• Solve rational equations
• Simplify expressions with rational exponents using the product, power, and quotient rules
• Perform operations on square roots
• Solve quadratic equations by the quadratic formula, factoring, and square root property.
• Solve applications problems involving linear equations, quadratic equations, and systems of equations
• Solve radical equations (squaring both sides once)

❖ Students must test into Math 82 (Math 24 level).

➢ Math 82X (5 cr)
  ❖ Title: Expanded Algebraic Foundations
  ❖ Catalog Description – Math 82X covers elementary algebra topics. Topics include linear equations and inequalities, graphing, linear systems, properties of exponents, operations on polynomials, factoring, rational and radical expressions and equations, quadratic equations, and applications. Additional topics may include graphing by transformations, introduction to logarithms and functions, and dimensional analysis.
  ❖ SLOs
    1. Use algebraic techniques to analyze and solve applied problems.
    2. Graph linear and quadratic equations.
    3. Solve equations, inequalities, and systems.
    4. Campuses may add more SLOs.
  ❖ Students must test in Math 82X (Math 24 level).

➢ Math 88 (2 cr)
  ❖ Title: College Algebra Companion
  ❖ Catalog Description – Math 88 provides students with supplemental algebra instruction that directly supports the topics covered in Math 103.
  ❖ SLOs
    1. Demonstrate algebra skills needed to be successful in Math 103.
    2. Campuses may add SLOs.
  ❖ Topics – To be determined by the campus.
  ❖ Math 88 would have a higher placement cut off than Math 82 or Math 82X.

➢ Students who do not place into Math 82 or Math 82X may take Math 75 or a non-credit prep course determined by the campus.

  o We decided to initially offer Math 82 (4 cr) and Math 75X (4 cr). We may change and/or choose to offer Math 88 or 78 in the future.

  o Calculator use and mode of instruction will be determined by campus.
2. Placement Test
   o There is a subcommittee working on this.
   o Christine Korey-Smith appears to be on the subcommittee.
   o Louise Pagotto might know who is on the subcommittee.

3. Course Level Assessment for AY 2015-16
   o Due to system initiatives, developmental courses do not need to be assessed this academic year.
   o Fall 2015
      ➢ Math 100 (Jody Storm)
      ➢ Math 111 (Kevin Takayama assisted by Clayton Akatsuka)
      ➢ Math 203 (Johnny Singh)
   o Spring 2016
      ➢ Math 103
      ➢ Math 112
      ➢ Math 135
      ➢ Math 205

4. Annual Master Schedule for Math Courses – Provides a guideline of how many sections of courses to offer each semester – See attached spreadsheet.

5. Math Center & Russell Uyehara
   o Clayton submitted a proposal to keep Russell for one more year to Charles and Ardis.
   o The bottom line is that there is no money.
   o John Morton had said that there would be about $400,000 to help with the transition to the new models in Fall 2016.
   o Clayton will contact Suzette Robinson to submit the request that he submitted to Charles and Ardis.

6. Developmental Ed Position – The revisions to the job description that Clayton and Jean worked on this summer was submitted to Administration. They are working on the position. The goal is to hire someone to start for Spring 2016.

7. Spring 2016 schedule – Do not offer Math 24 because there won’t be a Math 25 for those students in fall 2016.

8. The meeting was adjourned at 4:13 pm. (Minutes by J. Okumura)
August 28, 2015

To: Charles Sasaki, Dean of Division II, Academic Affairs

CC: Ardis Eichenberg, VCAA

Re: Math Center Coordinator – Russell Uyehara

From: Clayton K. Akatsuka, Prof. Mathematics, Developmental Education

This request is for the employment continuance of Russell Uyehara. Russell’s employment at WCC ends on September 30, 2015. This request is a plea to find the necessary funding to retain Russell Uyehara.

Currently, Russell serves the as coordinator of our Math Center located in Mana 103. Mana 103 is a computer classroom equipped with 30 computers with the primary function to serve the redesigned computer-based, independent study courses MATH 21, MATH 28, and MATH 29. During non-instructional hours, the Math Center provides open lab time for these students. Russell assists the instructors and students providing one-on-one assistance with the computer program, tutorials, preparing for tests, and reviewing tests for retesting. Russell is also available to assist instructors and students enrolled in all other math courses (primarily developmental math courses and often the 100-level math courses these students enroll in). During the summer, with abbreviated Math Center hours, Russell serves as the Tutor Coordinator for the highly successful TRiO/PaiPai/Hulili Math Summer program. It is truly with his assistance that the program was able to successfully scale up from 1 or 2 courses to 6 courses!

Russell’s effectiveness is based on his experiences as a student enrolled in WCC’s developmental math program as well as a few “transfer-level” math courses. Although he was enrolled in the Social Science Master’s program at UHM, he did not complete it – choosing to work full time at WCC in nearly the same capacity he now works. Over these 14 or so years Russell has come to know very well WCC’s math curriculum, the content of the courses, and the styles and demands of many of the instructors! He is a very capable and effective “math coach” for many of our students. Another compelling reason to retain Russell’s employment is his passion. He sincerely wants to help our students to be successful in their developmental math courses and to complete their math requirements as they work towards a degree. He is known to work with students after hours, including evenings, weekends, breaks, and holidays – often without compensation! I do not know of anyone willing to do this. This past summer, he took up residence in Kaneohe so would not have to take the bus to his home in Mililani. This allowed him to flexibility with his work schedule. Impressive!

This semester, Fall 2015, there are 429 students enrolled in developmental math courses (MATH 21, MATH 21A, MATH 21B, MATH 24, MATH 25, MATH 26, MATH 28, and MATH 29). Beginning in Fall 2016, the University of Hawaii Community Colleges will no longer be offering these developmental courses or similar courses (per V.P. of UHCC, John Morton). All UHCC campuses will be offering MATH 75 (non-STEM pathway) and MATH 82 (STEM pathway) in a linear, pre-requisite model (one of two models choices). Some campuses may also choose to offer, either in place of this linear, pre-requisite model or in addition to it, MATH 78 and MATH 88 in the co-requisite model.
WCC will probably offer only MATH 75 and MATH 82 in the linear, pre-requisite model. An assessment of the curriculum will be made after the 2016-2017 academic year with appropriate changes made, if needed, in the ensuing academic year.

MATH 75 will be the pre-requisite 3-credit course for MATH 100, MATH 101, MATH 111, and MATH 115 (non-STEM pathway) for students not placing into these courses. Students must take their developmental MATH 75 course the first semester and their 100-level math course the following semester, completing both in their first year of enrollment at WCC. A very important change from the present developmental math curriculum: There is no pre-requisite for MATH 75. All (non-STEM) students enroll in MATH 75. Projecting using Fall 2015 enrollment numbers, this means that approximately 338 students will be enrolling in MATH 75 in Fall 2016! The Math Center with its coordinator Russell Uyehara must provide “just in time” supplemental assistance – that is, the Math Center will be a place where students can go to receive the supplemental instruction they need when they need it. Russell will manage the Math Center and work with instructors to develop and provide the necessary supplemental materials - including on-line material and tutorials, pencil-and-paper worksheets, topic-focused workshops, etc.

MATH 82 is also a 3-credit course and serves as the pre-requisite for MATH 103 (STEM pathway) for students not placing into this course. There will be a UHCC system-wide placement requirement for MATH 82. These students are likely to need supplemental assistance as well.

The Math Lab, located in the Library, will continue to function as a free drop-in tutoring resource staffed by student peer tutors. The Math Lab is open to all students, but recent data (Spring 2015) shows that 29% of all students enrolled in a developmental math course frequented the Math Center while 8% frequented the Math Lab. Furthermore, 74% of the students receiving tutoring from the Math Center passed their course, while 66% of the students receiving tutoring from the Math Lab passed their course.

There is a definite need for the Math Center and Russell Uyehara and this will become more evident beginning in Fall 2016 with the implementation of John Morton’s vision for developmental education in the UHCC system. I strongly urge WCC to find the needed funding to continue Russell’s employment with WCC. Russell Uyehara has demonstrated his capabilities and effectiveness working with our students enrolled in developmental Math courses. His experiences, knowledge, and availability enable him to serve as a valuable “math coach” to our students.

Thank you.