Mathematics Discipline Meeting  
Tuesday, October 28, 2014  
Minutes  

Present: Jean Okumura, Johnny Singh, Jody Storm, Weiling Landers  
Excused: Clayton Akatsuka  
The meeting was called to order at 2:31 pm in the Mana’o Conference Room 107.  
The minutes of the October 14, 2014 meeting were accepted as circulated.  

1. Kapiolani CC’s Statway Courses  
   - Jean contacted the instructors and got the following information:  
     - It was believed that Math 132 obtained FS designation by the Kapiolani CC Foundations Board.  
     - As far as the instructors know, any program that requires Math 115 will accept Math 132 as well.  
     - If the student decides to pursue a STEM area after taking Math 32/132, then it is hoped that they will place into Math 25 or 103 via COMPASS.  
   - Math 32  
     - No equivalency/Does not satisfy FS  
     - Does not satisfy graduation requirement  
     - Next course – Math 24 or placement via placement test  
   - Math 132  
     - No equivalence  
     - Does not satisfy graduation requirement  
     - Next course – via placement test  
     - If Math 132 satisfies FS at Kapiolani CC then WCC will accept Math 132 for FS via Foundations Articulation Agreement.  

2. Math Graduation Requirement  
   - The approved statement of the requirement is: “Placement into Math 100 or complete Math 25 (or Math 28) with a “C” or better.  
   - We will not request to change until Faculty Senate asks for a review of the requirement.  
   - A review might come up with if Manoa adopts a new quantitative requirement.  

3. Textbooks – Binder Version  
   - It was clarified that the bookstore will buy back binder version of textbooks if it will be used again.
4. Math 26 – Johnny Singh
   o Johnny presented a proposal for Math 26 for WCC.
   o The course will be 5 credits.
   o The COMPASS cut offs to place into the course will be Pre-Algebra 52 – 100 or Algebra 29 – 33.
   o The catalog description will be: Math 26 is equivalent to a combination of Math 24 and Math 25. Topics include a quick review of operations with real numbers; linear equations and inequalities in one and two variables; linear systems and inequalities; graphing linear and quadratic equations; properties of exponents; operations on polynomials; factoring; rational expressions and equations; radicals and equations; quadratic equations; and applications.

   o The Student Learning Outcomes will be:
     ➢ Utilize precise mathematical language and symbols in written and/or oral form.
     ➢ Demonstrate proficiency in the skills and competencies for the concepts covered in this course.
     ➢ Use algebraic techniques to analyze and solve problems.
     ➢ Understand the connection between algebraic and geometric representation.

   o The Course Competencies will be:
     ➢ Demonstrate proficiency in performing operations with variable expressions.
     ➢ Interpret equations and inequalities geometrically.
     ➢ Find solutions to equations and inequalities algebraically.
     ➢ Solve systems of linear equations and inequalities.
     ➢ Interpret quadratic equations geometrically and identify key characteristics.
     ➢ Employ algebraic techniques to find the solution for linear, quadratic, rational, and radical equations.
     ➢ Evaluate and simplify radical expressions.
     ➢ Use algebraic techniques to analyze and solve applied problems.
     ➢ Demonstrate proficiency in the use of the rules of exponents and its applications to scientific notation.
     ➢ Perform operations on polynomial and rational expressions.
     ➢ Employ algebraic techniques to factor a polynomial
     ➢ Graph a linear equation in two variables, find slope and apply it to finding the equation of a line.
5. Data on Math 103/135 – Weiling Landers
   o Weiling shared her draft report on Math 103, 135 and 140 that she will be submitting as part of her sabbatical leave report.

   o For Math 135, a total of 86 Final Exam test papers were reviewed. The papers came from two sections of Math 135 in spring 2013, one section in summer 2013, one section in fall 2013, and two sections in spring 2014.

      ➢ There is a significant linear correlation between the Final Exam score and course grade.

   o For Math 103, a total of 318 Final Exam test papers were reviewed. The papers came from 21 sections of Math 103 from fall 2011 to fall 2013.

      ➢ 89 out of the 318 students passed the course with a “C” or better and took Math 135 while 229 students finished Math 103 but did not take Math 135.
      ➢ Therefore, a large number of students take Math 103 as a terminal course.
      ➢ There was little correlation between Math 103 Final Exam scores and the course grades for Math 103. There was also little correlation between Math 103 course grades and Math 135 course grades.
      ➢ The success rate was 78.7% of students passing Math 103 and then passing Math 135 with a “C” or better whereas 21.3% passed Math 103 but could not pass Math 135. It was felt that Math 103 prepares students for Math 135 adequately.
      ➢ The success rate was 70% of 318 student passing Math 103 with a “C” or better whereas 30% of the 318 student did not pass Math 103.
      ➢ Weiling examined the course and Final Exam grades of the students who took Math 103 but did not take Math 135 and found:

<table>
<thead>
<tr>
<th># of students who took Math 103, not Math 135</th>
<th>Math 103 Final Exam scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 students got an A for Math 103</td>
<td>51 - 146</td>
</tr>
<tr>
<td>48 students got a B for Math 103</td>
<td>15 - 135</td>
</tr>
<tr>
<td>50 students got a C for Math 103</td>
<td>38 - 116</td>
</tr>
<tr>
<td>96 students got a D, F, N, NC for Math 103</td>
<td>0 to 123.5</td>
</tr>
</tbody>
</table>

   ➢ A concern was expressed about the lowest scores on the final exam for students who got an A, B, or C.
   ➢ Weiling recommended a minimum guideline for the Math 103 grade and the final exam grade. She recommended:

<table>
<thead>
<tr>
<th>Math 103 Course grade</th>
<th>Minimum points on the Final Exam Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>For A</td>
<td>70% of the possible total Final Exam Score</td>
</tr>
<tr>
<td>For B</td>
<td>60% of the possible total Final Exam Score</td>
</tr>
<tr>
<td>For C</td>
<td>50% of the possible total Final Exam Score</td>
</tr>
</tbody>
</table>
5. Data on Math 103/135 – Weiling Landers (continued)

- Due to numerous inconsistencies that were found in the grading of the Math 103 Final Exams, Weiling recommended that a training session be held for those teaching Math 103 to help them understand and become familiar with the Key & Rubrics for the Final Exam and to provide guidelines for grading to promote consistency.
- Weiling will also do an initial search for a new textbook for Math 103 and make a recommendation to the department.
- Weiling recommends that the Math 103 should remain at 4 credits.

6. Review of Math 28 and Combo Classes

   - What data do we need?
     - The semester/year, whether the course was a lecture class or a self-paced (computer) class, how many students received the grade of A – C or CR, how many students received a grade of D, how many students received a grade of N, NC, or F, how many students withdrew from the class.
     - From the collected data, we can calculate the success rate without counting D grades, with D grades counted, without counting withdrawals, and with withdrawals counted.

   - Johnny will develop a form for collecting data from instructors of Math 28 and send it to Jean. Jean will then send the Math 28 form to all Math 28 instructors.

   - We will try to get the data by the next discipline meeting.

The meeting was adjourned at 4:30 pm. (Minutes by J. Okumura)