

## Academic Program Review Committee

**Program: Mathematics – CM1**

**Date Reviewed: 11/10/2016**

**Resubmittal Date:**

Please use these notes along with the comments from APRC members and your dean when revising this document.

**General Comments:** Clear and concise review. Add statement regarding findings and action planning related to student equity.

1. Overview of the Program	Comments
a) Provide a brief narrative description of the current program, including the program’s mission statement and the students it serves.	<ul style="list-style-type: none"> <li>• Concise and clear.</li> <li>• Clarify the sequential nature of courses</li> <li>• In this general overview section, emphasize highlights and other distinctive elements of the program:               <ul style="list-style-type: none"> <li>○ Size of program (~3K students)</li> <li>○ Integration with STEM</li> <li>○ Collaborations with CIS, Electronics, etc.</li> <li>○ Math Team (e.g., size of team, growth over years)</li> </ul> </li> </ul>
b) Describe the degrees and/or certificates offered by the program.	<ul style="list-style-type: none"> <li>•</li> </ul>
c) Explain how the program fulfills the college’s mission and aligns with the strategic initiatives. (see Appendix A)	<ul style="list-style-type: none"> <li>• P. 5 (College Mission and Strategic Initiatives) – add a chart to more optimally demonstrate program alignment with each strategic initiative; for each initiative, include a brief narrative with specific examples of how the program addresses the initiative.</li> </ul>
d) Discuss the status of recommendations from your previous program review.	<ul style="list-style-type: none"> <li>•</li> </ul>
e) Describe highlights of the program’s previous success and future vision.	<ul style="list-style-type: none"> <li>•</li> </ul>

<b>2. Analysis of Research Data (include data provided by Institutional Research &amp; Planning)</b>	
<b>Provide and <u>analyze</u> the following statistics/data</b>	<b>Comments</b>
	<b>GENERAL COMMENT:</b> Thorough, well thought out
a) Head count of students in the program	•
b) Course grade distribution	•
c) Success rates (Discuss your program's rates in light of the college's success rate standard. Set a standard for your program.)	<ul style="list-style-type: none"> <li>• Add a blurb regarding student equity to the "Success Rates by Ethnicity" section (e.g., what are you doing or planning to do to address performance gaps?).</li> <li>• Any data or other information to suggest that increase in success rates is due to Supplemental Instruction (SI)? If so, such a finding could justify recommendation for additional SI or more tutors.</li> </ul>
d) Retention rates	•
e) A comparison of success and retention rates in face-to-face classes with distance education classes	•
f) Enrollment statistics with section and seat counts and fill rates	•
g) Scheduling of courses (day vs. night, days offered, and sequence)	• Effective use of comparison data from SMC to justify recommendation to add more evening sections (in addition to the existing day offerings)
h) Improvement rates (if applicable)	•
i) Additional data compiled by faculty	•
j) List any related recommendations.	• Additional tutors? Noted that MESA only for members.

<b>3. Curriculum Review</b>	<b>Comments</b>
	<b>GENERAL COMMENT:</b> Indicate the number of

	units for Math courses (i.e., all 5 units, except for Math 170 and 210).
a) Provide the curriculum course review timeline to ensure all courses are reviewed at least once every 6 years.	•
b) Explain any course additions to current course offerings.	• •
c) Explain any course deletions and inactivations from current course offerings.	•
d) Describe the courses and number of sections offered in distance education. (Distance education includes hybrid courses.)	•
e) Discuss how well the courses, degrees, or certificates are meeting students' transfer or career training needs:	•
1. Have all courses that are required for your program's degrees and certificates been offered during the last two years? If not, has the program established a course offering cycle?	•
2. Are there any concerns regarding program courses and their articulation?	•
3. How many students earn degrees and/or certificates in your program? Do students take licensure exams? If so, what is the pass rate? If few students receive degrees or certificates or if few students pass the licensure exam, should the program's criteria or courses be re-examined? Set an attainable, measurable goal	•
f) List any related recommendations.	<ul style="list-style-type: none"> <li>• Presenters discussed some considerations related to recommendation to increase Math 170 to 4 units <ul style="list-style-type: none"> <li>○ Consistency with other colleges</li> <li>○ Shift in existing curriculum</li> </ul> </li> <li>• Presenters discussed issues with alignment with</li> </ul>

	<p>C-ID and how Trig often not articulated with coursework at 4 year institutions</p> <ul style="list-style-type: none"> <li>Any consideration of partnering with local aerospace and finance industries for students to receive credit for internships or for industry partners to offer workshops for students? Presenters will explore options, noting that Computer Science has begun to pursue partnerships with local industries.</li> </ul>
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<b>4. Assessment and Student and Program Learning Outcomes (SLOs &amp; PLOs)</b>	<b>Comments</b>
a) Provide a copy of your alignment grid, which shows how course, program, and institutional learning outcomes are aligned.	<ul style="list-style-type: none"> <li></li> </ul>
b) Provide a timeline for course and program level SLO assessments.	<ul style="list-style-type: none"> <li></li> </ul>
c) State the percent of course and program SLO statements that have been assessed.	<ul style="list-style-type: none"> <li></li> </ul>
d) Summarize the SLO and PLO assessment results over the past four years and describe how those results led to improved student learning. Analyze and describe those changes. Provide specific examples.	<ul style="list-style-type: none"> <li></li> </ul>
e) Describe how you have improved your SLO process and engaged in dialogue about assessment results.	<ul style="list-style-type: none"> <li></li> </ul>
f) Discuss any findings from SLO/PLO assessments that help to justify recommendations.	<ul style="list-style-type: none"> <li></li> </ul>
g) List any related recommendations.	<ul style="list-style-type: none"> <li>On p. 43, it is noted that "... providing more faculty office hours and practice outside classroom is absolutely necessary for [Math 270]." Perhaps, the SLO data from Math 270 could be used to justify a recommendation for additional tutors for the course (particularly as it was noted in the review meeting that there is a</li> </ul>

	<p>lack of tutors for this course because the tutors are in fact the students in this course).</p> <ul style="list-style-type: none"> <li>• Integrate some of the recommendations from other sections which apply to SLOs</li> <li>• Perhaps add a recommendation to increase the rigor and variety of SLO assessments</li> </ul>
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5. Analysis of Student Feedback	Comments
	<b>GENERAL COMMENT:</b> Survey data provide strong justification for recommendations
a) Describe the results of relevant surveys in each of the following areas:	•
i. Student Support	•
ii. Curriculum	•
iii. Facilities, Equipment, and Technology	•
iv. Program Objectives	•
b) Discuss the implications of the survey results for the program.	•
c) Discuss the results of other relevant surveys.	•
d) List any related recommendations.	•

6. Facilities and Equipment	Comments
a) Describe and assess the existing program facilities and equipment.	• •
b) Explain the immediate (1-2 years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.	•

c) Explain the long-range (2-4+ years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.	•
d) List any related recommendations.	•

<b>7. Technology and Software</b>	<b>Comments</b>
a) Describe and assess the adequacy and currency of the technology and software used by the program.	•
b) Explain the immediate (1-2 years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.	• P. 54 – Presenters will confirm \$8K cost estimate; group discussed whether or not the expense can be shared
c) Explain the long-range (2-4+ years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals	•
d) List any related recommendations.	• P. 55 – Need to add cost for recommendation #2; presenters to consult with faculty who last purchased the license

<b>8. Staffing</b>	<b>Comments</b>
a) Describe the program’s current staffing, including faculty, administration, and classified staff.	•
b) Explain and justify the program’s staffing needs in the immediate (1-2 years) and long-term (2-4+ years). Provide cost estimates and explain how the position/s will help the program better meet its goals.	•
c) List any related recommendations.	•

9. Future Direction and Vision	Comments
a) Describe relevant changes within the academic field/industry. How will these changes impact the program in the next four years?	•
b) Explain the direction and vision of the program and how you plan to achieve it.	•
c) List any related recommendations.	• •

10. Prioritized Recommendations	Comments
a) Provide a single, prioritized list of recommendations and needs for your program/department (drawn from your recommendations in sections 2-8). Include cost estimates and list the college strategic initiative that supports each recommendation (see Appendix A). Use the following chart format to organize your recommendations.	<ul style="list-style-type: none"> <li>• Suggested revisions and additions to list of recommendations: <ul style="list-style-type: none"> <li>○ Funding for Math Club</li> <li>○ Consider specifying <i>magnetic</i> whiteboards in recommendations; make adjustments for cost</li> <li>○ Perhaps incorporate request for cameras (if justified by any SLO assessment results or other data)</li> <li>○ Funding for back-up instructional equipment while awaiting maintenance or replacement</li> </ul> </li> </ul>
b) Explain why the list is prioritized in this way.	•