

Mathematics Department Action Plan based on Self Study and Program Review from AY 16/17

DRAFT 5/31/18

<b>Specific area where improvement is needed</b>	<b>Evidence to support the recommended change</b>	<b>Person(s) Responsible for implementing the change</b>	<b>Timeline for implementation</b>	<b>Resources needed</b>	<b>Assessment Plan</b>
STEM resource center (math and science)	Additional support needed for students in science courses, who often face mathematical difficulties in their courses.	Dean of HNS John Schaumloffel will coordinate efforts in collaboration with representatives from STEM departments	Planning to begin in fall 2018.	Space, computer, staff.	TBD
Math Center	The Math Center often seems disjoint from the department. It is located in a different building and although there is some collaboration between the two, there should be more.	Department chair will maintain ties and perhaps appoint a Math Center Liaison from the department. Math Support Specialist will also collaborate with center	Fall 2018 and ongoing		
Careers	We are unsure what skills are most important in securing and succeeding in a math related position in industry and are understaffed in the areas of applied mathematics and statistics. We have limited information on local internship and job opportunities to help students find such opportunities.	The department is submitting corresponding tenure track requests. Mary Ann Barbato, as part of her sabbatical, collected and shared information on internship & job opportunities, corresponding companies and curricular pathways.	Spring 2017 and ongoing.	New FT faculty members in applied mathematics and statistics	Student surveys & alumni data

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Dev. Math Coordinator	We have had a one year temp. serving in this role for the past 4 years.	The Mathematics Department is in the process of a corresponding search for an FT staff member to fulfill this role	Spring 2018 -	Staff position which has already been granted	Position will be reviewed after the first year.
Assessment Plans	Our current assessment plan is very dated and needs to be revised.	The department Assessment Committee is working on a new plan.	Fall 2017 -		Assessment data will be collected by dept.
Math Software	We have some new faculty who use different software and would also like to expand our software exposure to our students.	An ad hoc dept. committee will evaluate what software we would like to retain and which we would like to remove/replace/add.	Fall 2017. Revisit in Fall 2018		TBD
QR requirement	Quantitative reasoning is gaining attention nationwide as a more appropriate math experience for certain majors and our faculty see it as a desirable option for students at Fitchburg State who do not have a prescribed mathematics requirement.	Members of the Math dept. in collaboration with appropriate departments are developing a QR course titled Math in Society which has already been approved by AUC and is on the schedule for next AY.	Spring 2018 –	Additional faculty support	Collect & analyze performance and retention data after first year.
Co-requisite instruction	There is a statewide push toward real time remediation as it expedites students' path through developmental mathematics. In our initial pilot it showed to improve retention rates.	The department is continuing to use co-requisite instruction in math 1700, has expanded to math 1250 and 1800 and in fall 2018 will expand to the	Fall 2017 -	Additional faculty support	Collect & analyze performance and retention data.

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		new QR course and math 1500.			
BHE plans for developmental math	There is a statewide initiative piloting the use of HS GPA to place students into college level mathematics	The Math dept. has participated in the pilot and is expanding this alternate form of placement to several math courses.	expansion began in Fall 2017 and will continue into AY 18/19.		Collect & analyze performance and retention data
Graduate programs in STEM Ed.	The numbers in our graduate programs for teachers are low by department and streamlining into a joint program may solve this problem and enable us to better serve teachers in these fields.	Dean of Education, Bruno Hicks in collaboration with representatives from STEM departments			TBD
Statistics	Although some faculty in the department have taken statistics classes, we do not currently have a statistician on the faculty in this department. Since statistics is an area of math that is highly useful in industry and otherwise, we will be looking for ways to strengthen our department in that area.	Mathematics department	Fall 2017 -	Tenure track faculty member (statistics focus)	
Collaboration w. other depts.	One way to improve our students' educational experience in STEM is to make more connections	The Mathematics department has been in collaboration with several departments	Fall 2017 -		

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	between our mathematics service courses and other courses.	including: Bio/Chem, EGS, Comm. Media, Education,			
Collaboration w. MWCC	Mass Transfer and Math Pathways statewide efforts for ease of transfer	Since Fall 2015, several members of the Math dept. have represented Fitchburg State on statewide committees related to these efforts and worked with MWCC among other statewide institutions to align courses and curriculum. These efforts will continue.	Fall 2017 -		