FOOTHILL COLLEGE
Program Planning and Review
(650) 949-7240 | http://www.foothill.edu/staff/irs/

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I. Department/Program Mission	
1. State the department name and everyone who participated in creating the comprehensive program plan.	Math (Marc Knobel, Lori Silverman, Kathy Perino, Patrick Morriss, Young Hee Park lee, John Sawka, Ion Georgiou, Phuong Lam, Brian Stanley, Debbie Lee, Sarah Delos Santos, Nicole Gray, Rick Martinez, Rachel Mudge, Peter Murray)
2. State the program's mission. If you don't have one, create one.	Provide opportunities to study undergraduate mathematics developed rigorously in a contextual environment relevant to students.
3. Explain how the program/department mission is aligned with the college mission?	The department commits itself to providing access to outstanding educational opportunities for all of our students.

II. Department and Program Description & Data

1. What are your hours of operation? 08:00 – 23:00	Our offices open at: Closed for Lunch: No ☒ or Yes ☐ If yes, when: Our offices closed at:			
2. What types of classes do you offer, at what locations, and at what times? **Most classes are face-to-face on FH main campus.**	Times offered: ☒Morning (6AM-12PM) ☒Afternoon (12PM-4PM) ☒Evening (4PM-10PM)	Locations offered: ☒FH Main Campus ☐Middlefield ☐Off campus	Types Offered: ☒In Person ☒Hybrid ☒Distance	Status Offered: ☒Credit ☒Non-credit

3. List current positions and descriptions for all personnel in your area on the chart below (include position titles only, not individual names).

Faculty Positions by Discipline	**Full-time Headcount**	**Part-time Headcount**	**Brief Description of duties**
Mathematics	15 (from sheet)	13	Instruct & COR Development
Position Title	0	0	
Position Title	0	0	
Position Title	0	0	
Position Title	0	0	
Position Title	0	0	
Management and Classified Positions	**Full-time Headcount**	**Part-time Headcount**	**Brief Description of duties**
	0	0	
Position Title	0	0	
Position Title	0	0	
Position Title	0	0	
Student Worker Positions	**Hours per Week**	**Months per Year**	**Brief Description of duties**
PSME Graduate Student	112	8 and less in summer	Summer limited support
Position Title	0.00	0	
Position Title	0.00	0	

4. Given the data, describe the trends in enrollment, FTES, and Average Class size. What are the implications for your department?	Math FTES is increasing at a constant rate. Since 2005-6 the FTES has increased by 20% (8,500 WSCH). The increase is from additional sections in both precollegiate and transfer level courses. The productivity has also slowly been increasing.
5. Student Achievement: Given the data, describe the trends in overall success rates, retention rates, and degrees and certificates awarded. What are the implications for your department?	The retention rates are higher than expected based on the level of prerequisites and difficulty of the course material. The success is improving but is much lower than what faculty would like to achieve. What is not shown is the course sequence success, which needs to be increased. The Latino (16 % population) rate of success was from 55% to 66% 2007-8 to 2008-9; Asian remains same and White 68% to 65%. The increase in Latino base 2007- to 2008-9 is the largest group. This is probably tied to the increase in the increase in basic skills courses as well as success rates of the math programs.
6. Student Equity: Given the data, describe the trends with respect to underrepresented students. How will your program address the needs/challenges indicated by the data?	The majority of students are Asian, white, Hispanic or none which match the other STEM series populations. There is about a 30% increase in Hispanic enrollment and a 50% increase in "unrecorded". The department will create a pathway going forward by working with counseling and Outreach to encourage students in STEM pathways.
7. Given the data, discuss how the FTEF trends and FTEF/FTES ratio will impact your program. Include any need for increasing or reducing your program faculty. What are the implications for your department?	The number of Math course offerings will continue to increase and additional FTEF is required. The basic skills program will continue to expand in both numbers of sections as well as new course pathways based on student's educational goals.
8. Given the data for distance learning, describe the trends related to success, retention, and student satisfaction. Discuss solutions to ensure that rates match or exceed those of comparable traditional format courses.	The fully online is limited to Math 105 (Intermediate Algebra) and Math 10 (Statistics). The success and retention are not equivalent to the in-class and partial online versions of the class. The research data for the Math Dept aggregates all the classes and the 105 & 10 class data was extracted by hand. The use of technology to augment in-class teaching and

	homework is very prevalent. A majority of classes use online homework and additional information. The use of CCConfer is used for synchronous delivery of class material. The partially online (hybrid) has also been very successful, with student success and retention very close to in-class. The faculty are also using tablet computers to record work in class.
9. Optional: Provide any additional data relevant to your program. (Indicate the source of the data).	2003 Report by Johnstone; http://research.fhda.edu/researchreports/file_library/B17%20-%20Sequence%20Course-Grade-Success%20v4.0.pdf
10. Are you seeing trends that are not reflected in the data cited above? If yes, please explain.	The student success in the calculus course sequence is much lower than desired for transfer. The basic skills continues to have increased success in having students complete Math 105 or Math 10 for transfer or an AA/AS degree.

Summary of Planning Goals & Action Plans				
11. Identify 3-6 operational goals and link them to one or more college strategic initiatives or to your operations.				
Department Operational Goals	**College Strategic Initiatives**			
Identify 3-6 operational goals	Building a Community of Scholars	Putting Access into Action	Promoting a Collaborative Decision-making Environment	Operations Planning
Increase student success in sequence courses.	☒	☒	☒	☒
Expand course offerings	☒	☒	☐	☒
Improve teaching consistency	☒	☒	☐	☐
New Learning Technologies	☒	☐	☒	☒
Develop K-12 Teachers	☒	☒	☐	☒
Lower book costs. Adopt an open source text?	☒	☒	☐	☒
12. What is your plan for accomplishing your goals?				

Department Operational Goals	Activities	
Increase student success in sequence courses. Improve teaching consistency as measured by ongoing assessment of student learning outcomes	• There are at least three pathways: 1) Basic Skills; the sequences will be modified to have: - compress courses; combined Elementary and Intermediate Algebra - revised curriculum in Intermediate Algebra that continues to meet CSU transfer and Associate degree requirements - bridge courses and gateway assessment 2) College level math (statistics or math for the liberal arts) - revise the elementary and intermediate algebra sequence to support the critical thinking skills required for a college level course such as statistics or math for the liberal arts. - bridge courses and gateway assessment 3) Calculus level - Combine Trigonometry (Math 51) and Precalculus (Math 49) into a new coherent course sequence - bridge courses and gateway assessment Look at technology for new course delivery such as team teaching using in-class and synchronous course delivery. The students will use appropriate technology throughout the course including computers visualization, software models and analysis.	• Increase PT Faculty required • Release time for FT faculty • Capital equipment budget for teaching equipment • Additional FTEF to permit faculty to support both basic skills and transfer.

Encourage K-8 students to be interested in math (STEM)	• Strengthen the Silicon Valley K-8 science programs. Foothill will encourage students to study science via the annual Math Show.	• Requires funding for show and student stipends.
Expand course offerings	• Have math booster classes for all courses up through Math 1C.	• Release time for faculty
New Learning Technologies	• The students will need access to a wide range of equipment based on the approach for solving the generic problem. • Use synchronous technology to offer "PSME Center" tutoring online in the evenings and weekends.	• Requires release time (.111) per quarter to update courses to be scenario based. • Requires equipment that faculty and graduate students can use from the home locations.

13. Are additional resources needed to accomplish your department operational goals? If yes, identify the resource, as well as the purpose and rationale for each resource.

Identified Resource	Purpose	If requesting funding, provide a rationale of how each request **supports one or more college strategic initiative and/or supports student learning.**
Release Time	New Curriculum development	The new curriculum will support Building a Community of Scholars by increased student success. Putting Access into Action is the support to basic skills and those students in the early transfer track.
Graduate Students	Bridge Courses & gateway testing & tutoring	The testing and tutoring will support Building a Community of Scholars by increased student success. Putting Access into Action is the support to basic skills and those students in the early transfer track.

FT Faculty	Support to both basic skills and transfer	The additional FT faculty will support Building a Community of Scholars by increased student success. Because of the diversity of the student tracks it is difficult to allocate adequate FT faculty to both areas. Putting Access into Action is the support to basic skills and those students in the college transfer track.	
New FT Staff to manage the PSME Center	With the increased scope of the PSME Center will require dedicated scheduling and coordination.	The testing and tutoring will support Building a Community of Scholars by increased student success. Putting Access into Action is the support to basic skills and those students in the early transfer track.	

III. Curriculum	
Curriculum Overview	
1. How does your curriculum address the needs of diverse learners?	The instruction has shifted to group problem-solving versus the traditional lecture. Alternate and online materials are provided to supplement existing materials. A diversified approach to learning in the lecture sessions is key to reaching students, that is to say, less lecturing and more contextual problem-solving activities that engage students and give them ownership of their success.
2. How does your curriculum respond to changing community, student, and employer needs?	The courses are being updated and revised to meet student needs. Potential new course offerings: 1) Basic Skills; the sequences will be modified to have: - compress courses; combined Elementary and Intermediate Algebra - revised curriculum in Intermediate Algebra that continues to meet CSU transfer and Associate degree requirements - bridge courses and gateway assessment 2) College level math (statistics or math for the liberal arts) - revise the elementary and intermediate algebra sequence to support the critical learning skills required for a college level course such as statistics or math for the liberal arts. - bridge courses and gateway assessment 3) Calculus level - Combine Trigonometry (Math 51) and Precalculus (Math 49) into a new coherent course sequence - bridge courses and gateway assessment 4) Mathematics for Elementary Education Look at technology for new course delivery such as team teaching using in-class and synchronous course delivery.

3. How does your curriculum support the needs of other certificates or majors?	Math supports all AA & AS as well as transfer students.	
4. Do your courses for the major align with transfer institutions?	Yes. All transferable courses are aligned.	
5. Do your courses have appropriate and necessary prerequisites? Identify any challenges and plans to address the challenges.	Yes. Consistent with UC & CSU.	
6. Review the attached curriculum report for currency. What is your plan to address the deficiencies? (Consider: Title V, course deactivation, updated prerequisites, cross-listed courses, measuring student learning outcomes, curriculum sheets, certificates and degrees).	The courses are current.	
7. Does your program offer distance education courses?	Yes, Math 10 and 105. Other courses use distance education components for supplements and homework.	
8. If you offer distance education courses, list one or two short examples of how your distance education courses provide for effective interaction between students and faculty.	1) The courses have discussion areas. 2) Faculty answer students via email within 24 hours. 3) The full online courses are only taught by FT faulty who have regular office hours on campus.	
9. If you offer distance education courses, list one or two short examples of how your distance education courses provide for effective interaction among students.	The courses have discussion areas.	
College Skills (Pre-collegiate) Overview (Data Available Fall 2009-filling out this section is optional)		
10. What college skills should a student have before entering your program?	They come in at all levels.	

11. Given the data, comment on the effectiveness of the assessment and placement of college skills students into your program.	Looking at the data our success in math is very good given the difficulty and time demands of the subject matter. We are consistently in the 70-75% range overallOur success with the underrepresented (minority) groups falls by 10-20% compared to the average, not inconsistent with the rest of the campus. Since the data does not give retention and success rates for each sequence as asked in the question, it is assumed the average of 76% for 2008-09 fiscal maps into a sequence. **However, some students that do not succeed in general math fail because of inadequate math skills or too little time outside of class to study.** Some average (C) students have an unrealistic expectation of their own success in the core science classes, They have already shown by their C average they are not ready for a prime-time core science curriculum. To improve success in math we propose three items. 1) develop a math test to adequately gauge a student's math skills entering precollegiate thru Math 1B, 2) identify and counsel each student that appears to be at risk mathematically or cannot commit the necessary time, and 3) keep class sizes small. Curriculum changes may help as well, it is still unclear if the online programs have increased success or is simply another thing students feel they have to just get done, and don't see it as a learning tool. Prompting students to solve problems in relevant contexts may also positively influence student engagement and success in mathematics.
12. In what ways are you addressing the needs of the college skills students in your program?	Math My Way and revamping the precollegiate sequence

13. How are faculty in your program collaborating with other disciplines and services to meet the needs of college skills students?	Support the Basic Skills Committees and actively participate in basic skills initiatives.	
Program Mapping		
14. If applicable, identify any sequence of courses that are part of your program. List in the order that they should be taken by students.	All of the courses are part of a sequence.	
15. For your courses that are part of a sequence – are the student learning outcomes well aligned with the next course in the sequence? Please work with the college researcher to answer this question - once your sequence of courses is identified.	The SLOs are aligned in as a sequence. We are currently evaluating the lecture portion by pre- and post-testing. This is done in a constant rotation and professors are meeting to exchange feedback and ideas. The labs are evaluated by looking at specific experiments.	
16. If applicable, describe any capstone course, signature assignment (project, service learning, portfolio), or exam that demonstrates knowledge, skills, and abilities, indicating successful program completion?	Students exit our program at all levels, depending on the demands of their chosen fields. For those students completing an associate's degree in math, a capstone project may be appropriate in Math 1D (Vector Calculus), Math 2A (Differential Equations), or Math 2B (Linear Algebra). Another possibilty is a new one- or two-unit course for students who have completed all three.	
Course Scheduling & Consistency		
17. Given available data, describe the trends in the scheduling of morning, afternoon, and evening classes, as well as Friday, Weekend, and distance education classes. Comment on the feasibility of offering classes at non-standard times.	The lecture classes can be scheduled anytime. The morning classes are popular.	
18. Are required courses scheduled in appropriate sequence to permit students to complete the program in the prescribed length of time? If yes, describe the rationale upon which the sequence is based. If no, what is the plan to change the scheduling pattern? What are the barriers that prohibit implementation of the changes? Explain.	Yes. The courses are in the PSME Tracks.	
19. How does the department determine that classes are taught consistently with the course outline of record?	The courses are closely monitored by the Dean. The faculty need release time to assist with PT monitoring, especially in the evenings. The large turnover in PT faculty has caused both a mentoring and monitoring issue.	

Summary of Planning Goals and Action Plans			
20. What are your goals with respect to curriculum and how will those goals be measured?			
21. Are additional resources needed to accomplish your curriculum goals? If yes, identify the resource, as well as the purpose and rationale for each resource.			
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**	
Release Time	Course development and update	Supports scholars and student learning	
Release Time	Monitor and Mentor PT Faculty	Supports scholars and student learning	
Math Tutors	Maintain course quality and increase number of sections.	Supports scholars and student learning	
Release Time	For the labs, we should tackle the ones that are in most dire need first, identify what equipment could be purchased to improve them, and then make the $$$ requests.	Supports scholars and student learning	

IV. Learning Outcomes

Student Learning Outcome and Program Learning Outcomes Assessment

1. Be sure and complete your **course-level student learning outcomes** assessment for each course through the C3MS system.
2. **Program Learning Outcomes** in this section will be updated annually and posted on the Learning Outcomes webpage.

• Intended Program Outcome 1: **Clearly communicate mathematical ideas through graphs, tables of data, equations, and verbal descriptions.**

This Program Learning Outcome meets the Core College Mission of:	Basic Skills ☒	Transfer ☒	Workforce ☒
Relationship to Institutional Learning Outcomes • *Communication* • *Computation* • *Critical Thinking* • *Community and Global Consciousness*	Means of Assessment/Criteria for Success *What are the criteria for success? What tools will be used to establish and measure success?*	Summary of Data: December 2011 *Summarize the findings. How close were the results to the criteria for success?*	Use of Results: July 2011 *What do the data tell us about our process? What, if anything, do we need to do to our program or department to improve? What resources are necessary?*
Computation & Critical Thinking	**For Basic Skills Students who start in MathMyWay and complete through Intermediate Algebra courses will be tracked. A 75% success rate based on the longitudinal research is the goal. This supports the Basic Skills and Workforce missions.** **For the transfer students this is also a longitudinal approach. Student's success has two sequences:**	**In December 2011, Foothill's internal research will identify the results of the 3 tracks.**	**The individual classes will be evaluated to determine if a portion or elements of a course are not providing the foundation for the subsequent courses. This could include both student success skills as well as math descriptors.**

	1) The first sequence is the students that complete Math 1C that start in Math 48. (One year of calculus) is 60% **2) The second sequence is the students in science & engineering or for a Math AS degree that complete Math 2A or 2B that start in Math 48 is 60%.**		

• **Intended Program Outcome 2**: Construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques, and interpret results of those models.

This Program Learning Outcome meets the Core College Mission of:	Basic Skills ☒	Transfer ☒	Workforce ☒
Relationship to Institutional Learning Outcomes • *Communication* • *Computation* • *Critical Thinking* • *Community and Global Consciousness*	Means of Assessment/Criteria for Success *What are the criteria for success? What tools will be used to establish and measure success?*	Summary of Data: December 2011 *Summarize the findings. How close were the results to the criteria for success?*	Use of Results: June 2011 *What do the data tell us about our process? What, if anything, do we need to do to our program or department to improve? What resources are necessary?*
	For Basic Skills Students who start in MathMyWay and complete through Intermediate Algebra courses	**The number of students that complete a course with an "A" or "B" grade in the non-terminal courses in the**	**The individual classes will be evaluated to determine if a portion or elements of a course are not providing the**

	will be tracked. A 75% success rate based on the longitudinal research is the goal. This supports the Basic Skills and Workforce missions. For the transfer students this is also a longitudinal approach. Student's success has two sequences: 1) The first sequence is the students that complete Math 1C that start in Math 48. (One year of calculus) is 60% 2) The second sequence is the students in science & engineering or for a Math AS degree that complete Math 2A or 2B that start in Math 48 is 60%.	**sequence will indicate the probable success in the next course.**	**foundation for the subsequent courses. This could include both student success skills as well as math descriptors.**	

V. Departmental Engagement			
1. What standing committees, if any, does your department maintain? What are the committee charges and membership?		There are regular department meetings. Over the past few years the Math department has had strong off-campus outreach. This has been done via the Math Show, Amatyc CMC3, talks with DA, and Stanford internships.	
2. What interdepartmental collaboration beyond college skills has your department been involved in during the past 4 years?		The chemistry, physics , math and biology coordinate and collaborate on scheduling, articulation and grants. The sciences are very collaborative and often work together.	
3. What has your department done since its last program review to establish connections with schools, institutions, organizations, businesses, and corporations in the community?		Working with local K-12 schools. Participate in CSUEB and SJSU articulation meeting.	
4. In what ways if any, are you or have you worked with area high schools to align curriculum from the high school to your course?		There are AP guidelines but can cause an issue for a transfer student.	
5. In what ways if any, are you working with CSUs, UCs, private, or out-of-state institutions to align courses and develop articulation agreements?		This is complete for Math.	
Summary of Planning Goals and Action Plans			
6. What are your goals with respect to departmental engagement and how will those goals be measured?		The department needs to continue doing cooperative work such as scheduling and internships at Stanford.	
7. Are additional resources needed to accomplish departmental engagement goals? If yes, identify the resource, as well as the purpose and rationale for each resource.			
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**	
Release time	Write proposals	New interdisciplinary programs.	

VI. Professional Development			
1. List a sampling of professional development activities that faculty and staff have engaged in during the last two years.		Most of the faculty have attended one or more sessions of the Amatyc or CMC3. They also go to math lectures at Santa Clara.	
2. What opportunities does your department take to share professional development experiences with colleagues?		The faculty are part of the PSME Technology program.	
3. In what ways have faculty shared, discussed, and used professional development activities to improve program effectiveness?		The FT faculty share their online web information.	
4. In what ways have staff shared, discussed, and used professional development activities to improve program effectiveness? What professional development needs do you have in the coming years?		SEE BELOW	
5. Are there unmet or upcoming professional development needs among faculty in this program? If yes, then please explain a proposed plan of action for addressing this need and any necessary resources.		Have basic skills and math change meetings at FH.	
Summary of Planning Goals and Action Plans			
6. What are your goals with respect to professional development and how will those goals be measured?		PT faculty have adequate support materials and training.	
7. Are additional resources needed to accomplish professional development goals? If yes, identify the resource, as well as the purpose and rationale for each resource.			
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request supports one or more college strategic initiative and/or supports student learning.	
$3K	**Math Show**	**Building a Community of Scholars**	

VII. Support Services

Support Services

Consider the support services needed by your program when reflecting over the following questions		Comments or explanations of barriers and solutions.
1. Is there adequate clerical or administrative support for this program?	**Yes** | No	Use the PSME shared resources.
2. Are there sufficient college and departmental computer labs available to support this program?	Yes | **No**	Requires PSEC.
3. Are the library and media resources provided by the college sufficient to support up-to-date program instruction?	**Yes** | No	Could use access to digital research databases and basic skill books on-loan.
4. Are adequate services provided in compliance with program needs for meeting health and safety guidelines?	Yes **| No**	
5. Are the custodial services to this program in compliance with program needs for meeting health and safety guidelines?	**Yes** | No	
6. Are accommodations for students with disabilities adequate, including alternative media, testing, and tutorial?	**Yes** | No	
7. Are general tutorial services adequate?	Yes | **No**	Need funding for graduate students with degrees in math.
8. Are academic counseling and advising services available and/or adequate to support students enrolled in the program?	Yes | **No**	Counseling is unfamiliar with STEM and in particular math courses and transfer. The student's class plans don't use the tracks so students can complete all their courses in a timely fashion.
9. Do students have access to and can they effectively use appropriate information resources?	**Yes** | No	
10. Specifically related to distance learning, do you have appropriate faculty support services and/or effective training for faculty teaching online?	Yes | No	NA

Marketing & Outreach

11. What impact do you feel the college catalog, class schedule, and online schedule of classes have on marketing your program? Does the marketing accurately reflect your program, requirements, and services available?	They are very important to making students aware. The development of class schedules for marketing is too inflexible.

12. What impact does the college or departmental website have on marketing your program?		This will become more important when updated.
13. Is there any additional assistance from marketing that would benefit your program? If yes, explain.		No. Need for fund raising.
14. If you were to collaborate with the Outreach staff, what activities would be beneficial in reaching new students?		No. They are ineffective.
Programs, clubs, organizations, and special activities for students		
15. List the clubs that are designed specifically for students in this program. Describe their significant accomplishments.		
16. List any awards, honors, scholarships, or other notable accomplishments of students in this program.		Annual PSME Awards
Summary of Planning Goals and Action Plans		
17. What are your goals with respect to support services and how will those goals be measured?		Need to establish PSME STEM unique student services.
18. Are additional resources needed to accomplish your support services goals? If yes, identify the resource, as well as the purpose and rationale for each resource.		
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**

VIII. Career and Technical Education Programs	
Response to Labor Market Demand	
1. How does your program meet labor market demand? Cite specific examples and sources.	The Mathematics Program is not a Career or Technical Education Program.
2. Given the number of enrollments projected for the program and necessary to support the program, are there enough openings locally to permit placement of the expected number of graduates?	
3. Has the job market been: declining slowly? steady? growing slowly? growing rapidly? newly emerging?	
4. What is the average starting salary a student can expect to make after completing a certificate or degree?	
5. What is the projected average percentage of salary increase in 2 years? 4 years?	
Response to Program Credibility/Viability	
6. If advanced degrees are typically needed for career advancement, will the courses required for this program transfer towards completion of the requirements for those degrees?	
7. If yes, are the courses in your program aligned and/or articulated with the four-year institutions.	
8. Will this preparation permit students to stay current in their field? Does the program teach basic principles and theory, as well as applications? Is it current? Is it of sufficient rigor to assure the capacity to continue to follow the literature and learn new techniques? Is it of sufficient generality to allow for later shifts in career?	

9. Does this preparation provide a significant secondary expertise to primary careers? If yes, explain the purpose of the training – is it designed primarily or in part to meet the needs of those already employed for upward mobility, entrepreneurship, or other career upgrade?		
10. Describe any pre-collegiate or noncredit pathways that exist to direct students into the program?		
11. How does this program prepare students for competitive employment?		
Advisory Board		
12. List your advisory board members. The list of advisory board members should include their job titles as well as their affiliations, and an accompanying explanation should make clear that the professionals on this committee represent those within the industry who would hire graduates of a proposed CTE program.		
13. List the dates and number of members attending of your most recent advisory board meetings.		
14. What have been the major outcomes of your advisory board meetings? Of those outcomes, which have been acted upon, and what is your plan of action with regard to other outcomes discussed?		
Program Accreditation		
15. Is this program subject to approval by specialized state, regional, or national accrediting agencies?		
16. What is the program's accreditation status?		
17. Indicate recommendations of the most recent accreditation evaluation of the program and corrective actions taken or planned. Most recent accreditation report and all additional pertinent documentation and explanations should be available on site for consultant review.		
18. Provide a brief analysis of student performance on licensure or board exams on first attempt.		

19. What indicators does your program use to determine success of our students after completion?			
20. Does your program survey employers for satisfaction of our students who have earned a degree/certificate? Provide brief analysis of employer satisfaction.			
21. Does the department's analysis of labor market demand, advisory board recommendations, and accreditation status (if applicable) reflect the data?			
22. Have any/all issues been identified in the program plan and are they adequately addressed with appropriate action plans? Explain.			
Summary of Planning Goals and Action Plans			
23. What are your 4-year goals based on areas identified in the Career and Technical Education section of the program plan and how will those goals be measured?			
24. Are additional resources needed to accomplish career and technical education goals? If yes, identify the resource, as well as the purpose and rationale for each resource.			
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request **supports one or more college strategic initiative and/or supports student learning.**	

IX. Resource Planning: Personnel, Technology, Facilities, and Budget	
Faculty	
1. How does your PT/FT ratio impact the program?	Will require a FT Faculty in next year.
2. What staffing needs do you anticipate over the next four years. (Consider: retirements, PDL, reassigned time, turnover, growth or reduction of the program)	We anticipate 1 retirement in the next 3 years. Math will continue to grow, especially when PSEC opens in 2012.
Classified Staff	
3. What staffing needs do you anticipate over the next four years. (Consider: retirements, PDL, reassigned time, turnover, growth or reduction of the program)	Will require additional PT Classified if the number of sections increase and level of support in PSME Center. This will definitely be required in PSEC. Need graduate students in PSME Center. Estimate is $20K/year.
Technology and Equipment	
4. Are the existing equipment and supplies adequate for meeting the needs of the instructional program?	Hopefully funded in PSEC. - 5600 remodel to support new math learning programs - Each room have laptop computers for each student
5. Do you have adequate resources to support ADA needs in your physical and/or online courses and classrooms?	Yes.
6. Is the technology used in your distance education courses appropriate to the nature and objectives of your courses? Please explain how it is appropriate or what changes are underway to make it appropriate. Explain.	CC Confer and other technologies
Technology & Equipment Definitions	
• **Non-instructional Equipment and Supplies:** includes equipment for "office use" that is non-instructional and that is not used in a lab or classroom – it includes non-programmatic equipment for individual instructors and staff, such as a desktop computer for office use. Desktop technology (computers, printers, scanners, faxes) and software requests are processed through your Dean or Director. • **Need a PDF scanner .**	

• **Instructional Equipment and Supplies:** includes technology, software, and supplies used in courses or labs, including occupational program equipment. Instructional program equipment requests are prioritized by the department and then by the Dean or Director. • **Need laptop computers for PT faculty for course development and presentation. The faculty take the laptops into the lecture rooms and labs which just have projectors and NO desktop computers.**		
• **Durable Equipment and Furniture:** includes non-instructional, non-technology equipment (chairs, tables, filing cabinets, vehicles, etc.) necessary to improve the operational functioning of the program/department.		
• **Note:** It is recommended that divisions perform and maintain an inventory of all their technology and equipment.		
Facilities		
7. Are your facilities accessible to students with disabilities?	**Yes**	
8. List needs for upgrades for existing spaces	**NA**	
9. List any new spaces that are needed		
10. Identify any long-term maintenance needs.		
11. Are available general use facilities, such as classrooms, laboratories, and faculty office/work space adequate to support the program? Please explain.		
12. Are work orders, repairs, and support from district maintenance adequate and timely? Please explain.		
Budget		
13. Are the A-budget and B-budget allocations sufficient to meet student needs in your department?	**Need A budget for additional FT and PT faculty.** **Need B-Budget for PSME Center Graduate Students** **If Lottery $ remains, B-Budget is adequate in these tight times.**	
14. Describe areas where your budget may be inadequate to fulfill program goals and mission.		
15. Are there ways to use existing funds differently within your department to meet changing needs?	**The amount is too small to reallocate.**	
Summary of Planning Goals and Action Plans		
16. What are your goals with respect to resource planning and how will those goals be measured?		
17. Are additional resources needed to accomplish your resource planning goals? If yes, identify the resource, as well as the purpose and rationale for each resource.		
Identified Resource	Purpose	If requesting funding, provide a rationale for how each request supports one or more college strategic initiative and/or supports student learning.

Equipment Maintenance	**Keep existing equipment functioning and software licenses**	**Required for student learning and meeting articulation requirements. $15K/Year; new equipment**	

X. Final Summary of Goals, Commitments to Action, and Resource Requests

1. Upon review of this program plan, provide a comprehensive summary of goals met or in progress and resources awarded from the previous program plan.

Goal /Purpose – Met or In Progress	Resource(s) Awarded	Related Learning Outcomes	Related Strategic Initiative or Core Mission
• **Increase student success in sequence courses and improve teaching consistency.** ○ Mentor and monitor PT faculty, in particular the evening sections. Create consistency in level of teaching. ○ Develop a math test to determine the preparedness. ○ Create booster classes (workshops) and gateway testing in PSME Center to raise student's foundational skills ○ Train PT faculty to instruct in a diversified manner to reach struggling and ESL students ○ Continually (at least	**PSME Center provided permit B-Budget funding for Graduate Students in the PSME Center.** **MathMyWay provided permit B-Budget funding for Tas in the classroom.** **Faculty Release time to mentor PT faculty as well as work on new pedagogy**	**1: Clearly communicate mathematical ideas through graphs, tables of data, equations, and verbal descriptions.** **2: Construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques, and interpret results of those models.** **1 & 2 above**	**Basic Skills** **Transfer** **Work Force** **Basic Skills** **Transfer** **Basic Skills** **Work Force**

once per year) update the SLOs and modify the courses accordingly ○ Create two new sequences beyond Math 105. ○ Expand a "pass the torch" ○ Develop a math test to adequately gauge a student's math skills entering precollegiate through Math 1B ○ Stress to the students the time commitment needed in math for success and ○ Counsel each student that appears to be at risk mathematically or cannot commit the necessary time. • PSME's Aurora K-12 Aurora programs promote interest in the fields of science education by developing and disseminating programs designed to teach students about	**Received external funding to continue program.**	**1 & 2 above**	**Transfer** **Work Force**	

educational requirements. • Increase the number of sections and course offerings: o Offer more sections based on student's demand; rooms available.	**Enrollment increased 7% over prior year**	**1 & 2 above**	**Basic Skills** **Transfer** **Work Force**

2. Upon review of this program plan, provide a summary of current or continuing goals and resources needed.

Note: If you are requesting resources this year, these items have to be included in your current program review. If you want the college to understand your full range of need, list every current and upcoming resource need in this section.

Goal/Purpose – Current or Continuing	Resource(s) Requested (Costs need to be included)	Related Learning Outcomes	Related Strategic Initiative or Core Mission
All Prior goals are continuing	**All Prior goals are continuing**		
1**. Faculty to develop web page templates that all faculty can use (especially thinking of the part-time instructors).** Google sites will be the next big thing in instruction. Templates would allow	**Release time of .111 for qtr or $4,500 in B-Budget**	**1 and 2 from above**	**Basic Skills** **Transfer** **Work Force**

faculty with limited web experience to get up and running with a website quickly. And it's all free! By creating web page templates, the department would have a uniform web presence.			
2. **Increase student success in sequence courses and improve teaching consistency.** a. Mentor and monitor PT faculty, in particular the evening sections. Create consistency in level of teaching.	**PSME Center B-Budget funding of $35K for Graduate Students in the PSME Center.**	**1 and 2 from above**	**Basic Skills** **Transfer** **Work Force**
b. Develop a math test to determine the preparedness. c. Create booster classes (workshops) and gateway testing in PSME Center to raise student's foundational skills	**MathMyWay requires B-Budget funding of $65K for TAs in the classroom.**	**1 and 2 from above**	**Basic Skills**

d. Train PT faculty to instruct in a diversified manner to reach struggling and ESL students	**Faculty Release time (.444) to mentor PT faculty as well as work on new pedagogy**	**1 and 2 from above**	**Transfer Basic Skills Work Force**
e. Continually (at least once per year) update the SLOs and modify the courses accordingly			
f. Develop a math test to adequately gauge a student's math skills entering precollegiate through Math 1B	**Goal is grant funding from NSF STEMway proposal.**	**1 and 2 from above**	**Transfer Basic Skills Work Force**
g. Stress to the students the time commitment needed in math for success and	**Goal is grant funding from NSF STEMway proposal.**	**1 and 2 from above**	**Transfer Basic Skills Work Force**
h. Counsel each student that appears to be at risk mathematically or cannot commit the necessary time.	**Goal is grant funding from NSF STEMway proposal.**	**1 and 2 from above**	**Transfer Basic Skills Work Force**

1. PSME's Aurora K-12 Aurora programs promote interest in the fields of science education by developing and disseminating programs designed to teach students about educational requirements.	**Require external funding to continue program. Hopefully from the Foundation.**	**1 and 2 from above**	**Work Force**

Supervising Administrator Signature	*Completion Date*