## I. Team Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Member Type</th>
<th>Email</th>
<th>Contact Phone</th>
<th>Responsible for what part</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irina Roderick</td>
<td>Primary Team Member</td>
<td><a href="mailto:irina.roderick@marin.edu">irina.roderick@marin.edu</a></td>
<td>7522</td>
<td></td>
<td></td>
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</table>

## II. Program Review Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Committee (Chairs)</th>
<th>Signature</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Chris Schultz</td>
<td>Curriculum Committee Chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blaze Woodlief</td>
<td>Educational Planning Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-Anne Chernock and Erik Dunmire</td>
<td>Facilities Committee Co-Chairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yolanda Bellisimo</td>
<td>Planning and Resource Allocation Committee Co-Chair/Academic Senate President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nick Chang</td>
<td>Planning and Resource Allocation Committee Co-Chair/Instructional Equipment Committee Chair</td>
<td></td>
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</tr>
<tr>
<td>Sara McKinnon and Becky Brown</td>
<td>Program Review Committee Chair and SLO Coordinators</td>
<td></td>
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<tr>
<td>Chris Schulz</td>
<td>Student Access and Success Committee Chair</td>
<td></td>
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<tr>
<td>Michael Irvine</td>
<td>Tech Committee Chair</td>
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## III. Vice President of Academic Affairs

<table>
<thead>
<tr>
<th>Name</th>
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<tr>
<td>Nick Chang</td>
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## IV. Board of Trustees President

<table>
<thead>
<tr>
<th>Name</th>
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<th>Date</th>
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<tbody>
<tr>
<td>Eva Long</td>
<td></td>
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</table>
Program Overview—Introduction
MATH-2009

Instructions: Use this form to quickly outline your program at College of Marin. Briefly answer each of the questions and use bullet points whenever possible. Provide any attachments that substantiate or expand on the questions below.

I. Program Definition
Outline the unique qualities that define the importance of your program.

The Mathematics program at the College of Marin has a demonstrated long and distinguished history of providing the citizens of Marin county and adjacent counties with a variety of high quality courses designed to accomplish the four primary goals set by our department and reflective of the mission and educational goals of the College of Marin. In recognition of the increasing need for mathematics and technology as tools in a societal context, we give emphasis to applied and contextual based problem solving in our courses. This program seeks to develop in our students the level of mathematical competence appropriate for their educational goals, to foster appreciation of mathematics as part of human culture, to provide a climate conducive to intellectual growth of students and faculty, and to prepare and inspire students to the service of others. Our curriculum provides a strong transfer program, as well as life- long learning courses.

II. Program Purpose
Pathway:
Transfer

Briefly describe how your program fits into the pathways you have chosen.

The Mathematics program fits the transfer pathway since its goal is to maintain educational excellence and provide

a) rigorous training for students seeking to transfer to UC/CSU (and other four-year institutions) programs in mathematics,

b) a wide variety of courses meeting the UC/CSU general education requirement in mathematics for other disciplines, particularly in the physical and life sciences, engineering, and business who will transfer as college juniors.

Additionally, the Mathematics program fits into the other pathways (Basic Skills, Career Education, and Life-long Learning ) because it provides


c) a variety of courses in a positive and supportive learning environment for a diverse student population seeking opportunities, through general education mathematics courses, to investigate the complexity and diversity of human experience while learning to communicate clearly and to think independently, critically, and creatively, with the goal of participating as informed and ethical citizens of the world, and achieving their individual educational and professional goals and expectations.
d) remedial education for students, both for general education needs and specific vocational requirements, e.g., nursing, business and economics.

The Mathematics program is committed to develop in every one of our students (1) the level of mathematical competence appropriate for their educational goals, (2) an ability to think critically, reason logically, communicate precisely, and apply their knowledge/skills within and outside mathematics, and (3) an appreciation of mathematics as part of human culture.

To advance the mission of its program the Mathematics Department sets the goals of

1. Teaching students to communicate precisely and logically, to discover patterns in various areas of mathematics, and to apply this knowledge within and outside mathematics.

2. Providing a foundation for critical thinking by developing skills in logic and problem solving.

3. Organizing its teaching activities to reflect its commitment to educating students with diverse backgrounds and goals, and to making our expertise as professional mathematicians and educators available to the larger community by offering a broad selection of classes.

4. Seeking to develop in our students the level of mathematical competence appropriate for their educational goals, to foster appreciation of mathematics as part of human culture, to provide a climate conducive to intellectual growth of students and faculty, and to prepare and inspire students to the service of others.

5. Developing close mentoring relationships among faculty and students through classes of various size and format, student-faculty projects, and a Math Lab offering self-paced classes and tutoring.

6. Working continuously to improve our teaching and effectiveness of the program on the whole; keeping our pedagogy effective and well-suited to our students; exploring innovations in the field of mathematics and mathematical education; implementing improved methods in the classroom.

7. Maintaining a collegial working relationship with colleagues at the schools our majors transfer to (Sonoma State University, San Francisco State University, U.C. Berkley, and U.C. Davis to name but a few) to insure the equivalence of our course content and to prepare our transferring majors for academic challenges inherent to universities.
level study.

8. Maintaining diverse course offerings to provide an opportunity for enhancing the educational background of our adult learners and for those individuals that find they are in need of specific training or information that we can teach them. Two distinct populations (1. highly motivated students with specific goals, e.g., nursing programs, transfer, job requirements, and 2. students lacking such motivation, typically fresh from high school, often with a history of failure in math) are accommodated by two safety nets: the semester-long versions of basic mathematics, introductory algebra and intermediate algebra, and their stretch versions: two-semester Basic and Intermediate Mathematics (95AB), Introductory algebra (101AB), Intermediate Algebra (103AB), and the self-paced courses of basic mathematics (95XY), introductory algebra (101XY), and Intermediate algebra (103XY) taught in the Math lab. Additionally, to accommodate the changing population we are instituting an Arithmetic courses Math 85 starting Fall 2010.

III. Students Served
Briefly outline what students are served in your program.

The Mathematics program serves all students interested in mathematics and its applications. These include: a) students majoring in mathematics in order to pursue advanced study, obtain a career in teaching or in the private sector, or achieve intellectual enrichment; b) students from majors outside of mathematics who need to acquire mathematical skills in order to be successful in their majors; c) students seeking opportunities, through general education mathematics courses, to investigate the complexity and diversity of human experience while learning to communicate clearly and to think independently, critically, and creatively, with the goal of participating as informed and ethical citizens of the world; and d) students requiring remediation in mathematics. Age distribution: 60% are younger than 24; 32% are in 25-49 age group, 4% are over 50. There are 54% females and 46% males. There are 61% white and 39% non-white. From a sample of 379 students, 94% take mathematics for transfer; 49% for transfer major; 45% for General Ed. Transfer; 6% for personal enrichment.

IV. Program History
Briefly outline the recent history of your program.

In 1975 the Indian Valley campus, then called Indian Valley College (a completely independent academic institution in the same District as the College of Marin) officially opened and offered a full program of Mathematics courses ranging from basic skills (Math 95) through first-year Calculus (math 124). The discipline also included classes in programming languages, such as Basic and Pascal. Over the next two years an Individualized Mathematics Program was developed and offered self-paced courses in all of the pre-calculus Mathematics (Math 95, 101, 103, 104). The department flourished with approximately 4 FTE faculty and about 3000 students in the college as a whole. Concurrent with this period the College of Marin in Kentfield had about 10,000 students and 12 FTE faculty in Mathematics. The course offerings included all of the above plus third and fourth semester Calculus and Linear Algebra, but no programming classes or a math lab. In the mid-1980's a self-paced Mathematics program was established at this campus as well. In 1985 some of the buildings on the IVC campus were determined to have structural damage. The entire campus was closed and the Mathematics faculty from there came to the Kentfield campus. When the IVC campus reopened within the next couple of years, the full-time faculty from there remained primarily on the Kentfield campus. The mathematics faculty at IVC consisted of part-time faculty and one full-time person, the latter of whom taught classes on both of the campuses. Over the next two decades the program at Kentfield ebbed and flowed with the enrollment of the District, while IVC withered to two or three classroom offerings and a Mathematics lab. The program has remained basically the same since, except the
addition of on-line classes and a stretch version of Introductory Algebra in the late 1990's.

The Mathematics program serves all students interested in mathematics and its applications. These include:

a) students majoring in mathematics in order to pursue advanced study, obtain a career in teaching or in the private sector, or achieve intellectual enrichment;

b) students from majors outside of mathematics who need to acquire mathematical skills in order to be successful in their majors;

c) students seeking opportunities, through general education mathematics courses, to investigate the complexity and diversity of human experience while learning to communicate clearly and to think independently, critically, and creatively, with the goal of participating as informed and ethical citizens of the world; and

d) students requiring remediation in mathematics.

Attachments:
List and briefly describe any attachments
Five Pathways
A description of how you serve students in the five pathways as described in the Educational Master Plan.
MATH-2009

I. Please refer to the table of estimates of how many students are in each pathway for your program/discipline over the past four years.

1. Basic Skills
Students on the Basic Skills pathway seek to improve day-to-day functioning, enhance job performance, enter new careers, and/or acquire pre-collegiate fundamental skills in order to successfully complete college level courses. The Basic Skills pathway includes English as a Second Language courses offered in both credit and non-credit divisions as well as courses in developmental mathematics and English as well as basic skills courses in computers and Library.

Our program serves students in this pathway: A good proportion of the students, but not a clear majority

2. Career and Technical Education
Students on the Career and Technical Education pathway pursue knowledge, technical and skill training necessary for career placement, career advancement and career changes or for creative endeavors that require technical skills. Their educational goals are either an associate degree or certificate. For some degrees/ certificates, such as Nursing, the course of study is defined by external professional regulations or licensing criteria.

Our program serves students in this pathway: Some students

3. Cultural Enrichment
Students on the Cultural Enrichment pathway focus on acquiring and expanding aesthetic abilities. Students broaden their intellectual and artistic skills through participation in creative opportunities including exhibitions, performances, or publishing work.

Our program serves students in this pathway: Some students

4. Lifelong Learning
Students on the Lifelong Learning pathway focus on intellectual and physical enrichment. Some Lifelong students may have already completed degrees and/or may be in significantly advanced positions in their careers.

Our program serves students in this pathway: Some students

5. Transfer
Students on the Transfer pathway seek successful matriculation from College of Marin to four-year institutions, universities, colleges or specialized educational institutions by completing courses that fulfill requirements for the baccalaureate degree or admission to specialized programs such as nursing. In the process of completing transfer requirements, these students may also earn an associate degree.

Our program serves students in this pathway:
Transfer GE: A good proportion of the students, but not a clear majority
Transfer Major: A good proportion of the students, but not a clear majority

II. What are your program’s goals for each pathway?
The program's goals for all pathways indiscriminately are:

1. Teaching students to communicate precisely and logically, to
discover patterns in various areas of mathematics, and to apply this knowledge within and outside mathematics.

2. Providing a foundation for critical thinking by developing skills in logic and problem solving

3. Educating students with diverse backgrounds and goals, and to making our expertise as professional mathematicians and educators available to the larger community by offering a broad selection of classes.

4. Developing in our students the level of mathematical competence appropriate for their educational goals, fostering appreciation of mathematics as part of human culture, providing a climate conducive to intellectual growth of students and faculty, and preparing and inspire students to the service of others.

5. Developing close mentoring relationships with students through classes of various size and format, student-faculty projects, and a Math Lab offering self-paced classes and tutoring.

6. Providing rigorous training for students seeking to transfer to UC/CSU (and other four-year institutions) programs in mathematics and a wide variety of courses meeting the UC/CSU general education requirement in mathematics for other disciplines, particularly in the physical and life sciences, engineering, and business who will transfer as college juniors.

III. How does your program/discipline help students meet these goals?

The program meets the stated goals by providing the students with a comprehensive math curriculum taught by highly-qualified faculty and support staff.

IV. How do you measure your success?

We measure our success by evalutaing our students using a variety of tools including exams, homework, class activities and discussions, projects, individual feedback.

V. How do you make sure your students are able to get through your program in a timely fashion?

We encourage the students by providing guidance and teaching proper study skills, as well as by emphasizing the importance of taking math classes in sequence, without substantial time gaps.
Student Access and Success  
MATH-2009

I. Access
Based on the enrollment numbers and demographic breakdown for your courses, what significant factors or barriers are influencing student access to your courses or program?

We believe that significant factors influencing student access are language barriers, financial difficulties, scheduling. The absence of a stable tutoring budget (our current need being $15,000 yearly) limits access significantly.

II. Student Success
Based on the student success and retention rates breakdown for your courses, what significant factors or barriers are influencing student success in your courses or program measured by completion of course and grade earned?

Note: Success Rate is the percentage if students who received a passing grade of A, B, C, or P at the end of the semester.

Note: Retention Rate is the percentage of students retained in a class at the end of the semester. In Progress and Report Delayed grades are excluded. Cancelled classes and classes with no grades shown are excluded.

We believe that significant factors influencing student success are language barriers, family obligations, job obligations, lack of study skills, lack of self-motivation, poor preparation for the class. The absence of a stable tutoring budget (we currently need $15,000 yearly) limits success significantly.

III. Student Retention
Based on the student success and retention rates breakdown for your courses, what significant factors or barriers are influencing the ability for the student to succeed at more advanced courses for which your course is a prerequisite.

We have an inability to enforce a standard level of preparation.

We can't retain students if we can't provide the most basic need - the need for tutoring. We can't provide it without a stable tutoring budget of $15,000 yearly.

IV. Improving Student Success and Retention
What key factors would further improve your student success and retention or support your current level of success? Please check any applicable statements below and then provide additional details/explanation on your choices below.

- Access to student support services (counseling, tutoring, etc.)
- Curriculum change
- Course scheduling for students needs
- New offerings/additional sections
- Articulation for transfer or COM GE
- Recruitment/outreach
- Student/job market demand change
- Faculty availability
Facilities & technology

Tutoring

The Math Lab is routinely under-funded or unfunded for tutoring (we need $15,000 yearly). The space is inadequate and poorly equipped. We need a stable budget and more tutors to eliminate lines and to shorten the time students spend waiting for help.

Scheduling

Many sections routinely have waiting lists long enough to fill additional classes. Sections need to be added to accommodate these students.

V. Please explain and provide additional details regarding your choices above:

We need a budget of $15,000 yearly to operate the Math Lab to benefit all students in the math program. Without mathematics the students can't complete their college goals. They need support to do it in a timely manner.
Facilities Questionnaire
MATH-2009

What are the existing facilities issues that impact student access and success, or health and safety? (address any of the following: Size, location, conditions, maintenance, features, a/c, lighting, adjacencies, other.)

The issues that have an impact on the student access and success are classroom size, disgusting condition in which the classrooms are kept, dirt and poor ventilation; dirty, torn and worn carpets threatening the Instructors' safety, poorly regulated heat and air-conditioning.
Curriculum
MATH-2009

1. Course Outlines of Record must be updated every 5 years to remain current for content, texts, student learning outcomes as well as for articulation purposes. Are you aware of the dates on your course outlines? If not, contact OIM to check. If you have courses that are over 5 years old, are you planning on updating them? Please list. The courses that are in the process of being updated are:

   all Math 95 sections, all Math 101 sections, all Math 103 sections, all Math 104 sections, Math 109, Math 105, Math 115, Math 121, Math 110.

2. Are you planning on changing, updating or revising and degree or certificate requirements? If so, please explain how it will improve student learning, student success and/or access.

   N/A

3. Are you collaborating (or thinking about collaborating) with other departments to develop joint curriculum for learning communities? If so, please describe briefly and explain how it will improve student learning, student success and/or access.

   N/A

4. Do you plan to develop any new curriculum? If so, please describe briefly and explain how it will improve student learning, student success and/or access.

   Math 85 (an arithmetic class) will be instituted to accommodate the students lacking in preparation for Math 95.

5. Do you plan to develop any new Distance Ed courses or develop Distance Ed versions of existing courses? If so, please describe briefly and explain how it will improve student learning, student success and/or access.

   N/A

6. Do you plan to add or increase your material fees for any of your classes? If so, please list the classes and the proposed new or revised material fees for the respective classes.

   N/A
Student Learning Outcomes
MATH-2009

Five College Learning Outcomes:
1. Written, Oral and Visual Communication: Communicate effectively in writing, orally and/or visually using traditional and/or modern information resources and supporting technology.
2. Scientific and Quantitative Reasoning: Locate, identify, collect, and organize data in order to then analyze, interpret or evaluate it using mathematical skills and/or the scientific method.
3. Critical Thinking: Differentiate between facts, influences, opinions, and assumptions to reach reasoned and supportable conclusions.
4. Problem Solving: Recognize and identify the components of a problem or issue, look at it from multiple perspectives and investigate ways to resolve it.
5. Information Literacy: Formulate strategies to locate, evaluate and apply information from a variety of sources - print and/or electronic.

I. Degrees and Certificates
1. What degrees and certificates does your discipline offer?
   We offer an A.A. in Mathematics.

2. Keeping in mind the five College Learning Outcomes above as well as what your discipline specifically requires of your graduating students, what should students be able to do when they have completed your discipline's requirements for each degree or certificate?

   Upon completion of the discipline's requirements students will be able to

   1. Communicate effectively in writing, orally and/or visually using traditional and/or modern information resources and supporting technology.
   2. Locate, identify, collect, and organize data in order to then analyze, interpret or evaluate it using mathematical skills and/or the scientific method.
   3. Differentiate between facts, influences, opinions, and assumptions to reach reasoned and supportable conclusions.
   4. Recognize and identify the components of a problem or issue, look at it from multiple perspectives and investigate ways to resolve it.
   5. Formulate strategies to locate, evaluate and apply information from a variety of sources - print and/or electronic.

3. How do students in your program demonstrate that they meet each of the college-wide learning outcomes? What courses, activities, and/or projects are students required to complete that relate to each outcome?

   i. Written, Oral and Visual Communication

      The students submit homework assignments, examinations and projects that demonstrate their ability to communicate in written, oral and visual form efficiently and effectively.

   ii. Scientific and Quantitative Reasoning

      The students participate in activities, submit homework, and take exams to demonstrate the achieved mastery of scientific and quantitative reasoning.

   iii. Critical Thinking

      The students participate in activities, submit homework, and take exams to demonstrate the achieved mastery of critical thinking.
iv. Problem Solving
The students participate in activities, submit homework, and take exams to demonstrate the achieved mastery of efficient problem-solving methods.

v. Information Literacy
The students participate in activities, submit homework, and take exams to demonstrate the achieved mastery of processing quantitative and qualitative information presented in oral, written, visual forms.

II. General Education:
1. Does your discipline offer any classes which count for general education requirements?
   None

2. Which General Education courses in your discipline address the each of the five College Learning Outcomes? Please list courses for each of the following:
   i. Written, Oral and Visual Communication
      See the corresponding section under SLO Certificates and Degrees.
   ii. Scientific and Quantitative Reasoning
      See the corresponding section under SLO Certificates and Degrees.
   iii. Critical Thinking
      See the corresponding section under SLO Certificates and Degrees.
   iv. Problem Solving
      See the corresponding section under SLO Certificates and Degrees.
   v. Information Literacy
      See the corresponding section under SLO Certificates and Degrees.

III. Course Level Outcomes:
1. Do all of your Course Outlines of Record include Student Learning Outcomes? If not, are you revising them?
   Some of the course outlines already include the SLOs, the rest are being revised.

2. What percentage of faculty members in your discipline include SLOs in their course syllabi?
   Approximately 95-100%.

3. Assessment:
   i. How often do you assess these SLOs?
      Once a semester.
   ii. In the last two years every discipline developed SLOs specifically related to College Learning Outcome #3: Critical Thinking. Have you assessed this or any of the stated Student Learning Outcomes in your course outlines over the last year? If so, please summarize the results.
      We have developed, as a department, SLOs for every course. The SLOs topic is on the agenda of every department meeting where SLOs are discussed and analyzed.
   iii. What improvements have you made or do you plan to make in the future?
      We have refined the SLOs to better reflect the desired outcomes for each course.
3. Assessment:
iv. What do you plan to assess this year? Who will you assess? How will you assess?

The SLO for every course is assessed each semester without exceptions. We are assessing our students by examining their mastery of Mathematics.
Technology Requests

Part II : Hardware for Lab and Classroom

MATH-2009

I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

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<th>Priority:</th>
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<th>Category</th>
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Description and part number for ordering:

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Type               | College-wide | Discipline-Specific
Replace            | Open Lab      | Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

Old equipment runs on Microsoft-98, can't open Acrobat reader.

Item to be shared with the following Department/Program: (Include any shared expenses)

N/A

Justification for Item (See Rating Rubric)

1. Indicate how important this item is to the life of your discipline.
   • 'A' means that your discipline cannot teach your course(s) without the requested equipment.
   • 'B' means that your course(s) would be greatly enhanced with the requested equipment.
   • 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

   In addition, how many times have you requested this item, but you have not received it?

2. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

3. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

4. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

5. What student learning or other outcomes are expected? Is it important to the achievement of student goals?

6. How will these outcomes be measured for future planning? What data or evidence supports your request?

Additional Justification for this item:
I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

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Description and part number for ordering:

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</table>

Type College-wide Discipline-Specific
Replace Open Lab Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

The current equipment is running on Windows-98, can't open Acrobat Reader.

Item to be shared with the following Department/Program: (Include any shared expenses)

N/A

Justification for Item (See Rating Rubric)

1. Indicate how important this item is to the life of your discipline.
   • ‘A’ means that your discipline cannot teach your course(s) without the requested equipment.
   • ‘B’ means that your course(s) would be greatly enhanced with the requested equipment.
   • 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.
   In addition, how many times have you requested this item, but you have not received it?
   A

   We have requested it twice before.

2. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)
   N/A

3. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?
   The Instructor and Instructional Specialist need to be able to open documents sent to the Math Lab in order to perform their required duties.

4. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?
   It is vital for the Math Lab operation serving all students in the Math program.
5. What student learning or other outcomes are expected? Is it important to the achievement of student goals?

Faculty and staff need to be able to access information in order to provide a minimum level of service to students.

6. How will these outcomes be measured for future planning? What data or evidence supports your request?

If this equipment is not replaced, the important services to the students will be curtailed.

Additional Justification for this item:

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I. Technology Requests-Hardware for Lab and Classroom or other student use

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

<table>
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Description and part number for ordering:
Copier

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Type College-wide Discipline-Specific

None None

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:

The old copier is falling apart and needs constant repair

Item to be shared with the following Department/Program: (Include any shared expenses)

Justification for Item (See Rating Rubric)
1. Indicate how important this item is to the life of your discipline.
   • 'A' means that your discipline cannot teach your course(s) without the requested equipment.
   • 'B' means that your course(s) would be greatly enhanced with the requested equipment.
   • 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.
   In addition, how many times have you requested this item, but you have not received it?

2. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

3. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

4. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?
5. What student learning or other outcomes are expected? Is it important to the achievement of student goals?

6. How will these outcomes be measured for future planning? What data or evidence supports your request?

Additional Justification for this item:

I. Technology Requests-Hardware for Lab and Classroom or other student use
This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

<table>
<thead>
<tr>
<th>Priority:</th>
<th>To Support:</th>
<th>Category</th>
<th>Discipline Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>all Classes</td>
<td>Computer</td>
<td>All science classes</td>
</tr>
</tbody>
</table>

Description and part number for ordering:
PC

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Unit Cost:</th>
<th>Tax:</th>
<th>Shipping:</th>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>$1,000.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$15,000.00</td>
</tr>
</tbody>
</table>

Type
Replace

College-wide
Discipline-Specific
Open Lab
Lab use

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:
The existing computers in the Computer Lab in the Science building need replacement

Item to be shared with the following Department/Program: (Include any shared expenses)
To be shared with Boi/Geo/Chem/Phys/math

Justification for Item (See Rating Rubric)
1. Indicate how important this item is to the life of your discipline.
   • 'A' means that your discipline cannot teach your course(s) without the requested equipment.
   • 'B' means that your course(s) would be greatly enhanced with the requested equipment.
   • 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.
   In addition, how many times have you requested this item, but you have not received it?

2. Is this hardware required to meet Title 5 and/or Ed Code? If so, how? (Cite code)
   Is this equipment required to meet any local, state or federal Health and Safety Code? If so, how? (Cite code)

3. How will the quality of instruction be improved for student learning and success? Is it necessary for students to succeed in a series of courses?

4. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

5. What student learning or other outcomes are expected? Is it important to the achievement
of student goals?

6. How will these outcomes be measured for future planning? What data or evidence supports your request?

Additional Justification for this item:
**Instructional Operating Supplies**  
**MATH-2009**

### I. Consumable Instructional Operating Supplies

This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

**Note:** Please group requests into broad categories of items required to teach a class. Make ONE entry for each category.

**Note:** These are generally ongoing costs. One-time items go under Instructional Equipment.

<table>
<thead>
<tr>
<th>Priority:</th>
<th>To Support:</th>
<th>Discipline Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>1200 Students</td>
<td>Mathematics</td>
</tr>
</tbody>
</table>

**Broad Category (for example in Chemistry - "Chemicals")**  
Chalk, pens, pencils, notepads, manipulatives

<table>
<thead>
<tr>
<th>Annual Cost</th>
<th>Previous Cost</th>
<th>Amount of Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.0</td>
<td>250.0</td>
<td>300.0</td>
</tr>
</tbody>
</table>

**Type**  
Increasing Cost  
**How Long?**  
Ongoing/Recurring

**Item to be shared with the following Department/Program: (Include any shared expenses)**

**Justification for Item (See Rating Rubric)**

1. Indicate how important this item is to the life of your discipline.
   - 'A' means that your discipline cannot teach your course(s) without the requested equipment.
   - 'B' means that your course(s) would be greatly enhanced with the requested equipment.
   - 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.

   In addition, how many times have you requested this item, but you have not received it?

   A

2. Is it necessary for students to succeed in a series of courses?

   N/A

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?

   N/A

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals?

   N/A

5. How will these outcomes be measured for future planning? What data or evidence supports your request?

   N/A

---

http://programreview.marin.edu/IEReportPart4.jsp

2/22/2010
This section will be filled out by faculty and reviewed by the Department Chair, the Area Dean, the Technology Committee, IPC and Budget.

Note: Please group requests into broad categories of items required to teach a class. Make ONE entry for each category.

Note: These are generally ongoing costs. One-time items go under Instructional Equipment.

**Priority:**

<table>
<thead>
<tr>
<th>Priority</th>
<th>To Support:</th>
<th>Discipline Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>1200 Students</td>
<td>Mathematics</td>
</tr>
</tbody>
</table>

**Broad Category (for example in Chemistry - "Chemicals")**

Paper in reams

<table>
<thead>
<tr>
<th>Annual Cost</th>
<th>Previous Cost</th>
<th>Amount of Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.0</td>
<td>375.0</td>
<td>25.0</td>
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</table>

**Type**

<table>
<thead>
<tr>
<th>Increasing Cost</th>
<th>How Long?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing/Recurring</td>
<td></td>
</tr>
</tbody>
</table>

**Item to be shared with the following Department/Program: (Include any shared expenses)**

**Justification for Item (See Rating Rubric)**

1. Indicate how important this item is to the life of your discipline.
   - 'A' means that your discipline cannot teach your course(s) without the requested equipment.
   - 'B' means that your course(s) would be greatly enhanced with the requested equipment.
   - 'C' means that you would like this piece of equipment for your course(s) but can wait for a future academic year.
   In addition, how many times have you requested this item, but you have not received it?
   A

2. Is it necessary for students to succeed in a series of courses?
   Yes.

3. How will access for students be improved? How many students (annually) will benefit from this request? Is it required to accommodate existing students? Would it be vital to attracting new students?
   N/A

4. What student learning or other outcomes are expected? Is it important to the achievement of student goals?
   N/A

5. How will these outcomes be measured for future planning? What data or evidence supports your request?
   N/A
Non-Instructional Requests

Part I : Non-Instructional Equipment and Supplies
This section will be filled out by the Department Chair
MATH-2009

I. Non-Instructional Equipment and Supplies
This section will be filled out by the Department Chair, and reviewed by the Area Dean, IPC and Budget.

<table>
<thead>
<tr>
<th>Priority</th>
<th>To Support</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>1200 Students</td>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade</td>
<td>New and will be ongoing</td>
</tr>
</tbody>
</table>

Description and part number for ordering:
Record-keeping equipment

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Unit Cost:</th>
<th>Tax:</th>
<th>Shipping:</th>
<th>Total:</th>
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<tbody>
<tr>
<td>2</td>
<td>$1,000.00</td>
<td>$100.00</td>
<td>$0.00</td>
<td>$2,100.00</td>
</tr>
</tbody>
</table>

If this is an upgrade or replacement, please briefly describe your existing equipment in terms of age and capability or lack thereof:
It is an upgrade from the paper-traking system in KTD and Foxpro program done in DOS.

Item to be shared with the following Department/Program: (Include any shared expenses)
N/A

Justification for Item (See Rating Rubric)

1. Who will use these supplies or equipment?
This equipment is to be used by faculty and an Instructional Specialist for record-keeping purposes. The present form of record-keeping is outdated and unreliable.

2. How will access for students be improved?
N/A
## Faculty Members
### MATH-2009

### I. Program Faculty

#### List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>Maula</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status:**
- Shared W/other program(s): Full-time, tenured No

<table>
<thead>
<tr>
<th></th>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>21</td>
<td>19.000</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Years of Service:** 7
**Specialty:** Applied Mathematics

**Leadership:** List involvement in committees or other service
- Former CRA Trustee. Served on various committees. Acted as Math and Science Club President. Served on the Curriculum Committee, the IPC, the Road to Success committee.

---

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armendariz</td>
<td>Joaquin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status:**
- Shared W/other program(s): Full-time, tenured No

<table>
<thead>
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<th></th>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
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<tr>
<td></td>
<td>6</td>
<td>19.25</td>
<td>19.5.000</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Years of Service:** 22
**Specialty:** Mathematical Physics

**Leadership:** List involvement in committees or other service
- Served on various committees.

---

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackburn</td>
<td>Brian</td>
<td></td>
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</tr>
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</table>

**Status:**
- Adjunct, ETCUM No

<table>
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<tr>
<th></th>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
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<tbody>
<tr>
<td></td>
<td>0</td>
<td>8</td>
<td>6.875</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Years of Service:** 14
**Specialty:** Math Education

---

[http://programreview.marin.edu/TUPhysicsReviewFacade.jsp](http://programreview.marin.edu/TUPhysicsReviewFacade.jsp)
### Leadership: List involvement in committees or other service

#### List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contini</td>
<td>Victor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status:**
- Shared W/other program(s): Temp Pool No

<table>
<thead>
<tr>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Years of Service:** 1  
**Specialty:** Mathematics

### Leadership: List involvement in committees or other service

#### List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
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</thead>
<tbody>
<tr>
<td>Freedman</td>
<td>Meredith</td>
<td></td>
<td></td>
</tr>
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</table>

**Status:**
- Shared W/other program(s): Temp Pool No

<table>
<thead>
<tr>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>7.25</td>
<td>7.5</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Years of Service:** 3  
**Specialty:** Math Education

### Leadership: List involvement in committees or other service

#### List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golitzin</td>
<td>George</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status:**
- Shared W/other program(s): Full-time, tenured No

<table>
<thead>
<tr>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0</td>
<td>20</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Years of Service:** 13  
**Specialty:** Lie Superalgebras

### Leadership: List involvement in committees or other service

- Served on Curriculum Committee.

### List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodale</td>
<td>Jayme</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Status: Shared W/other program(s):
Adjunct, ETCUM No

Summer 2009 TU Fall 2009 TU Spring 2010 TU Reassigned (Total)
0.5 3.75 6 0.000

Years of Service: Specialty:
12 Math Education

Leadership: List involvement in committees or other service

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer
Last Name First Name MI Year Retired:
Jacob John

Status: Shared W/other program(s):
Full-time, tenured No

Summer 2009 TU Fall 2009 TU Spring 2010 TU Reassigned (Total)
0 13 15 0.0

Years of Service: Specialty:
19 Differential Geometry, Lie Groups, Mathematical Physics

Leadership: List involvement in committees or other service
Served on various committees. Former department Chair.

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer
Last Name First Name MI Year Retired:
Jaeschke Sara

Status: Shared W/other program(s):
Adjunct, ETCUM No

Summer 2009 TU Fall 2009 TU Spring 2010 TU Reassigned (Total)
0 0 0 0.000

Years of Service: Specialty:
11 Math Education

Leadership: List involvement in committees or other service

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer
Last Name First Name MI Year Retired:
Kostyrko Jacek

Status: Shared W/other program(s):
Adjunct, ETCUM No
<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired</th>
<th>Status</th>
<th>Shared W/other program(s):</th>
<th>Tuition Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lansing</td>
<td>Ira</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monteith</td>
<td>Anthony</td>
<td>1</td>
<td>1</td>
<td></td>
<td>CRA Trust Board UPM Executive Council Advisor</td>
<td></td>
</tr>
<tr>
<td>Nelson</td>
<td>Cliff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Leadership: List involvement in committees or other service

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordin</td>
<td>Laurie</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status:**
- Shared W/other program(s):
  - Full-time, tenured: No

**Summer 2009 TU**
- 8

**Fall 2009 TU**
- 19.5

**Spring 2010 TU**
- 18.75

**Reassigned (Total)**
- 5.5

**Years of Service:**
- 13

**Specialty:**
- Statistics

---

### Leadership: List involvement in committees or other service

- ASG Advisor
- Academic Standards Committee member
- College Petitions Committee member
- UPM CCC Rep
- Served on hiring committees
- Department Co-Chair.
- Math department Co-Chair

---

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psomas</td>
<td>Nick</td>
<td></td>
<td></td>
</tr>
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</table>

**Status:**
- Shared W/other program(s):
  - Adjunct, ETCUM: No

**Summer 2009 TU**
- 8.000

**Fall 2009 TU**
- 0.000

**Spring 2010 TU**
- 0.000

**Reassigned (Total)**
- 0.000

**Years of Service:**
- 17

**Specialty:**
- Math Education

---

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
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</thead>
<tbody>
<tr>
<td>Roderick</td>
<td>Irina</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status:**
- Shared W/other program(s):
  - Full-time, tenured: No
<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russakovskii</td>
<td>Eugene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stewart</td>
<td>Alyson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang</td>
<td>Andrea</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Leadership: List involvement in committees or other service**
- Served on Curriculum Committee. Currently on hiring committee. Department co-Chair

**List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer**

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russakovskii</td>
<td>Eugene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stewart</td>
<td>Alyson</td>
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<td></td>
</tr>
<tr>
<td>Wang</td>
<td>Andrea</td>
<td></td>
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</table>

**Years of Service:**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Summer 2009 TU</td>
<td>Fall 2009 TU</td>
<td>Spring 2010 TU</td>
<td>Reassigned (Total)</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>5</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Specialty:**

- Partial Diff. Equations
- Linear Algebra, Math Education
- List all areas of specialty and/or equivalency: Math Education

**Status:**

- Adjunct, ETCUM: No
- Adjunct, ETCUM: N
- Adjunct, ETCUM: No

**Shared W/other program(s):**

- No
- No
- No

**Reassigned (Total):**

- 1.5
- 00.000
- 00.000

**Years of Service:**

- 7
- 11
- 15

**Notes:**

- [Program Review Page](http://programreview.marin.edu/TUReportFaculty.jsp)
Leadership: List involvement in committees or other service

List of Faculty Members and Total faculty Units separately for Fall, Spring and Summer

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MI</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young</td>
<td>Maria</td>
<td></td>
<td></td>
</tr>
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</table>

Status: Shared W/other program(s): Adjunct, ETCUM No

<table>
<thead>
<tr>
<th>Summer 2009 TU</th>
<th>Fall 2009 TU</th>
<th>Spring 2010 TU</th>
<th>Reassigned (Total)</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>5</td>
<td>00.000</td>
</tr>
</tbody>
</table>

Years of Service: Specialty: 2 Math education

Leadership: List involvement in committees or other service

Additional Teaching Unit Requests

III. FT Faculty Needs (Please fill this out ONLY if you are stating a need for new full time faculty in your area.)

1. Please indicate if there are NO FT faculty in your discipline. Please provide data regarding the length of time this discipline has been without a full time instructor.

2. Non-availability of part-time instructors in a subject area. Please provide evidence demonstrating the difficulty in finding part-time instructors to teach in the subject area.

3. RETCUM Faculty: How many FT faculty have retired in the past ten years. How many units are now taught by RETCUM faculty each year?

4. New FT Faculty: How many NEW FT faculty have been hired in past 10 years? Please list each faculty name and the year of employment. If this instructor is shared with another department, please list the equivalent FTE% for your department. Please list instructional equivalencies as necessary and if faculty member was the result of retreat rights.

5. Reduction in department TUs as a result of FT Faculty retirements or other significant causes? Please provide data that illustrates a change in teaching unit allocation as a direct result of FT faculty retirements within your department and how this may change in the coming year(s).

6. Other reasons: Have there been other causes for a reduction in units in your discipline? If so, please explain and provide evidence.

7. Changes in Student Demand: Recent or forthcoming growth as a result of added sections due to enrollment demands. Provide evidence that illustrates the need for additional faculty due to increased student demand such as numbers of sections added and/or courses with waitlist totals showing a need for additional sections. What is the % of FTEF for this increase in units? If there has been a decline in student growth, please explain why.

8. Current of forthcoming changes that illustrate the immediate need of additional FT faculty within this department. Please outline all relevant circumstances that justify the priority of a FT hire in...
addition to those already outlined above. Consider changes in the field, changes in the job market and population shifts.

9. Program Review Findings: Indicate what trends you identified in your last program review that support the need for full time faculty hires. Tie these to the department and college mission.

10. Other considerations: Include such information as matriculation needs, changes in student demand or community and job market needs, response to legislation, or rapid growth of the discipline.

11. Shared Resources: If you have requested FT faculty that will be used by more than one department, please indicate here. Please indicate which disciplines and/or departments and the number of combined students/faculty or classes he/she would serve. Please indicate how it will improve access or outcomes and if it is needed for health and safety concerns or required by law.
## Non-Instructional Support Staff

### MATH-2009

### I. Current Support Staff

**List of Support Staff**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Purpose</th>
<th>Hours/Week</th>
<th>To support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crocker, Lindsay</td>
<td>Hourly</td>
<td>Tutoring</td>
<td>13</td>
<td>1200 Students</td>
</tr>
</tbody>
</table>

**Leadership:** List involvement in committees or other service

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<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Purpose</th>
<th>Hours/Week</th>
<th>To support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Name</td>
<td>Clerical</td>
<td></td>
<td>40</td>
<td>1119 Students</td>
</tr>
</tbody>
</table>

**Leadership:** List involvement in committees or other service

We need a full-time science and math secretary to support 119 students in math program and share with other science building programs.

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<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Purpose</th>
<th>Hours/Week</th>
<th>To support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jason Murphy</td>
<td>Part-Time</td>
<td>Instructional Specialist</td>
<td>22</td>
<td>1200 Students</td>
</tr>
</tbody>
</table>

**Leadership:** List involvement in committees or other service

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<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Purpose</th>
<th>Hours/Week</th>
<th>To support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jestadt, Jesse</td>
<td>Part-Time</td>
<td>Instructional Specialist</td>
<td>22</td>
<td>1200 Students</td>
</tr>
</tbody>
</table>

**Leadership:** List involvement in committees or other service

---

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Purpose</th>
<th>Hours/Week</th>
<th>To support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stupp, Salomon</td>
<td>Hourly</td>
<td>Tutoring</td>
<td>13</td>
<td>1200 Students</td>
</tr>
</tbody>
</table>

**Leadership:** List involvement in committees or other service

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### II. Request for additional support staff

( cleric, lab tech, IS, comp tech, tutor, etc. )
Program Summary
MATH-2009

Instructions: after reviewing your data and reports from all other sections of your program review, use this form to briefly summarize all of the information you have provided by closing with your concluding remarks (e.g. an executive one-page summary) for your entire program review.

I. Program Excellence (Best Practices)
Please address any of the following areas:
Overall Program structure, contextualized learning/learning communities, reputation of faculty, faculty collaboration, staff, retention and success, how you maintain a supportive environment, how you address issues of diversity, any specific student learning outcomes.

The Mathematics program at the College of Marin is providing a variety of high quality courses designed to accomplish the goals set by our department and reflective of the mission and educational goals of the College of Marin. The program is committed to develop in every one of our students

(1) the level of mathematical competence appropriate for their educational goals,

(2) an ability to think critically, reason logically, communicate precisely, and apply their knowledge/skills within and outside mathematics, and

(3) an appreciation of mathematics as part of human culture.

Our best practices in guiding this review and in the planning of our goals and outcomes include

a) faculty who are highly-qualified, knowledgeable and enthusiastic in the discipline;

b) curriculum designed for a diverse student population seeking opportunities, through general education mathematics courses, to participate as informed and ethical citizens of the world, and achieve their individual educational and professional goals and expectations;

c) a strong two-year transfer program with top-quality university level instruction;
d) continuous efforts in improving our teaching and effectiveness of the program on the whole; keeping our pedagogy effective and well-suited to our students; exploring innovations in the field of mathematics and mathematical education; implementing improved methods in the classroom;

e) continuous effort to increase retention and success through improved placement with the help of a web-based and dynamically generated test, which excludes memorization of the test questions; pre- and post- tests in developmental classes; focusing on basic skills that the students are expected to bring into each class and carry to the next one at the exit;

f) flexibility in course offerings and delivery formats to address the needs of developmental and remedial instruction; introducing stretch versions of developmental classes (Math 95-103) to target at-risk student populations; a system of support services characterized by a high degree of integration among academic and student support services;

g) developing assessment criteria based on the collectively designed departmental finals and comparison of the students' success in particular areas of each course. We administered at least five departmental finals with common questions embedded in them and collected on students' success in meeting the set outcomes;

h) developing close mentoring relationships among faculty and students through classes of various size and format, student-faculty projects, directed study, and a Math Lab offering self-paced classes and tutoring;

i) maintaining a collegial working relationship with colleagues at the schools our majors transfer to (Sonoma State University, San Francisco State University, U.C. Berkley, and U.C. Davis to name but a few) to insure the equivalence of our course content and to prepare our transferring majors for academic challenges inherent to universities level study.

II. Program Resources (Responsiveness)
Briefly summarize examples of key resources required for your program to meet or exceed the college goals (as cited in this review).

Math program should be given a top priority in terms of COM resource allocation. This is essential to maintain and expand a healthy math program that provides rich curricular diversity and well-scheduled
offerings; maintains educational excellence in general education and transfer offerings; maintains high quality instruction; keeps and attracts excellent faculty and support staff.

Our program is providing

a) rigorous training for students seeking to transfer to UC/CSU and other institutions,

b) a wide variety of courses meeting the UC/CSU general education requirement in mathematics for other disciplines, particularly in the physical and life sciences, engineering, and business who will transfer as college juniors.

We need resources to address the following areas

a) Curriculum should be expanded to add a new prerequisite arithmetic course (Math 85) for students not ready for Math 95; to offer two part courses Math 95AB, Math 103 AB to under-prepared students.

c) To work on better utilization of Accuplacer to place students into math classes where they can be realistically successful. This is especially true for Math 95.

d) Having Math Advisor(s) who will direct students into appropriate levels of basic skills classes and the rest of the math curriculum will have a positive impact on enrollment.

e) Low enrolled core courses need to be supported and low enrollment ought not to be a deciding factor for class cancellation. This is essential for keeping the program healthy and serving our students.

f) Increased diversity and redundancy in scheduling practices with a possibility of adding weekend sections of basic skills classes to accommodate working adults will have a positive impact on enrollment.

g) Increasing the summer school offerings and improving scheduling will improve access to COM for four-year college students and COM?s own students interested in meeting their transfer requirements faster.

h) Restructuring the Math Lab and enhancing it with technology (this will require the purchase of new computers and replacement of outdated ones every three years) and giving it reliable budget to provide high-quality tutoring services.

i) Incorporating MyMathLab resource into some lecture sections of math program to support students in developmental classes.

j) Developing hybrid courses to teach developmental classes in various formats and settings.
Modernization of the College of Marin mathematics lab is the highest priority need for new funding. The mathematics lab at the College of Marin needs restructuring to offer better services for math students of all levels. The mathematics department plans to experiment with "hybrid" mathematics courses in which a required lab hour or lab component is added to a traditional lecture based mathematics course. The lab component of these hybrid courses would use the same facility and equipment as used by the present math lab, which is inadequate even for our current needs.

With the goal of modernizing the College of Marin Math Lab, program review for the next two to five years will include requests for funding the following items (these items appear in the expenses/budget portion of this document as well):

1. Computer workstations and learning software capable of supporting 12 students at one time.

2. Software for test generation and software that will maintain homework and grade records that is "secure" (so that students can access their own records, but not access the records of other students).

III. Moving Forward Objectives (Planning)

Please summarize any data-driven coordinated planning has your department done to improve enrollment, student learning, access and success?

The Math program believes that, based on the analysis of the collected data and coordinated planning aimed at improving student enrollment, learning and success, the following actions are needed:

a) Curriculum should be expanded to add a new prerequisite arithmetic course (Math 85) for students not ready for Math 95; to offer two part courses Math 95AB, Math 103 AB to under-prepared students which we would like to run every semester.

b) Work should continue on better utilization of Accuplacer to place students into math classes where they can be realistically successful. This is especially true for Math 95.

c) Introducing a Math Advisor(s) who will direct students into appropriate levels of basic skills classes and the rest of the math curriculum will have a positive impact on enrollment.
d) Low enrolled core courses need to be supported and low enrollment ought not to be a deciding factor for class cancellation. This is essential for keeping the program healthy and serving our students.

e) Increased diversity and redundancy in scheduling practices with a possibility of adding weekend sections of basic skills classes to accommodate working adults will have a positive impact on enrollment.

f) Increasing the summer school offerings and improving scheduling will improve access to COM for four-year college students and COM's own students interested in meeting their transfer requirements faster.

g) Math Lab should undergo restructuring. Self-paced classes will be phased out and replaced with hybrid courses to teach developmental classes in various formats and settings. They will have a lab component which will require the purchase of new computers and replacement of outdated ones every three years and giving the Lab a reliable budget, especially for high-quality tutoring services.

h) Incorporating MyMathLab resource into some lecture sections of math program to support students in developmental classes. For this purpose we need to install computer workstations and learning software capable of supporting at least 12 students at one time. We also need to acquire software for test generation and software that will maintain homework and grade records that is "secure" (so that students can access their own records, but not access the records of other students).

IV. Assessment of 2008 Program Reviews:
1. What resources have you been granted from your previous program reviews?
2. Please assess how these resources have been used to improve access, learning outcomes and student success in your program?
3. What changes have you implemented based on previous program reviews?
4. What results have you found?
   1. Our tutor budget is still zero. We got the budget for supplies. We did not get computers and a record-keeping computer.
   2. Whatever we got we have used to the full capacity.
   3. We refined our SLOs.
   4. Based on the refined SLOs it has become easier to analyze the students' success in the program.

V. Fall 2009 Requests Summary:
1. Please summarize the main requests you have made in this program review in order of...
your priority starting with the most important one.
2. Summarize briefly why you want each one.
3. Summarize your overall rationale.

1. Our priority is tutoring budget for the Math Lab.

We need a new computer for IS in the IVC Lab. We need a new record-keeping computer.

2. We need the tutoring budget for the Math lab to support all the students in the Math program. We need a new computer in the IVC lab because it is outdated and is unreliable in performing important functions. We need a new record-keeping computer because the present system is outdated and in danger of crashing.

VI. Other concluding remarks.

Future Needs

Modernization and restructuring of the College of Marin mathematics lab and a reliable budget for its operation are our highest priorities. The mathematics lab at the College of Marin has offered self-paced courses for students who either (1) cannot fit a traditional lecture-based mathematics course into their work schedule or (2) cannot (or need not) adhere to the standard (very regimented) pace of a traditional lecture-based mathematics course. We believe time has come to phase out self-paced courses and replace them with hybrid courses enhanced with a lab component. The lab component of these hybrid courses will have to use the same facility and equipment as used by the present math lab which are inadequate.

With the goal of modernizing the College of Marin Math Lab, program review for the next two to five years will include requests for funding the following items (these items appear in the expenses/budget portion of this document as well):

1. Computer workstations and learning software capable of supporting 12 students at one time.

2. Software for test generation and software that will maintain homework and grade records that is "secure" (so that students can access their own records, but not access the records of other students).

3. Computer workstations and support devices (printers, etc) for the mathematics specialists at the Kentfield and Indian Valley math lab facilities.

4. Reassigned time and grant funding for full time and part time faculty as well as mathematics specialists to (1) research, (2) develop, and (3) train themselves and other math lab personnel in the new self-paced course curriculum and technology that will be designed and implemented over the next five years.

5. Upgrading the Administrative Assistant in the Science Center to full-time.

6. Expanding the Computer Lab in the Science Center and ??????
The College of Marin mathematics faculty is prepared to address the students in need of intensive basic skill mathematics on (at least) three separate fronts. Each of these proposals is under consideration, and each would take several pages to describe.

First, Math 95 is being reorganized for those students who need more time to re-learn or master these important skills. There will be experimentation with adding one or two hours of problem solving/lab to the present lecture based course. Availability of paid tutors and counselors is a likely constituent of any such plan. Also, a two-semester version of the basic arithmetic course is being seriously discussed at this time.

Second, a ten-hour per week elementary algebra course (Math 101) has been proposed. This course is intended as a prototype course for future AA candidates who have successfully completed basic arithmetic, but will likely have difficulty completing the AA degree mathematics requirement (presently elementary algebra is the requirement, but intermediate algebra will be the requirement starting in fall 2009).

Third, a pre arithmetic course that would focus on addition and multiplication skills, could be developed if research indicates this would help a significant number of students to complete the basic arithmetic (Math 95) course. This new course would likely require a very close study of existing research in the teaching of basic primary grade arithmetic skills to adults. Specialists in the psychology of learning disorders might be required as consultants. It is clear that the existing College of Marin faculty is not trained to handle this type of student; therefore, staff development funding and training would be absolutely necessary.
1. Please make any comments on the Five Pathways, Student Access and Success, Facilities, Curriculum and SLO sections.

2. Please comment on the instructional equipment requests, technology requests and other instructional materials requests sections. Please comment especially on any specific priorities without which this program cannot function.

We need a stable tutoring budget of $15,000 yearly to operate the Math Lab serving all the students in the Math program. Computers in the Computer Lab in SC need to be replaced. We need a new copier in SC.

3. Please comment on the faculty and staff sections.

We would like to introduce a Math Instructional Specialist in the Learning Center who can provide quality assurance for the math tutoring. This position can be shared with the Math department.

4. Other comments

The classrooms in SC building have shredded carpets which creates hazardous working conditions. It is easy to get entangled in the carpet and fall during a lecture. The carpets need to be patched or taped. SC 133 is a perfect example. It is dangerous to teach there.

The walls in classrooms are dirty and dusty, with traces of chalk and coffee splashes.

In SC 104 there is a blind covering the door that is disgustingly dirty. It needs to be taken off.

Examples of this neglect are abundant. We need the building to be clean, professional, and well-maintained.
1. Please make any comments on the Five Pathways, Student Access and Success, Facilities, Curriculum and SLO sections.
This review advocates for an expansion of the curriculum to include a pre-Math 95 course (Math 85). This has already happened and Math 85 will be offered for the first time during Fall 2010.

This review advocates for a stable tutoring budget of $15,000 yearly to operate the Math Lab. Currently, the budget line for this service is at ZERO and must be corrected.

2. Please comment on the instructional equipment requests, technology requests and other instructional materials requests sections. Please comment especially on any specific priorities without which this program cannot function.
This review advocates for a new record-keeping computer and other student computers for use in the Math Lab. I whole-heartedly support these requests.

3. Please comment on the faculty and staff sections.

4. Please itemize expenses currently covered by external funds that may revert back to general funds.

5. Other comments
This is a comprehensive and well-done review. Thanks to all who participated in its completion.