# Mt. San Antonio College
# Planning for Institutional Effectiveness
# (PIE)  2006-07

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| Department/Unit: | Math/Computer Science | Division: | Natural Science Division | |
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| Dean/Supervisor: | Larry Redinger | Ext. 4425 | Email: | lredinge@mtsac.edu |

Note: Departments with multiple disciplines and/or programs need to submit additional PIE packets as needed to represent planning in different disciplines.

# Institutional Planning Framework

## 1. Institutional Mission

The campus is unified through its demonstrated connection to the mission. Driven by the California Master Plan for Higher Education, revised by the President's Advisory Council, and approved by the Board of Trustees, it informs all planning and assessment.

The Mission of the College is to

- provide accessible and affordable quality learning opportunities in response to the needs and interests of individuals and organizations;
- provide quality transfer, career, and lifelong learning programs that prepare students with the knowledge and skills needed for success in an interconnected world; and
- advance the State and region's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement.

## 2. College Goals

College goals allow the campus to focus on critical issues.  Articulated by the President's Advisory Council, they guide all planning and assessment processes.  Goals are listed below as current and ongoing goals, retaining the lettering used in the 2005-06 process.  This division of goals may be useful in that the goals for current focus are more concrete than the ongoing goals and perhaps easier for us to document progress.

**Current focus:**

B.  The College will secure funding that supports exemplary programs and services.

C.  The College will prepare students to be critically thinking, socially, culturally, and politically responsible citizens through the development of exemplary programs

D.  The College will improve career/vocational training opportunities to help students maintain professional currency and achieve individual goals.

E.  The College will improve the quality of its partnerships with business and industry, the community, and other educational institutions.

H.  The College will utilize technology to enhance teaching and learning and to provide support for educational programs.

I.  The College will provide an environment for consciousness of diversity while also providing opportunities for increased diversity and equity for all across campus.

**Ongoing goals:**

A.  The College will provide a risk-free environment for the measurement of SLOs under the umbrella of Planning for Institutional Effectiveness.

F.  The College will become a nationally recognized institution of higher education that embraces an atmosphere of self-reflective dialogue in making policies and plans and in communications.

G.  The College will provide a risk free environment for the measurement of AUOs related to Planning for Institutional Effectiveness.

J.  The College will embrace an environment of mutual respect and integrity that encourages the exchange of ideas and acknowledges and values contributions made by members of the College community.

# 3.  Internal/External Conditions

Consideration of internal and external conditions is the basis of department/unit planning and assessment processes.

**3a.** Identify those external conditions that have influenced the department/unit goal-setting process:

*Note: External conditions include disciplinary or regulatory changes, changes in technology or legislative changes, accreditation recommendations, enrollment issues, advisory committee input, etc.*

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1.  PIE and SLO requirements.
2.  Transition to a 16 week semester.
3.  Block scheduling has impacted the availability of adjunct faculty.
4.  The hiring of full-time faculty at local community colleges has decreased the quantity, quality, and availability of adjunct faculty.
5.  Adjunct faculty salaries are not competitive with local schools, decreasing the quantity, quality, and availability of adjunct faculty.
6.  Ongoing curricular review requirements.
7.  Changes in course prerequisites.
8.   Inability to fit extended class periods into available classroom space as dictated by block scheduling.

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| 9. The college request to increase the number of full-time faculty teaching in the Bridge and Weekend College programs. |
| 10. Increase in student demand for math courses. |
| 11.  Current technological trends dictating software needs with related licensing requirements. |

**3b.**  Identify those internal conditions that have influenced the department/unit goal-setting process.  Please include a periodic review of attached data [provided for academic departments only].

*Note: Internal conditions include results of previous SLOs/AUOs assessment, IT data, changes in technology, changes in budget, staffing, resources, enrollment issues, facilities issues, etc.*

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| 1.  Results from 2005 – 2006 SLOs process. |
| 2.  Research data from Spring 2006 showing a drop in student success in Math 51 and Math 71. |
| 3.  Banked leave/release time/sabbatical/reduced load/retirement has increased department reliance on adjunct faculty. |
| 4. Math Department Diagnostic Test cutoff scores. |
| 5.  The proven success of the Learning Communities model for some students. |
| 6.  The magnitude of the adjunct faculty evaluation process versus the available time of the department chair. |
| 7.  Research data showing greater success for students in our 100 level courses who entered via a placement test than for students who matriculated from our developmental math program. |

# DEPARTMENT/UNIT PLANNING PROCESS
*Note: For assistance with the SLOs/AUOs process, please contact the SLOs/AUOs Team Coordinator, Jemma Blake-Judd X3934*

**4. Department/Unit Goals**     Department/Unit goals allow the area to focus its priorities. Prompted in part by College goals and generated by faculty/staff, they guide area planning and assessment.

## Goals:

**4a.**  List a MINIMUM OF TWO GOALS to be addressed through the SLOs/AUOs process.  Please do not list outcomes statements here. When appropriate, identify the connection of your goals to the College goals.

1.
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| Increase student success in our developmental Math Program.(College Goals #2A and #2C) |

2.
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| Promote in students an appreciation for the value of a mathematics education via application problems.  (College Goals #2A and #2C) |

**4b.** List a MAXIMUM OF THREE goals that will <u>not be assessed</u> through the SLOs/AUOs process. When appropriate, identify the connection of your goals to the College goals.

1. Maintain a quality mathematics program with more consistency in instruction.  (College Goals #2C,#2D,#2H)
2. Increase the amount of work done in setting goals and planning for departmental improvement.   (College Goals  #2C,#2f,#2J)
3. Increase student access to our program.  (College Goal #2D, #2I)

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**5. SLOs/AUOs**    SLOs/AUOs are a means of evaluating and validating area/program effectiveness.  Created and assessed by department /unit faculty/staff, they can inform planning.

Note:  *Student Learning Outcomes* (SLOs) are expressed in statements of what students will be able to think, know, do, or feel because of a given educational experience.  The purpose of this assessment process is to improve student learning.

**5a.**

| Intended Outcomes (SLOs) | Means of Assessment and Criteria for Success | Summary of Data Collected | Use of Results |
|---|---|---|---|
| 1.  (From 2005/2006, including material not reported in last year's PIE) Students in developmental math courses will demonstrate the thinking skill of accurate self-assessment. | 1.  At least 85% of a random sample of Math 71/71B students in 1/3 of the classes offered will indicate a "D" level (agree) or higher on all three questions on a survey created by faculty and administered by full and part-time faculty in their classes in the 15$^{th}$/16$^{th}$ week of the semester, May '05.  Results will be compiled and evaluated by the SLOs committee.  Data from Math 50 and Math 51 will also be taken for the group's interest.  The results will be taken to the department to determine key findings and use. | 1.  75% of students indicated a "D" or higher. The results were deemed flawed due to the assessment tool (survey). The department has chosen to re-evaluate this SLO. | |
| 2.  (From 2005/2006 . . .) Students in developmental math courses will feel more confident in their ability to solve word problems. | 2.  At least 78% of  . . .  (see above) | 2.  64% of students indicated a "D" or higher. Dept. decided that the "feeling" based data from a survey would be more | 2.  The SLO team was directed to explore whether a developmental math student "can do" a word problem in the Fall of |

| | | meaningful if coupled with a "performance" based assessment. | 2006. A representative problem has been chosen and a scoring rubric developed. |
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| 3. (From 2005/2006 . . . ) Students in developmental math courses will feel that mathematics is a beneficial part of their education. | 3. At least 90% of . . . (see above) | 3. 72% of students indicated a "D" or higher. Dept. decided this was an acceptable number for meeting standard. Satisfied with these results. | 3. Handouts (outlines of levels of math required in various majors and applications of math across the disciplines) have been made available to faculty who were troubled by the results of the survey. These could then be shared with students. |
| 4. (2006/2007) Students in our developmental math courses will be able to do a word problem. | A random sample of Math 71/71B students in 1/3 of the classes offered will participate in an activity involving doing a word problem. This activity will be administered by full and part-time faculty in their classes during the 15th week of the semester in Dec. '06. The assessment criterion has not been set yet. It will be based on a scoring rubric developed by the Math SLOs Committee. | | |

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## OR *(Most areas will complete either 5a or 5b, but you may complete both if they apply to you.)*

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Note: *Administrative Unit Objectives* (AUOs) are expressed as statements of what clients experience, receive, or understand as a result of a given service. The purpose of this assessment process is to improve the unit's service.

**5b.**

| Intended Objectives (AUOs) | Means of Assessment and Criteria for Success | Summary of Data Collected | Use of Results |
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## 5c. Goal Implementation

Goal implementation is a non-evaluative process necessary to achieve the area goals. Determined by faculty/staff, goal implementation facilitates planning.

| Department/Unit Goal | Responsible Parties | Implementation Timeline | Status of Implementation | | |
|---|---|---|---|---|---|
| | | | Planning | Implementing | Completed |
| 1. Determine what factors affected student success in Spring 2006 and implement solutions where feasible to problems found. | Student Success Committee | 2006/2007 | 2006/2007 | Fall 2007 | |
| 2. Determine reasons and implement solutions for the greater success shown for students in our 100 level courses who entered via a placement test than for students who matriculated from our developmental math program. | Student Success Committee | 2006/2007 | Spring 2007 | Fall 2007 | |
| 3. Increase the efficiency in the utilization of available space by having more classes run in the early hours. | Scheduling Committee | 2007 | Spring 2007 | Fall 2007 | |
| 4. Increase the number of course sections we can offer by increasing the available space. | Prioritization Committee | 2007 | Spring 2007 | | |
| 5. Increase the number of course sections we can offer by increasing the number of faculty. | Prioritization Committee | 2007 | Fall 2006 | Fall 2007 | |
| 6. Increasing the number of full-time faculty teaching in the Bridge and Weekend College programs. | Department Volunteers | 2006/2007 | | Spring 2007 | |
| 7. Getting replacements for full-time faculty teaching in the Bridge and Weekend College programs. | Prioritization Committee | 2007 | Spring 2007 | | |
| 8. Analyze cutoff scores for Math Department Diagnostic Tests. | Assessment Project | 2006/2007 | | Fall 2006 | |
| 9. Review block scheduling. | Bill and Heidi. | 2006/2007 | Fall 2006 | Fall 2007 | |
| 10. Assist the department chair with the task of monitoring and evaluating adjunct faculty. | Adjunct Coordinator. | 2007 | Spring 2007 | | |
| 11. Increase the contact and communication between adjunct and full-time faculty. | Department Volunteers | 2007 | Spring 2007 | | |
| 12. Explore incorporating successful features of the | Bridge Coordinator | 2007 | Spring | | |

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| Learning Communities model into our general instructional program. | | | 2007 | | |
| 13. Expand the Math Bridge Program, including the development of a fast-track for students to the Calculus sequence. | Bridge Coordinator. | 2006/2007 | Fall 2006 | Fall 2007 | |
| 14. As a department, discuss what the Fall 2006 SLOs data means and what changes might be made as a result. | Math Department | 2006/2007 | Spring 2007 | Fall 2007 | |
| 15. Come up with SLOs to measure in 2007/2008 | Math Department | 2007 | Spring 2007 | Fall 2007 | |
| 16. Increase efficiency in performing SLO assessment tasks. | SLO Committee | 2006/2007 | | | |
| 17. Preliminary planning for establishing an equivalent to the MARC and a Math Lab to support students not in the developmental math program. | Department Volunteers | 2007/2008 | Spring 2007 | | |
| 18. The number of full-time faculty that participates in the setting of department goals and planning needs to be increased. | Department Volunteers | Ongoing | | | |
| 19. Increase efficiency in performing department tasks. | Prioritization Committee | Ongoing | | | |
| 20. Continuation of Math and CSCI competitions. | Department Volunteers | Ongoing | | | Participated in both competitions Fall 2006 |
| 21. Meet deadlines and requirements for curriculum review. | Curriculum Teams | Ongoing | | | |
| 22. Purchase new software or upgrades as determined by current technological needs. | Department Volunteers | Ongoing | | | |
| 23. Change all course timelines to meet 16 week semester. | Al | | | | Fall 2005 |
| 24. Create list serve groups for committees so they can communicate electronically and more frequently. | Matt | | | | Spring 2006 |
| 25. As a department, discuss what the results from 2005/2006 SLOs data meant and what changes could be made. | Math Department | | | | Spring 2006 |
| 26. Expand PIE committee. | PIE Committee. | | | | Spring 2006 |
| 27. Come up with SLOs to be measured in Fall 2006. | SLO Committee | | | | Spring 2006 |
| 28. Move program over winter break 2005/2006. | College/Department | | | | Winter break 2005/2006 |
| 29. Change curriculum review to spring instead of fall. | Curriculum Committee | | | | Spring 2006 |

| 30.  Increase the number of "functional" technology classrooms. | IET | | | | Spring 2006 |
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# 6.  Resources

Resources support achievement of goals.  Requested by department/unit faculty/staff, they directly support plan implementation.

*Note: Resources include: research support, budget allocation, training, instructional equipment, marketing, staffing (classified, faculty, and/or management positions), facilities, etc.*

| Department/Unit Goal | Resources Needed? Yes    No | If yes, please list resources needed |
|---|---|---|
| 1.  Maintain a quality mathematics program with more consistency in instruction. | X | We need to hire more full-time faculty. |
| 2.  Increase the amount of work done in setting goals and planning for departmental improvement. | X | We need to hire more full-time faculty. |
| 3.  Getting replacements for full-time faculty teaching in the Bridge and Weekend College programs. | X | We need to hire more full-time faculty. |
| 4.  Increase the number of course sections we can offer by increasing the number of faculty. | X | We need to hire more full-time faculty. |
| 5.  Increase efficiency in performing department tasks. | X | We need to upgrade a position from Clerical Specialist 2 to Secretary. |
| 6.  Increase the number of course sections we can offer by increasing the available space. | X | We need another trailer. |
| 7.   Assist the department chair with the task of monitoring and evaluating adjunct faculty. | X | Release time for an Adjunct Faculty Coordinator position. |
| 8.  Increase the contact and communication between adjunct and full-time faculty. | X | Stipends for both adjunct and full-time faculty that participate in outreach efforts. |
| 9.  Increase efficiency in performing SLOs tasks. | X | We need a Research Analyst. |
| 10.  .  Purchase new software or upgrades as determined by current technological needs. | X | We need an increase in our software allowance. |

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# 7.  Signatures

Department Chair or Unit Manager:_____Date:_____

Dean/Supervisor:_____Date:_____

Thank you for your work in preparing this form.  It will help us tremendously.

## THIS REPORT IS DUE TO YOUR DEAN OR SUPERVISOR by **Friday, March 16, 2007**

**Process Timeline**:

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| October 2006 | Departments and administrative units receive forms |
| March 16, 2007 | Completed forms are due to division office or appropriate manager |
| April 12, 2007 | Deans/managers prepare a summary of the PIE forms they received and submit to appropriate Vice President |
| May 10, 2007 | Vice Presidents prepare a summary of reports they have received to take to budget allocation discussions. |
| End of May 2007 | IEC reviews all submitted summaries to prepare a year-end report to PAC on progress made in meeting College goals. |