Department: Mathematics
Year: 2002-2003
Mission: To provide every undergraduate student at Rose-Hulman with mathematical experiences and mathematical ideas that will serve as a foundation for careers and further study in engineering, mathematics, and science.

Strategic Goals (where we want to be in 3 years?)	Objectives (measurable)	Tactics (what are we going to do to get there?)	Timeline	Person responsible
MAKSD1 – Student Recruitment, Placement and Persistence				
MAKSD1.1	Math majors and minors: Continue to increase the number of majors in mathematics – both primary and double majors – and the number of students taking upper division mathematical courses.	a. Take an active role in recruitment of mathematics majors from off campus. b. Increase the number of students taking the Statistics concentration, collaborating with client departments and modifying courses as necessary c. Increase number of students taking Continuous Applied Mathematics (as double majors and minors) collaborating with client departments and modifying courses as necessary.	a. Ongoing b. Ongoing c. By May 2003, then ongoing	a. Dept Head, faculty assigned to recruitment activities b. Statistics faculty c. Cts Applied Math Faculty
MAKSD1.2	Scholarships: Seek scholarship opportunities for mathematics majors and to recruit students to Rose-Hulman.	a. Actuarial scholarships and fellowships b. Rose scholarship associated with the Rose-Hulman High School Contest c. more aggressive use of the Rose High school contest for recruiting.	a. 2002-2003 b. 2002-2003 c. plan 2002-2003, implement 2003-04	a. Allen Broughton b. Contest Champions c. Contest Champions
MAKSD1.3	Diagnostic Test, Calculus placement, and persistence:	a. Make diagnostics test and its use more effective b. Implementation of computerized tutorials, diagnostics, drills, and quizzes. c. Increase support of and coordination with the Learning Center	a. June 30, 2003 b. 2003-04 c. Ongoing	a. Persistence Team b. Persistence Team c. Dept Head

MAKSD1.4	Student Involvement: Improve the sense of belonging and "professional involvement" for mathematics majors, mathematics minors and other students with a strong interest in mathematics.	a. Increase the involvement of the Math Club and the Pi Mu Epsilon organizations in the extracurricular activities of the department b. Promote mathematical presentations by students, both on and off campus c. Continue the high level of student activity in local, regional, and national mathematics competitions.	a. Ongoing b. Ongoing c. Ongoing	All: Club advisors/contest organizers/faculty mentors of students
MAKSD1.5	Placement: Develop a knowledge base and network for placement of mathematics students, both in industry and graduate school		2002-2003 school year	Department in conjunction with Advisory Board, and specific faculty taking on a placement role
MAKSD2: Improvement of curriculum, program and learning environment				
MAKSD2.1	Freshman and sophomore curriculum: Use the various teaching teams in the first two years (Calculus, Differential Equations and Matrix Algebra and Statistics) to implement and to continuously improve recent curriculum changes.	a. Coordinate the calculus sequence with the physics sequence b. Investigate making calculus a 4 hour course c. Implement computer use recommendations d. Develop a rotating schedule for Course review (FR/SO)	a. May 1, 2003 b. May 1, 2003, implement c. May, 2003 d. December 2003	a. Curriculum Committee b. Curriculum Committee c. DE and Calculus Instructors d. Curriculum Committee
MAKSD2.2 *Note link to MAKSD1.1b	Math Major	a. Implement and monitor the newly approved mathematics major (keep records concentrations) b. Special Attention to the Continuous Applied Math c. Develop a rotating schedule for Course review (major)	a. Ongoing b. May 2003 c. December 2002	a. Student Advisors/ Dept Head b. Cts Applied Math Faculty c. Curriculum Committee
MAKSD2.3	Computing	a. Implement the consensus and guidelines for the use of the laptop in the freshman and sophomore courses. b. Continue to make appropriate utilization of the laptop computer in the upper-division courses. c. More effectively use the Theorodrome room as a high end	a. May 1, 2002, and then ongoing b. Ongoing c. Ongoing	a. Departmental Discussion b. Course Instructors c. Computing Committee

MAKSD2.3 (cont'd)		computing resource. d. Make the parallel computing cluster better known and used e. Increase the effectiveness of IAIT and student help in supporting our academic computing.	d. Ongoing e. Ongoing	d. Interested faculty e. Dept Head
MAKSD2.4	Curriculum documentation: Document, archive, and update materials associated to the curriculum.	a. Syllabi for all courses b. Final exam archives c. Develop culture of sharing curricular materials d. Supplemental course materials e. Keep either copies or a list of textbooks used in the department for past courses with instructor comments concerning the positives and negatives.	a. Ongoing, as classes are taught b. Sep 1, 2001 and then ongoing c. Begin 2001-02 d. Planning – 2001-02 e. Ongoing	a. Course Instructors, coordinated by Dept Head b. Course Instructors, Dept. Head/secretary c. Dept Head and designated faculty d. Dept Head to coordinate e. Library Committee
MAKSD2.5	Interdepartmental Coordination	a. Continue to vigorously participate in the interdepartmental coordination of programs, in particular the Foundation Coalition Sophomore Curriculum b. Keep a departmental library of texts being used in other courses on campus c. Consider and discuss the involvement of the mathematics department in an Industrial Engineering degree.	a. Ongoing b. December 2002, then ongoing c. December 2002	a. Dept Head b. Library Committee c. Tom Mason and Curriculum Committee
MAKSD2.6	Projects and undergraduate research: Increase the number of opportunities for faculty and students to work on mathematically or statistically based projects and undergraduate	a. Continue involvement in the Imaging Systems Laboratory b. Other project opportunities for faculty and student such as working with RHV and external clients	a. Ongoing b. 2002-2003 school year and beyond	a. Math Imaging faculty. b. Interested faculty, coordinated by Dept. Head

	research.	c. Finding additional ways to involve more RHIT students in undergraduate mathematics research, in school year and in summer, especially seeking funding for these students.	c. 2002-2003 school year and beyond	c. Interested faculty, coordinated by Dept. Head
MAKSD2.7	Supporting Programs: Continue to support and further develop the Department's existing programs and activities that support undergraduate education and outreach activities	a. Fast Track Calculus b. Rose-Hulman Conference in Undergraduate Mathematics c. Research Experiences for Undergraduates d. Rose-Hulman High School Mathematics Contest e. Electronic Journal of Undergraduate Mathematics Research	a. Ongoing b. Ongoing c. Ongoing d. Ongoing e. Ongoing	All – Interested/responsible faculty coordinated by Dept. Head
MAKSD3: Faculty and Staff Development				
MAKSK3. 1	Workload. Through various means find reassigned time for faculty to accomplish various significant tasks of value to their professional , the department, and the institute	a. Support curriculum development b. Support professional development, especially of junior faculty c. Various other tasks that are of mutual benefit to the department and institute	a. Ongoing b. Ongoing c. Ongoing	a. Dept Head b. Dept Head c. Dept Head
MAKSD3.2	Junior Faculty	a. Improve the quality of assessment and guidance for junior faculty, especially the mentoring of the large number of new faculty b. Continue to aggressively pursue mentoring opportunities within the department c. Prepare for "passing the torch" from senior faculty to junior faculty during the next 3-5 years. Include this consideration in hiring.	a. Ongoing b. Ongoing c. Ongoing	a. Dept Head and faculty mentors b. Dept Head c. Department, Coordinated by Dept. Head
MAKSD3.3	Professional Development	a. Continue to support a high level of varied, appropriate, professional development opportunities for all faculty, including both teaching & scholarly development b. Continue our colloquia and seminars	a. Ongoing b. Ongoing	a. Dept Head to coordinate b. Seminar/colloquium coordinators

		c. Staff Development	c. Ongoing	c. Dept Head
MAKSD4: Assessment of student learning and program success				
MAKSD4.1	Assessment of student outcomes	a. Develop and implement an assessment plan to document effectiveness of mathematics instruction	a. Design 2002-03, implement 2003-04	a. Dept Head and Curriculum Committee
MAKSD4.2	Assessment of Program	a. Develop and implement an assessment plan for the effectiveness of Fast Track Calculus and other advanced placements b. Develop and implement an assessment plan for the effectiveness of the diagnostic test and trailer sections of mathematics	a. Implement 2001-2002 b. Implement 2002-2003	a. Dept Head and Curriculum Committee b. Persistence Team & Curriculum Committee
MAKSD5: Space allocation/ upgrade, infrastructure and other resource needs				
MAKSD5.1	Short-term space allocation/ renovation in Crapo Hall	a. Review space utilization and quality to maximize effective utilization of non-office space over the short term. Consider solutions that include medium cost renovation, and furniture replacement and reallocation. Include, in particular, MAKSD5.2 below. (Continues office modernization)	a. Design 2002-03 and ongoing	a. Dept Head
MAKSD5.2	Informal study space	a. Create an informal study area that will foster faculty/student and student/student interaction outside the classroom. Look at Civil Engineering's Learning Center as a possible model. Coordinate with institute strategic planning.	a. ASAP	a. Dept Head
MAKSD5.3	Long-term renovation	a. Press to have master plan move along expeditiously. In the interim take	a. Proposal 2002-03 budget cycle	a. Dept Head , CS Dept Head

		advantage of what may be freed up in the auditorium, and any synergies with the Computer Science department.	work with Art Western	
MAKSD5.4	Improvement of Classroom Space	a. Press for more classroom space, or better utilization of current space.	a. Proposal 2002-03 budget cycle	a. Dept Head to coordinate
MAKSD5.5	Library Resources	Working with Dean, the Library, and spending our own funds, ensure the availability of key research and scholarship resources for faculty and our students	Ongoing	Library Committee
MAKSD5.6 MAKSD5.6 (cont'd)	Ensuring an Excellent Computing Environment	Seeking external funding as necessary, and working with other departments and units of the Institute, ensure the adequacy of computing resources for teaching, student learning and scholarship/research. In particular, a. Obtain workstations for faculty for computation beyond the capabilities of the laptop on an as-needed basis b. Continue to work to have the Theorodrome used exclusively as a computer laboratory. c. Upgrade/replace workstations in the Theorodrome on a regular basis, to keep up with current computing needs d. Upgrade or obtain new software, specific to the Mathematics Department e. Work with IAIT and Computer Science to ensure a high level support for the computing in the Mathematics Department	All – submit appropriate budget by Dean's timeline – July 2, 2001 a. Ongoing b. Ongoing c. Ongoing, d. Ongoing e. Ongoing f. Ongoing	All – Mathematics Computing Committee and Dept. Head for follow-up
MAKSD6: Communication with stakeholders				

MAKSD6.1	Implement an External Advisory Board		Design and complete in summer quarter, 2002. Meet by the end of the spring quarter 2003	Dept Head
MAKSD6.2	Identify the internal stakeholders at RHIT and establish a method of interaction with them		End of fall quarter 2002	Dept Head, after departmental discussion
MAKSD6.3	Conduct annual survey of selected students and alumni		Ongoing	Dept Head