

Annual Review and Projections Report

Part B1. Review of Goals and Accomplishments in Research, Service, and Other Program Enhancements, 2003-04

(Complete one template for each goal)

Department: Mathematics College of Arts and Sciences

Goal: **To attract more students to major and minor in mathematics and statistics.**

Methods/Measures for Assessing Goal Attainment: Counting the number of Majors

Results from Goal Attainment Measures: Success

Objectives	Actions taken to achieve Objectives	Status (In-Progress, Completed, Dropped: if dropped, note reason)	Results/Impacts of Actions	Needed Follow-up/Future Actions
To double the number of students majoring in Mathematics and Statistics.	Recruit double majors: particularly from the College of Education.	Completed	As of Fall 2004, there are close to 132 students who list mathematics and statistics as one of their majors.	Sound academic advising
To offer 300 and 400 level courses on a regular basis during the summer.	We offered Statistics 335 and Math 413 this past summer.	Completed	Both courses had significant enrollments.	We are planning on offering other sections of upper division courses in Summer 2005.

To offer enrichment seminars and courses.	We hosted a Putman team. We encouraged undergraduates to attend seminars and colloquia.	Ongoing	Several undergraduates routinely attended seminars and colloquia.	More colloquia geared to the interest of undergraduates. Host Putnam team again.
To assist graduates in obtaining employment or graduate admission.	Faculty advising.	In progress.	Insufficient data.	Find additional ways to achieve objective.
To award scholarships for Academic Excellence in Mathematics and Statistics.	Eight Mathematics Scholarships were awarded as were the Sushila Mishra, Blanco and Nash Scholarships.	Completed.	Students interested in mathematics and statistics.	More scholarships given in subsequent years.

To investigate the feasibility of offering different upper level mathematics courses.	Demand was found to be insufficient. Some independent studies were given.	Postponed. Current upper level courses still have small enrollments.		Reconsider as upper level enrollment increases.
To continue to provide on-line resources such as syllabi, class notes, and exam archives to enhance instruction.	A number of syllabi and exams are available.	In progress.	When information of this type was requested from the VPs office it was readily available.	Syllabi are being annotated to include an articulation of learning objectives.
To include colloquium speakers who discuss teaching and employment issues.	One speaker gave such a presentation.	In progress.		Increase efforts to find appropriate speakers.

Department: Mathematics College of Arts and Sciences

Goal: **To improve the master's degree program.**

Methods/Measures for Assessing Goal Attainment: Secure sources of funding

Results from Goal Attainment Measures: _____

Objectives	Actions taken to achieve Objectives	Status (In-Progress, Completed, Dropped: if dropped, note reason)	Results/Impacts of Actions	Needed Follow-up/ Future Actions
To solicit EPSCoR support for mathematics and statistics program across the state.	Preliminary discussions have been initiated.	In progress	Interest with sister institutions is very high.	Further development locally and statewide.

To expand the use of GTAs to MA 112 and ST 210.	Some new sections with GTAs have been included.	On-going.	More student hours being available.	Course CAFs to redesign Ma 112 are necessary.
To obtain funds for individual graduate students.	Some recent NSF awards have included graduate student support as a line item.	On-going	One student supported in 2003-2004 and another supported in 2004-2005.	More action in the future.
To recruit graduate student assistant for the Center for Statistical Consulting.	Qualified student was identified.	Dropped due to problems with INS.		More action in the future.

Department: Mathematics and Statistics College of Arts and Sciences

Goal: To assess the education of students in lower division courses. _____

Methods/Measures for Assessing Goal Attainment: Assessment mechanism in place

Results from Goal Attainment Measures: Incomplete

Objectives	Actions taken to achieve Objectives	Status (In-Progress, Completed, Dropped: if dropped, note reason)	Results/Impacts of Actions	Needed Follow-up/ Future Actions
To assess learning outcomes for MA 110, 112, 113, and 115.	A set of learning objectives were articulated for MA 112 in May 2004. During the summer, these were mapped to specific problems within the text. In Fall 2004, instructors were asked to include these problems among homework, tests, and	In progress.	Several important objectives such as the need for good mathematical writing, curve sketching, and the integration of proof into the lower level curriculum were identified.	Continued work in the 2004-2005 AY.

	quizzes. We anticipate more work in this regard during the 2004-2005 academic year.			
To provide Computer assisted instruction in MA 112, 201, 202, ST 210.	Many, but not all, sections of MA 112 are using CAI. It is available for MA 201 and MA 202 and also available in some sections of ST 210.	Ongoing.	The need to identify baseline homework exercises for the precalc sequence has been articulated.	We will continue to examine this learning tool and its efficacy in achieving our educational goals.
To provide up-to-date syllabi in all courses.	Syllabi can be found at our web site. Many need to have learning objectives further articulated.	Ongoing	Information is more readily available to instructors and students.	This item will be completed during 2004-2005.
To examine texts in calculus and business calculus.	A new business calculus text has been selected. The decision was made to consider calculus text in fall2004.	Nearly Complete.		Curriculum Committee is examining text choices for Calculus Fall 2004.

Department: Mathematics and Statistics College: Arts and Sciences

Goal: To recruit and to support a high quality diverse faculty with broad research and teaching interests.

Methods/Measures for Assessing Goal Attainment: Recruiting the faculty

Results from Goal Attainment Measures: Three new faculty have been recruited.

Objectives	Actions taken to achieve Objectives	Status (In-Progress, Completed, Dropped: if dropped, note reason)	Results/Impacts of Actions	Needed Follow-up/ Future Actions
To hire 3 to 5 full-time tenure-track faculty in Mathematics and Statistics.	We recruited three new faculty members during the academic year 2003-2004.	On-going. There are unfilled lines within the department, and our five year plan includes an expansion of faculty based upon projected enrollments.	New faculty members.	Enrollments in upper division courses are growing. Graduate service courses continue to need to be staffed. The department is prepared to act aggressively to attract new faculty members, but cannot do so without budgetary approval.
To work with College of Education on their recruiting.	We provided contact information with some schools who grant degrees in math education.	Incomplete: The college of education has not found a qualified applicant.		Send more smoke signals to other programs to indicate our desire to have such a person on the faculty.

Department: Mathematics and Statistics College: Art and Sciences

Goal: To encourage and support faculty research and scholarship.

Methods/Measures for Assessing Goal Attainment: How do you measure encouragement?

Results from Goal Attainment Measures: See Arts and Sciences Annual Report.

Objectives	Actions taken to achieve Objectives	Status (In-Progress, Completed, Dropped: if dropped, note reason)	Results/Impacts of Actions	Needed Follow-up/ Future Actions
To increase externally funded research, scholarship, and teaching related projects.	By the end of the 2003-2004, academic year we received one new NSF grant.	Perpetually on-going.	Faculty are to be congratulated for their successes in securing grants. Each program directorate in the NSF is able to fund about 30% of the proposals submitted.	More recognition (and employee compensation) is needed from the upper administration when such prestigious awards are granted. Also, the culture of the MSP in the NSF should be contrasted in the minds of the administration from other directorates and the NIH.
To support an active colloquium series.	We supported a number of visitors to give colloquium talks.	Not all colloquia are documented on our homepage.	Interesting mathematics was promulgated in the department.	Continuing colloquial series.
To maintain quality research.	Many faculty gave plenary talks at national and international venues. We supported travel for all faculty who delivered talks.	Perpetually on-going.	The faculty deserve special commendations for their outstanding work. It is they who maintain the high quality research for which this department is known.	Find ways to reward faculty productivity.
To maintain membership in professional societies.	Most, if not all faculty, are members of the AMS, ASA, IMS, or the MAA. Others are involved in teaching organizations.	Perpetually on-going.	Internationally known faculty.	

To institute faculty seminars.	Active seminars in algebra and analysis throughout the academic year.	Perpetually on-going.	Interesting mathematics was promulgated in the department.	Continuing seminars.
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Annual Review and Projections Report

Part B2. Goals in Research, Service, and Program Enhancement for 2004-05

(Note: Goals and Objectives need not change from the previous year)

(Complete one template for each goal)

Department: Mathematics and Statistics College: Arts and Sciences

Goal: To further develop high quality education for undergraduate students in mathematics and statistics.

Methods/Measures for Assessing Goal Attainment: The intellectual development of our students

Objectives	Actions to be taken to achieve Objectives	Lead Responsibility	Expected Completion Date
To develop a method of integrating the ideas of proof, beauty, and applicability throughout the curriculum.	Curricular tweaking.	The assessment committee has been charged with this action.	May 2005
To develop a set of questions that will be common to all sections of each of the courses MA 112, MA 113, MA 115, and MA 125 to ensure that all students have minimal competencies on those learning objectives that these problems address.	Curricular tweaking.	The instructors in Ma 112, Ma 113, and Ma 115 will develop such lists and make them available through the computer assisted instruction software. The assessment committee will advise on the desirability to do so in the calculus sequence.	May 2005

To examine the calculus text for Fall 2005.	Textbook selection.	Curriculum Committee.	May 2005
To continue to recruit students to the major.	Talk to students.	Entire faculty of the department.	Ongoing.
To examine the requirements for the major.	Recommendations to the Department.	Curriculum Committee.	February 2005
To provide sound academic advice for all of our majors.	An advisee should be provided with a "check-sheet" that she/he can fill out to ensure that core courses are completed in a timely fashion.	Each faculty member has between 3 and 6 advisees. Each student should be advised once a semester.	On-going.

Department: Mathematics and Statistics College: Arts and Sciences

Goal: To grow and sustain our graduate program.

Methods/Measures for Assessing Goal Attainment: Graduate student stipends in dollars and number of graduate students

Objectives	Actions to be taken to achieve Objectives	Lead Responsibility	Expected Completion Date
Recruit and retain high quality graduate students.	Advertisement and recruitment.	This item is under the purview of the graduate committee.	May 2005
Obtain support through NSF grants.	Request support through NSF grants.	Principal Investigators.	June 2005
Seek other outside funding sources.	Submit big money grant proposals such as EPSCoR, NSF-GK12, or other NSF opportunities.	Graduate Committee and the Departmental Chair.	July 2005
Continue internal funding sources.	Graduate students as teaching assistants should be helping us achieve better learning outcomes and undergraduate student retention rates.	Graduate Chair and Department Chair.	On-going.

Department: Mathematics and Statistics College: Arts and Sciences

Goal: To sustain and support the research and scholarship endeavors of the faculty.

Methods/Measures for Assessing Goal Attainment: Continued high quality research in the department.

Objectives	Actions to be taken to achieve Objectives	Lead Responsibility	Expected Completion Date
Obtain research grants that support efforts of the individual faculty member.	Submit research grants that support the efforts of the individual faculty member.	Individual faculty members.	November 2004 for submission. July 2005 for award.
Write and publish research papers in high quality journals.	Write and publish research papers in high quality journals.	Individual faculty members.	As completed.
Maintain editorial posts in high level journals.	None needed.	Those editors.	
Develop an active colloquium series.	Invite internal and external colloquium speakers.	Colloquium committee.	May 2005
Continue active faculty seminars.	Hold and attend seminars.	Interested faculty	May 2005
Direct Statistical Research Forum.		Director of the Stats Research Forum	December 2004
Host a regional conference in knot theory during early spring 2005.	Ask for money, invite speakers, organize the conference.	Carter, Champanerkar	February 2005
Faculty continue their work in refereeing and writing for Math Reviews and Zentralblatt.	Review and referee	Reviewers and referees	On-going

Department: Mathematics and Statistics College: Arts and Sciences

Goal: To provide professional service to the community. _____

Methods/Measures for Assessing Goal Attainment: Continued service activities.

Objectives	Actions to be taken to achieve Objectives	Lead Responsibility	Expected Completion Date
Provide professional mentoring for public school teachers.	Be available to answer mathematical and statistical questions posed by school teachers.	All faculty.	
Continue departmental support for the Mobile Mathematics Circle.	Grants, department, and university funds available to the math circle. Faculty presentations to the math circle.	Prokhorov, Pillen, Carter, and Galaktionova	
Develop a method to promote mathematical awareness within the community.	Direct the Regional Science Fair and provide judging in several categories. Provide <i>ad hoc</i> support for other mathematical events in the area such as the Mobile Maysville Mathematics Initiative. Plan an event during Mathematics Awareness Month (April) and other community activities.	Various faculty.	Spring 2005