

A Pre-proposal for New Graduate Program
Masters of Science in Statistics
Department of Mathematics
The University of Texas – Pan American
March 31, 2005

Purpose

The purpose of this program is to provide an interdisciplinary program in statistics which prepares students for employment in biomedical, business, industrial, and other non-academic careers. The program will have an emphasis in biostatistics, providing research support and productivity in biomedical research at UTPA. Students may also, however, prepare themselves for subsequent doctoral work by choosing appropriate electives within the program.

Geographically, the closest statistics program is a general statistics masters program offered within the College of Business at UT – San Antonio. Another general statistics masters program is offered at UT Austin, while the closest biostatistics program is a graduate certificate program within the Health Service Research program at Texas State University in San Marcos.

A full proposal for the program is to be prepared by Fall 2005 in order to implement the program by Fall 2007.

Description of the Program

Students in the program will complete an 18-hour major in statistics and two 9-hour minors in related fields. Students choosing a thesis option will replace one of the 9-hour minors with a 6-hour thesis requirement.

Statistics Major: (18 hours) Students are required to complete six courses

- Math 6365 Probability and Statistics
- Math 6366 Mathematical Statistics
- STAT 63xx Regression Analysis (new course)
- STAT 63xx Nonparametric Statistics (new course)
- STAT 63xx Categorical Data Analysis (new course)
- STAT 63xx Experimental Design (new course)

Minors: (9 hours each): Non-thesis students are required to complete two 9-hour minors from the following list of disciplines. Thesis students are required to complete one 9-hour minor from this list.

Mathematics
 Biology
 Computer Information Technology
 Management, Marketing, and International Business
 Manufacturing Engineering

Thesis Option: (6 hours) Students selecting the thesis option will be required to complete the new courses STAT 7301 (new course) Thesis I and STAT 7302 Thesis II (new course).

Table of Programs

This program is not currently included on the University's Table of Programs.

Student Demand

Students for the program will be pooled from regional residents, recent graduates of UTPA, and national and international students. The expected student population is 1/3rd local and Texas students, 1/3rd national students, and 1/3rd international students. Graduate students outside of the region will be necessary to sustain this program; in 2001, non-U.S. citizens comprised 50% of the full-time graduate students in U.S. mathematics programs. In addition to attracting students from abroad, the programs will be a gateway for qualified students from neighboring regions in Central America. Effective recruitment of graduate students will be enhanced by the experience, contacts, and international reputation of the current Department Chair. The anticipated enrollment in the first three years of the program is

	Year 1	Year 2	Year 3
Number of full-time students	5	7	10
Number of part-time students	5	10	15

Revenue Implications

The expected revenue generated by this program by Year 3 is

Number of full-time students	10
Number of part-time students	15
Total graduate SCH generated ¹	150
Total Instruction & Operations per Semester ²	\$97,144
Total Instruction & Operations Revenue per Year	\$194,288

¹Assumes 9 SCH per full-time student and 4 SCH per part-time student.

²Assumes a multiplier per SCH of 3.94 x \$51.25.

Cost Considerations

Anticipated annual program costs for the first three years are

	Year 1	Year 2	Year 3
New Faculty	\$60,000	\$60,000	\$60,000
Graduate Assistantships	\$36,000	\$72,000	\$120,000
Support Personnel			
Equipment			
Supplies			
Library			
Other Operational Costs¹	\$8,000	\$11,000	\$15,000
Total	\$104,000	\$143,000	\$195,000

¹ Assumes \$5000 per new faculty member and \$1000 per GTA.

Accreditation

It is not necessary for this program to seek or obtain national accreditation.