

**Program Review Report
For
BS in Statistics
2005-06**

Prepared by Dana L. Thomas and Ronald P. Barry

Contents

Purpose	1
Strengths	1
Weaknesses	2
Needs	3
Recent Significant Changes	3
Service Course Issues	4
Outcomes Assessment Summary	4

Weaknesses

The number of undergraduate statistics majors (Appendix 5) and the number of graduates of this program (Appendix 7) have been low. This is not uncommon among undergraduate programs nationwide. Traditionally, graduate statistics programs have been the primary means of educating statisticians. While the American Statistical

Association encourages academic members to implement undergraduate programs, most

students first learn about the field of statistics late in their undergraduate program in some

Needs

An organized sustained student recruiting effort is needed. Historically students learned of the undergraduate statistics program by word of mouth or found it on the web. However with more students coming out of high school AP statistics courses we are

beginning to see freshmen declaring statistics as their major for the first time. This

Service Course Issues

Appendix 8 shows enrollment in undergraduate statistics courses. It is clear there are no under enrolled courses in our offerings except perhaps STAT 461, Applied Multivariate Analysis. We have discussed making this a graduate course to attract more graduate students from the sciences.

As noted above, growing enrollment in STAT 300 caused us to offer this course more frequently. CS students constitute the majority of the enrollment in this course and it

is expected that this enrollment will continue to grow in enrollment. Thus, it is important

should be paying more attention to assessing learning outcomes of our graduates in this program and ensuring that information is not lost to faculty departures

Who are our students? As part of this program review, we examined the transcripts of the

Appendix 1 – List of BS Graduates by Year

1994 Michael Rosing, was enrolled as a student at the Center for Quantitative Ecology at the University of Washington after graduation, but we have lost track of him recently.

Jason Marshal works as a wildlife biologist in Whitehorse, Yukon, Canada

1995 Matt Clark, enrolled in an MS program at Washington State University, current

admitted to the Ph.D. program in the Department of Biology at the University of

Appendix 2

American Statistical Association

Curriculum Guidelines for Undergraduate Programs in Statistical Science

The American Statistical Association endorses the value of undergraduate programs in statistical science, both for statistical science majors and for students in other majors seeking a minor or concentration. This document provides guidelines for development of curricula for such programs.

Principles

Undergraduate programs in statistics are intended to equip students with quantitative

— **Statistical** Graduates should have training and experience in statistical

Mathematical Topics

- Calculus (integration and differentiation) through multivariable calculus.
Applied linear algebra (emphasis on matrix manipulations, linear transformations,

projections in Euclidean space, eigenvalue/eigenvector decomposition and singular-value decomposition).

Probability

- Emphasis on connections between concepts and their applications in statistics

Computational Topics

- Programming concepts; data base concepts and technology.

ssment

at pdf
rojects

te so
lres do
ation.

e sure
aires

ther

if we

	Implementation
g S l eir no le, .	Review of omnibus test responses by Statistics faculty in May of each year

pn

ity review SAS
n May.

f Statistics
ttend Senior
tations, read
bject report,
e their

mation on jobs
school
our graduates.
ormal inquiries
will be kept.
from Career
be summarized.
ill review this
.

	Fiscal Year
2004	2005
41	7
38	42
5	6
4	6
1	1
5	5
2	3
1	1
58	69

all	Spri
004	200
766	2.47
8	539
1	125
12	559
12	248
1	67
012	3.90

ear

atics

Major Description	1999	2000	2001	2002	2003	2004	2005
Mathematics			1		1	1	2
Mathematics	5	8	8	3	9	10	8
Statistics	1	1	1	1	1	1	
Mathematics	1				4	1	2
Statistics				1	3	5	1
	7	9	10	5	18	18	13

ureau) by semester 2000-2005

	Fall 2003	Spring 2004	Fall 2004	Spring 2005	Fall 2005
2)	125(2)	123(2)	104(2)	123(2)	106(2)
1✓		47✓		44✓	31✓
7	19✓	36✓	31✓	28✓	27
	20✓		16✓		15✓
		7✓			
			11		
		11			
3				12	
		4			
	11				8
	6		7		6
7				6	
		8			
7		1		1	
					10(J)