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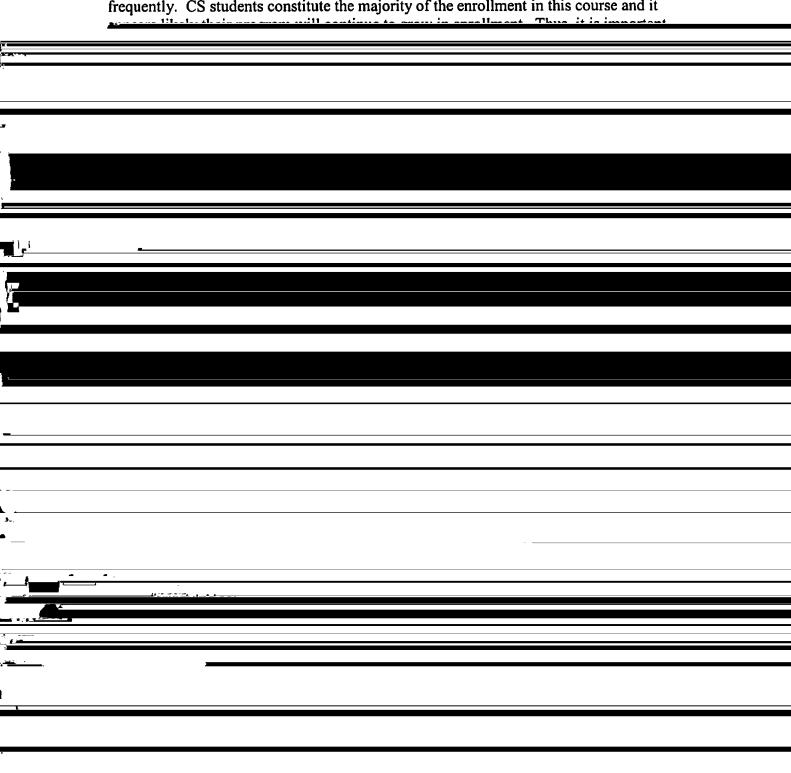## 2005-06

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Contents

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

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
program has the capacity for additional students. Thus, we should arrange to visit high
schools offering AP Statistics to recruit students into this program.

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

should be paying more attention to assessing learning outcomes of our graduates in this

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

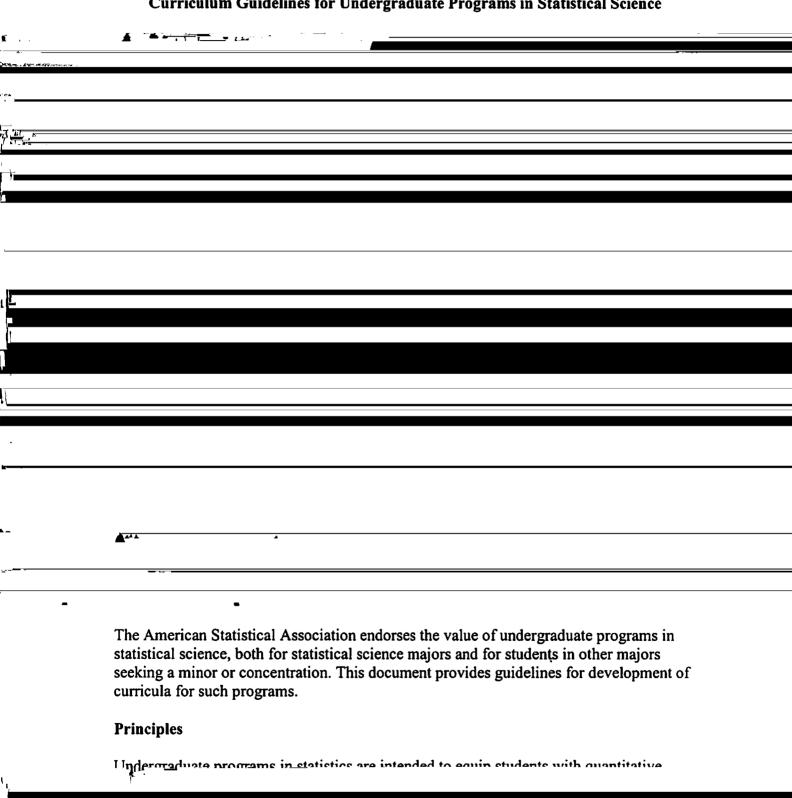**Appendix 1 – List of BS Graduates by Year**

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

Washington

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

Mathematical Topics

- Calculus (integration and differentiation) through multivariable calculus.

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.

departments with significant statistical content might be allowed to count toward a statistics minor or concentration, though the content of such courses must differ substantially from the others.

Additional Information

The ASA's <u>Center for Statistical Education</u> (see www.amstat.org) has available more detailed recommendations on statistics programs, along with a list of model programs. These materials have been developed and are maintained by the Section on Statistical Education, in conjunction with other sections and committees of ASA. Those considering new or revised undergraduate statistics programs may contact the <u>Center for Statistical</u>

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ajor_Description	1999	2000	2001	2002	2003	2004	2005
athematics			1		1	1	2
athematics	5	8	8	3	9	10	8
tatistics	1	1	1	1	1	1	
athematics	1				4	1	2
tatistics				1	3	5	1
	7	9	10	5	18	18	13

Appendix 8 – Course Enrollment by Year

Statistics Course Enrollment (sections; J = Juneau) by semester 2000-2005

STAT	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004	Spring 2005	Fall 2005
200	104(2)	122(2)	101(2)	114(2)	104(2)	124(2)	125(2)	123(2)	104(2)	123(2)	106(2)
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401	16	19	17	19	34	27	19	36	31	28	27
402	29		20		28		20		16		15
461				12				7			
480			canceled	10							
602	11				9				11		
605				13				11			
611		6				13				12	
621				2				4			
631			12				11				8
651	6		7		6		6		7		6
652		7				7				6	
653				9				8			
654		5				7		1		1	
661		2									10(J)