

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

**Prepared by Dana L. Thomas and Ronald P. Barry**

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## 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 appears likely their program will continue to grow in enrollment. Thus, it is important that we consider alternative means of offering this course such as the web based alternative mentioned above or offering it during summer session to allow statistics

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~~faculties offer elective courses to our undergraduate and graduate students~~

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 Fall 2014 Statistics program during the next five years to provide an over

view of student characteristics. We offer the following summary of student characteristics:

- One student completed the Statistics program 20 years after completing a geology degree. All other statistics graduates were double majors: two in

**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

adviser is Dr. [redacted] at [redacted] in Pullman.

## 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.



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

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	004	200
	766	247
	8	539
		125
	12	559
	12	248
		67
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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	
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