

2006 Program Review
MATH; STAT
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UAF Academic Program Review

Department of Mathematics and Statistics

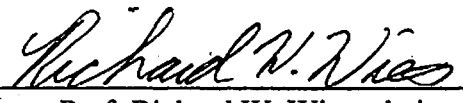
**Mathematics: B.A., B.S., M.S., Ph.D., M.A.T.
Statistics: B.S., M.S.**

in the

College of Natural Science and Mathematics (CNSM)

April 21, 2006

Review Committee; Signature and Date


Asst. Prof. Richard W. Wies chair


Asst. Prof. Javier Rochesotto

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1 Introduction

A committee has been convened in response to a request by UAF Provost Paul Reichardt to provide an academic review of seven degree programs within the Department of Mathematics and Statistics (DMS) in the UAF College of Natural Science and Mathematics (CNSM). The committee is composed of three UAF faculty members (two external and one internal to the programs being

and M.A.T. in Mathematics and the B.S. and M.S. degrees in Statistics.

Materials required for this academic review were created by DMS and submitted to the

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The rest of this review will focus on these five primary needs by first providing supporting information and an overall evaluation of the degree programs and then highlighting individual recommendations for each of the seven degree programs.

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3. Primary Needs Common to all Degree Programs

Based on the DMS Self Study, discussions with DMS faculty, and the additional information requested from DMS, the committee clearly identified five primary needs common to all DMS degree programs as outlined at the end of Section 1.

as listed in Section 1.

3A. Space

The Introduction of the Self Study, the additional summary of space requirements requested from DMS by the committee and discussions with DMS faculty are listed below.

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3B. Faculty

There is a need for additional faculty and retention in DMS. Additional faculty are necessary to

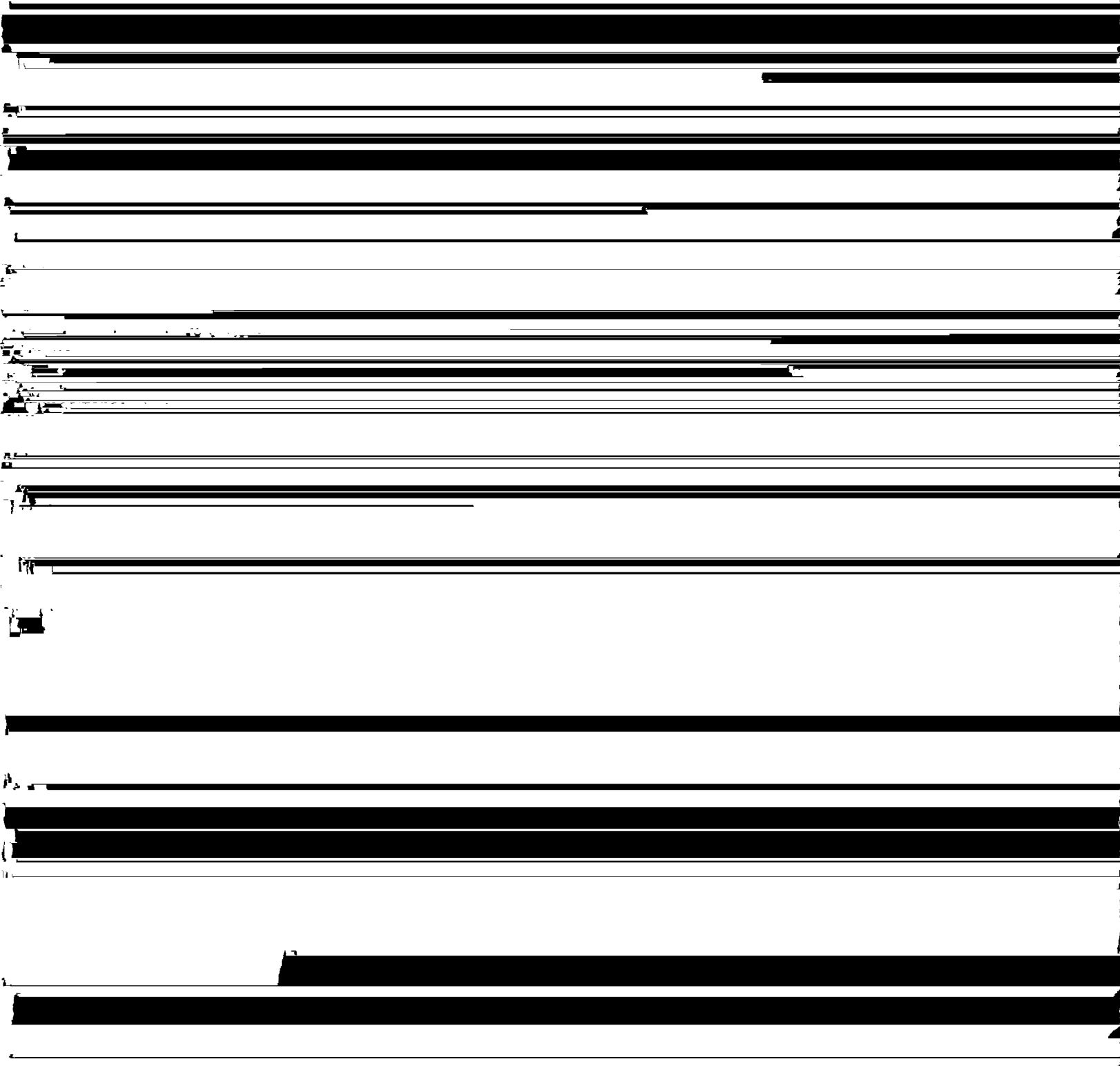
support the increasing demand for service courses in mathematics and statistics for other degree

programs at UAF as well as to support the major courses as the department grows to keep up with

UAF demands. Retention of faculty is also imperative to create a strong and stable program. DMS has seen a turnover of 7.5 out of 8.5 tenure track Mathematics faculty since the Spring 1998. While the introduction of RIP and faculty deaths have played a role in the faculty retention problems, there are many other factors that contribute to faculty turnover. Three major factors in retention are hiring

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It is also important that a larger budget be allocated to DMS for hiring teaching assistants to help with



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increasing enrollments in mathematical science courses which serve both undergraduate Mathematics majors and other degree programs at UAF. An expansion or annex of the Chapman building is absolutely necessary to provide space for current faculty, staff, and the student computer laboratory

majors is currently limited since Mathematics courses do not have a computer laboratory use fee.

Although additional space, additional faculty, and computer laboratory access are a priority for the B.A. and B.S. in Mathematics programs, increased departmental budgets for faculty development and teaching assistants are also necessary to support service course workloads. The undergraduate programs in Mathematics will continue to grow as enrollments in undergraduate mathematical science courses increase across UAF degree programs, therefore it is important that additional space, additional faculty, computer laboratory access and increased departmental budgets be allocated for

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support the Ph.D. in Mathematics. The Ph.D. in Mathematics program is needed to attract new faculty in Mathematics and to provide prestige for the graduate Mathematics program.

4D. M.A.T. in Mathematics

The M.A.T. in Mathematics program is designed to offer a graduate degree to students who have a B.A. or B.S. in Mathematics and are interested in teaching mathematics in K-12 schools. This program currently has one student enrolled, effective in the Spring 2006 term. However, this is the only student enrolled in the MAT program in the past eight years. DMS currently has a faculty

member, Tony Rickard, who does research in Math Education, has a 50/50 joint appointment with the School of Education, but already teaches a full load with Math 205 and Math 206 each year. Currently, the majority of the credits required for this program are from Mathematics, including the comprehensive exams. As a step toward restructuring the program, DMS would like to recruit

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statistical graphics. This Review Committee concurs with these course selections and realizes that more faculty are needed before these courses can be given.

5B. M.S. in Statistics

This is a strong program whose graduates are professional statisticians many of whom are employed in Alaska often as biometricians in the Alaska Dept. of Fish and Game, and now some within Institutional Research at the University of Alaska. A testament to the quality of this program is the number of M.S. graduates who go on to obtain Ph.D.'s in statistics from renowned programs of

disciplines such as fisheries studies, AIDs research, and marine ecology.

As noted in the program self evaluation, the program enrolls from 4 to 6 students per year, has adequate enrollment to support its graduate offerings, graduates 1 to 5 students per year and has good

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of knowledge and faculty development which translates to growth and prestige for DMS faculty at UAF.

The undergraduate major programs in Mathematics and Statistics have experienced cyclical enrollments. There is a much larger impact on DMS faculty at UAF.