

# ASSESSMENT PLAN NARRATIVE

## Ph.D. in Applied Mathematical Sciences

### DEPARTMENT OF MATHEMATICS AND STATISTICS

This document describes the Department of Mathematics and Statistics (DMS) plan for assessing the Ph.D. program in Applied Mathematical Sciences.

#### **1. OU Mission Goals**

Among the goals listed in the Oakland University Mission Statement, our assessment activities will focus on Excellence in Graduate Programs, and Research and Scholarship. These goals are central to the mission of the DMS graduate programs.

#### **2. Department Goals**

We will continue to provide excellent graduate programs. Our Ph.D. in Applied Mathematical Sciences has now been in existence for over a decade. We awarded four Ph.D. degrees in each of the last two years, and we expect to continue producing graduates at roughly the same pace. The overall purpose of this program is to prepare students for careers in industry and government, as well as academe. The program is intended to provide research experiences for our students, as well as experience in the application of mathematics and statistics to business, industry and government.

We believe the quality of this program is excellent; we intend to keep it this way.

#### **3. Learning Outcomes**

Our graduate programs are designed to accomplish the following student learning outcomes:

- A. Deep knowledge of course material, both theory and application.
- B. High quality Ph.D. dissertations, scholarly publications and other research endeavors.
- C. Exposure to, and an understanding of, the nature of research in mathematics and statistics.
- D. An understanding of how mathematics and statistics are used effectively in industry and government.

#### **4. Methods of Assessment**

The key internal/direct measure of our level of success in attaining the stated learning outcomes is the quality of the Ph.D. dissertations. Dissertations will be evaluated on a three point scale (unacceptable, acceptable, superior) with respect to the following items: clarity of writing, completeness and correctness of results, and performance at the oral examination.

External/indirect measures include student exit interviews, student publications and conference presentations, and follow-up interviews with alumni.

### **5. Assessment Administration**

The DMS Committee on Graduate Programs (a standing committee) will have the responsibility of overseeing and administering the assessment activities. It is chaired by the department's Coordinator for Graduate Programs, who is a continuing member of the DMS Steering Committee (i.e., executive committee). The chair of the department is an ex-officio member of the Graduate Programs Committee.

### **6. Assessment Procedures**

All dissertations will be evaluated by appropriate DMS faculty members. Student exit interviews will be conducted by members of the Committee on Graduate Programs. Alumni survey data will be collected on a two year cycle, as will information on student publications and conference presentations. During each academic year, the Committee on Graduate Programs will review the available assessment data along with other relevant information and determine whether any changes to the program are needed. As necessary, the Committee will develop proposals for departmental approval, and in any case the Committee will report to the department on an annual basis.