



May 7, 1999

To: Herb Wang, Associate Dean

From: Richard A. Brualdi

*RAB*

Enclosed please find a preliminary report on the assessment of the Graduate Program of the Department of Mathematics. It was prepared by our Graduate Program Committee (T. Kurtz, chair) which was given the responsibility for graduate assessment by the Department. The report was discussed in the departmental meeting held on May 6, 1999.

The analysis and interpretation of the information obtained will be continued in the fall semester of 1999-2000. In addition, it is planned to extract further data for analysis from our database on graduate students.

It is planned to submit a final report next fall.

I would be happy to answer any questions that you may have.

# **Graduate Program Assessment**

## **Preliminary Report**

The College of Letters and Sciences requires that

- a) Each department in the College will review its graduate program with reference to the mission of the department, its place in the liberal arts tradition, its capacity to provide financial support for students, the time that students take to receive a degree, and how well the program meets the career aspirations of its students. The departments will use this review to establish clear educational goals for the program.
- b) Each department and program will develop instruments that measure the extent to which it achieves its educational goals.
- c) Committees in each department and program will use these measures to monitor success and suggest changes in the graduate program.

To meet the College assessment requirement, the Graduate Program Committee has begun by seeking feedback from students regarding the program. Questionnaires were given to all current students and second-year students were invited to group meetings with members of the Committee.

### **Questionnaire results**

The Committee has reviewed the questionnaires. The students identify a number of aspects of the program that they consider to be strengths and others that they consider to be weaknesses.

Program strengths identified in the questionnaires:

1. Size of the department. Several students mentioned the size of the department as a positive factor because of the variety of classes and research areas that are available.
2. Friendly/supportive students and faculty. In particular, other students are not perceived as being competitive (in the negative sense).
3. Variety of teaching opportunities. Students appreciated the fact that they had the opportunity to teach a variety of classes. Concern was expressed, however, about the small number of satellite sections that are available.

Program weaknesses identified in the questionnaires:

1. Anxiety level generated by qualifying exams. The VIGRE site visitors also commented that the level of anxiety regarding qualifying exams seemed to be much higher here than at other universities they visited.
2. Sense of isolation on the part of some students. In part, this feeling is the downside of the size of the program mentioned in 1. above, but, in addition, some students felt that the faculty did not show an interest in them, especially before they had passed qualifying exams.
3. Adequacy of advising, particular early in the program.
4. Lack of a structure to deal with problems that arise.
5. High TA workload.
6. High number of required credits. Several students comments about the delay that the coursework/qualifying requirements cause in beginning research.
7. Lack of gender and ethnic diversity among the faculty and the students.
8. Lack of communication about the variety of teaching opportunities, about options for changing advisors, about courses, etc.

### **Meetings with second year students**

These interviews are now being transcribed and will be reviewed by the full committee.

### **Issues that have been identified so far**

Although we have not completed our review, a number of issues have emerged through the questionnaires, the interviews, the VIGRE site visit, and in other ways with enough consistency to convince us that they need to be addressed.

1. Preparation for qualifying examinations

To some extent, the high anxiety regarding the qualifying examinations is associated with students' perception that they do not know what is expected of them for the exams. These expectations need to be clearly specified and communicated. There were frequent comments on a lack of correspondence

between the qualifying examinations and the first-year courses on which they are based. At a minimum, we need to have a clear understanding of what the relationship should be and to communicate that understanding to all concerned. The importance of the first-year courses can hardly be overemphasized. Caucuses should recruit their best teachers for these courses; regular assignments and feedback in the courses should play a major role in preparation for the qualifying examinations. Student to student mentoring on strategies for exam preparation could also be valuable.

2. Timing of qualifying examinations

A number of students attributed the anxiety over the qualifying examinations to the time limit under which the examinations must be passed. Students who change their minds regarding their choice of examinations can end up in a bind, as can students who enter with weaker backgrounds and who might best be advised to take some 500 and 600 level courses.

3. Advising and communication with students

Many comments directly and indirectly suggest that students may not be receiving the best possible advice and information. The possibility of developing a graduate student handbook that would consolidate the large amount of paper we now produce in a more convenient and accessible form is being explored. Other suggestions include involving a larger number of faculty in pre-dissertator advising.