

Developing the Educator

I Graduate Student Orientation

For seven days prior to the start of the fall semester, we require an extensive orientation session for our new graduate students. This orientation is coordinated with the general sessions offered by the university. A substantial portion of the department orientation is devoted to topics related to teaching math in general, but specifically in our department. Teaching related topics include: *Successful Teaching in Graduate School*, *Lecturing*, *Chalkboard Techniques*, *Teaching in the American Classroom*, *Being a Good GTA* (coordinated by the Senior GTA), *Cooperative Learning*, *Grading*, and *Being Mentored*. The new students also view a video of veteran GTAs teaching their own classes, and are required to make five practice presentations on topics from traditional first year courses, including one in which they answer “student” questions and one in which they must use some form of technology.

II Teaching College Mathematics Course

Offered in the fall semester, this is a required 2-credit course for all new teaching assistants in the department. This course is an introduction to college-level teaching principles and practices. Key issues in undergraduate mathematics education are surveyed. These issues include course preparation, assessment, understanding student learning, developing assignments, instructional strategies (lecturing, collaborative learning, discussions, etc.), the use of instructional technologies, motivating students, and the use of institutional resources for student development. Source materials for the course are derived from research in higher education and the writings and opinions of experienced educators.

III Seminar in Teaching College Mathematics

The seminar series is offered during the spring semester as most GTAs begin teaching independently. This course is intended to provide a forum to discuss problems and issues associated with college teaching. The *BCC Case Studies* are used as readings and springboards for discussion. The seminar is held once weekly and is facilitated by a different faculty member in the department each week in order to expose the GTAs to a wide range of teaching styles and philosophies. This faculty member plans the format for the seminar, but is discouraged from offering the “correct” answer to any questions, as we believe that there is no one right way to teach. Faculty facilitators are selected based on their past teaching performance.

IV Mentoring

The mentoring program in our department is one year in length. Each new GTA is paired with a faculty mentor who has been identified as a good teacher. Typically during the first semester the new GTA does not teach independently, but rather assists his or her faculty mentor in a first year course. Occasionally, we have new graduate students with teaching experience who may teach their own course, but are still closely supervised by the mentor. Those GTAs who assist in a class taught by the mentor usually begin the semester by observing and assisting in the classroom when students are working in small groups. Later in the semester, the protégés are given opportunities to teach the course while the mentor observes. If the new GTA is teaching his or her own course, the mentor will attend the GTA’s course a minimum of once each week, to observe and offer feedback. In either case, the GTA and his or her mentor are required to meet a minimum of once each week to discuss issues related to teaching. The

protégé is required to keep a journal of their meetings as part of the requirement for the *Teaching College Mathematics* course. During the second semester, the mentor supervises the GTA as he or she begins teaching a course independently, and is available for assistance in developing lessons, writing exams, and dealing with student problems.

V Support for Teaching

We offer our teaching assistants an extensive support network. Although the mentor is usually the first person to whom a GTA goes for help and advice, we also have three faculty members (the Director of First Year Math, the Developmental Math Specialist, and the Assistant to the Chair), who are available for assistance. We make it clear to our GTAs during the orientation and at meetings throughout the semester that they are not in this alone, and that the department is committed to helping them succeed. We also encourage GTAs to inform the Director of First Year Math early if problems seem to be developing.

VI Evaluation of Teaching

We regularly evaluate our GTAs throughout the semester. A faculty member evaluates beginning GTAs three times. There is also a midterm and final student evaluation. Veteran GTAs who have had good teaching evaluations in the past are typically observed once during the academic year, unless a problem is identified, but still participate in the midterm and final student evaluations. In addition, we are working to institute a peer mentoring process in which new GTAs are observed by veteran GTAs as a non-threatening means of improving their teaching. We hope to place the GTAs in pairs or groups of three. These students will then observe each other and meet to discuss effective teaching practices.

VII Senior GTA (SGTA)

The Senior GTA is selected from among those graduate students who have been teaching in the department for a minimum of one year, have completed the entire GTA training program (orientation, mentoring program, fall and spring courses), and have demonstrated strong pedagogical skills. The role of the SGTA is to assist the GTA supervisor in developing and maintaining programs related to the ongoing training of GTAs in the department. This person will also coordinate a peer-mentoring program. The GTA who holds this position is guaranteed summer support for one summer, and are also given financial support to attend one professional conference during the year in which the position is held.

VIII Department Handbooks

In the Summer 2002, two department handbooks were published: *A Handbook for Mathematics Teaching Assistants* and *Mentoring Handbook For Faculty Mentors and Teaching Assistants*. These documents further detail the programs outlined above.

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