

“My First Year Teaching In a College Of Engineering”  
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The first year of teaching as a faculty member in a College of Engineering provided me with many opportunities for professional growth. It served as a time to set a foundation on how I will teach, do research, and serve the university and community in which I am a part. During this time it was important to meet the challenges and expectations of the Department of Mathematical Sciences, the College of Engineering, and Tennessee State University (TSU) as well as achieve the career goals and aspirations I had set for myself.

There are several important factors to consider when making the transition to being a first year tenure track faculty member. These essential elements include: understanding how you will be evaluated and assessed by the department and college and overall what is expected of you, knowing how to utilize your resources which include books, online information, technology, and people, balancing teaching and scholarship, and outlining your short and long term goals as a professional. This paper will focus on what I consider to be the most important factors that influence your success as a first year professor and my first year experiences as an Assistant Professor at Tennessee State University.

When undertaking any new job or commitment the first step of being on track to successfully completing the assignment is to gain an understanding of what is expected of you and how your work will be assessed and evaluated. During the interview process at my current job I learned the expectations set for any tenure track faculty member at Tennessee State University. Each faculty member is evaluated and assessed based on teaching, research and scholarship, and service, which all carry specific weights based on the type of institution, college and departmental goals, and the current need within the department. As a result, I gained an understanding of what I needed to do, how much of each activity I needed to perform, and on what level I needed to demonstrate excellence in each of these areas in order to receive high reviews and markings and excel in the Department of Mathematical Sciences in the College of Engineering at Tennessee State University. I also inquired about how I could make additional positive contributions to the department outside of my job description and requirements. Therefore, prior to being hired I already had a great understanding of how to be successful in a faculty position at Tennessee State University as well as how to make myself an asset to the department and the university by bringing new ideas and methods for improving the mathematics program.

Another critical part of maximizing on your productivity and positive results as a first year professor is realizing how to utilize your resources. These supports include books, online resources, technology, and people. People resources is always a great starting point because these individuals can lead you to other great resources including other people, technology, useful textbooks, and helpful online resources. Some of the online resources include: Paul’s Online Notes, Khan Academy, and Math Insight. All of these supports provide assistance and guidance when planning lessons, creating exams and assignments that are reasonable yet challenging for students, and deciding how to link classroom knowledge to application problems and student research. Seeking advice from mentors, colleagues, and other experienced teachers helped me tremendously during my first year. These individuals provided valuable information about best teaching practices, useful textbook and online resources, and how to balance the various aspects of the profession and life.

As an instructor I used many different teaching methods to try to reach all types of learners at varied levels of background knowledge and skills. In the classroom I used lecture, group activities, discussion, students presenting their work on the board, and technology like the Smart Board, and clicker questions. To supplement the lessons and provide students with opportunities to practice the concepts learned in the class I have used textbook homework and Webwork, which is free online homework software.

I have found that each class has a different personality and students with varied skill levels. Therefore, it is important to recognize and understand the needs of each class and construct lessons in order to maximize on the talents, skills, and abilities of all students enrolled in the course. Lessons should be planned so that the beginning student and most advanced students in the class can learn and be challenged by the course material. In addition, the intermediate students also need to be engaged and gain the maximum benefit from the learning experience. It is a balancing act and the balance differs from class to class. Various combinations of the classroom activities listed above must be utilized during class lessons to make teaching and learning most effective in each unique class.

Along with developing lessons that are appropriate for each individual class, it is essential to develop a positive rapport with students just as you should with your colleagues and people in the community. The first day of classes I introduced myself and made my expectations and standards known. I gave all students a syllabus that clearly outlined my office location, office hours, prerequisites for the course, course objectives, the grading policy and grading scale which will be used to determine their grades, online resources that supplement the course content, and a list of problems to do for practice to reinforce what is learned in the classroom. This served as the contract between the students and I and it gave students a chance to keep track of where they were throughout the semester and determine what they needed to do in order to excel in the course. In addition, from the very first time I met my students I showed them that I truly cared about their success in the mathematics course as well as in life. Academic and professional growth take place in the classroom and outside of the classroom and both are important factors in student development and maturity. Therefore, I also mentored and advised students on academic scheduling, academic and career goal setting, summer opportunities, research, and service. Further, I have developed research projects that allow students to participate and get involved with mathematical modeling and coding test problems in Matlab.

It is critical to establish a strong foundation of how you will teach and continue to maintain involvement in scholarly activity like grant writing and participation in grant programs and active research. In addition, it is important to get to know the administrators at your institution. These individuals are excellent resources for opportunities, recommendations, and career advancement.

Being an excellent educator is also connected to being an excellent professional in your respective discipline. As a professional it is crucial to do your job well and also stay active in your profession; for mathematics professors this means teaching well and continuing to do research, publishing, grant writing, and attending conferences pertaining to your discipline, research area, and effective teaching methodologies. During my first year I attended workshops on teaching methods and best teaching strategies and I made several presentations. I gave talks at the Seventh International Congress on Industrial and Applied Mathematics in Vancouver, Canada and the Mathematical Association of America Southeastern Conference 2012. In addition, I gave an invited talk in the Department of Mathematics at University of Tennessee Knoxville and was a panelist for the Program for Excellence and Equity in Research Graduate

Student Symposium at University of Tennessee Knoxville. I was also an invited speaker for the 2012 Enhancing Diversity in Graduate Education for Women at Florida Agricultural and Mechanical University in Tallahassee, Florida. These activities have allowed me to stay connected and continue to network internationally in the academic community and the mathematics community.

During my first year I established my reputation as a professor and professional among the students and my colleagues. Prior to this year I had already set goals for myself as a teacher and researcher so this allowed for a smooth transition meeting the standards and expectations of the college and accomplishing my own professional goals. However, it is also crucial to be open to adjusting your teaching and research plans to suit the needs of students and the department. As I went through my first year since I had a solid plan of how I would teach and do research it was easier to make slight adjustments to create a learning environment that fostered excellent student performance in all of my classes and allowed me to maximize on the time I had allotted for research work. Part of my success can be attributed to my spending quality time on both teaching and working on new research projects which required me to designate specific times for each.

Lastly, but certainly not least, it is important to establish short and long term goals for yourself. Prior to beginning, during, and after my first year of teaching I set short and long term goals for myself in teaching, research, and service. This is critical because it is much easier to succeed if you have already established goals and outlined the steps necessary to achieve those goals. I always want to continue to grow professionally therefore once I accomplish certain goals I set new goals and continued to learn by discussing teaching methods with other teachers, attending workshops, conferences, and trainings on effective teaching strategies, innovative technologies that can be used in the classroom, and developing student research projects. During my first year I attended several trainings some of which include: faculty seminars like the TSU Smart Board workshop, TSU Moodle workshop which is an online grading, homework, and activity website, and the Inquiry Based Learning Workshop 2011 at University of Michigan.

All of these trainings allowed for growth and an extensive repertoire of teaching methods that can be used in the classroom which gave me the ability to choose the most effective teaching strategies and activities that work best for each of my classes. As a teacher it is my responsibility to be able to effectively convey information and knowledge to all students so that each of them can maximize on his or her skills and abilities in mathematics and thinking in general. Ultimately, I want all of my students to excel in my classes and when they finish the course be able to determine answers to questions posed using given information, critical thinking and problem solving skills, pattern identification, and methods they have learned to solve problems.