

Mark Williams, Horticulture

Teaching Philosophy Statement 2006

Learning is one of the most empowering and important human experiences. The ability and desire to learn are the key attributes that allow us to gain knowledge, wisdom and personal growth. The opportunity to impart knowledge through teaching is one of the most important responsibilities we have as faculty members. I believe that excellence in teaching originates from an insatiable desire to learn, and a constant pursuit to maximize one's ability to communicate information to others.

Although I have taught a variety of subjects within the biological sciences, my basic goals for students remain the same, and reflect my own thoughts about learning. Although mastery of subject material is necessary and important, memorization of specific facts is ancillary to my primary goal, which is to instill the ability to think creatively and critically. I believe that developing the capacity to interpret, comprehend and assimilate information provides benefits that last much longer than a focus on the retention of details. I also feel that learning to think holistically, taking many factors into account when interpreting and comprehending information is vital to gaining a long-lasting understanding of individual concepts. Additionally, acquiring experimental knowledge is crucial for any student of biology, and leads to the development of higher order thinking skills such as critical analysis. I have found that within a memorization intensive discipline like biology, teaching students how to think is one of the biggest challenges.

My teaching philosophy has evolved with each classroom experience. As my views have developed, the teaching techniques I use have also changed. When I first began teaching in graduate school I had limited personal interactions with my students. Over time, I have learned that my teaching is most effective when individual connections are made with my students, and I foster these connections whenever possible. I want my students to understand that I have a genuine and vested interest in their learning, and care about them as individuals with unique abilities and goals. This rapport not only helps in learning course-specific information, but also allows me to instill a desire and enthusiasm for learning through example. Being able to share my values and learning experiences inspires students to meet the expectations I have for them. This approach creates a symbiotic relationship that allows me to see how the students evolve in their intellectual development, and also teaches me what is effective and where I can improve.

I have found that within any classroom there is a wide range of individual learning styles and needs. Through experience I have increased my knowledge of these learning styles, which has allowed me to develop appropriate and effective teaching methods. I believe all students deserve equitable learning opportunities, and I make a concerted effort to use a variety of classroom techniques to make information as widely accessible as possible. In my lectures I use computer-based information, videos, guest lecturers, in-class readings and interactive discussions.

In my labs I focus on hands-on experiential learning, particularly in small group settings that allow for peer collaborative learning. Whenever possible I incorporate active-learning, which I have empirically found to be a particularly effective teaching tool. Using a diverse approach to teaching not only keeps students interested, but also creates opportunities for them to utilize their individual strengths.

At the beginning of each semester I set high but realistic goals for my students and myself. I express clear expectations for student learning, and then make every effort to provide the necessary support for achievement of these expectations. I become completely committed to my students to help them maximize their abilities. My teaching extends beyond the classroom; I make myself available for any student needing help, and I try hard to create a sense of approachability. Just as I commit myself to teaching, I also require that my students take full responsibility for their own learning and I ask a lot from them intellectually.

I strive for excellence, and this requires constant self-evaluation and a commitment towards seeking ways to improve. Before each semester I review my lecture material and apply any new information I have acquired. During the semester I consistently record my thoughts on what is working and what should be changed, and I amend my lectures accordingly. Even during periods when I am not teaching, I seek new material to strengthen my classes.

In the spring of 2005, I was able to distill all of my teaching philosophies into one singular goal. I initiated and led an effort to develop and submit a USDA Higher Education Challenge Grant to fund the creation of an undergraduate curriculum in Sustainable Agriculture (SA) in the College of Agriculture. The grant was funded, and as Principal Investigator I have been able to apply all of my educational beliefs and experiences in the development of this curriculum. During the last six months I have chaired a steering committee comprised of a diverse group of faculty from many different disciplines who are focused on designing and implementing the curriculum. The curriculum was developed by integrating the "three pillars" of sustainability: environmental stewardship, economic profitability and social responsibility. This approach will create a unique learning opportunity that will enable students to gain a holistic understanding of the complexities of agriculture.

The curriculum will be truly interdisciplinary, composed of classes from a range of agriculture and non-agriculture disciplines such as geology, nutrition, economics and sociology. There will be five new core sustainable agriculture classes, with a strong emphasis on collaborative teaching either through team teaching or by bringing in guest lectures from other departments, as well as farmers and other agriculture experts. There will also be a strong experiential component to this curriculum, with a requirement for students to spend two semesters either working on the organic community supported agriculture (CSA) farm being developed at the UK South Farm in conjunction with the program, or working on other suitable farms throughout the U.S. and abroad. As director of the program, I will be teaching one of the new SA core classes, managing the CSA and

coordinating student advising. Additionally, I will direct ongoing evaluative analysis of the curriculum so that every effort can be made to optimize the educational effectiveness. With only a handful of undergraduate major degree programs in the United States focused on sustainable agriculture, this program has the potential to position the University of Kentucky as a leader in undergraduate education in an increasingly important area.

Being in the community of university faculty creates excellent opportunities in collaborative teaching and learning. The wealth of knowledge and teaching experience is an immense, but far too often underutilized resource. It has been my experience that it is not difficult to find faculty in seemingly disparate areas that are not only passionate about their subject, but are willing to find ways to collaborate and share their knowledge. I have worked hard to capitalize on this resource. One experience in particular epitomizes this effort. After discovering that the core concepts of agricultural sustainability are applicable to many different disciplines, I met with a professor in the UK School of Design in 2004 and developed a unique educational collaboration. Since then, we have worked with seven individual classes of students from Architecture, Horticulture and Landscape Architecture to apply the concepts of sustainability to the conversion of an old storage shed at our research farm into an Organic Farming Research and Education Center. We have continually challenged the students to expand their concepts of function, design and construction by focusing on reusing and recycling building materials wherever possible. It has become apparent to me in this process that when faculty with shared interests and enthusiasm work together, a synergy can occur that creates a fantastic learning environment for both students and instructors. This project has also further reinforced the value of experiential learning, and I have witnessed how students from many different backgrounds and abilities respond positively to this method of learning. It has been gratifying to hear so many students describe this project as their best college experience.

One of the most rewarding aspects of teaching is the opportunity for continued education for the teacher. Since becoming a faculty member, I have consistently tried to challenge myself by teaching classes in areas where I had only a cursory knowledge of the subject. In 2003 I was asked to create a class on arboriculture and landscape management (PLS 451). Although I had very little experience in either area, I welcomed the learning opportunity and spent almost a year mastering the subject material. I specifically designed the lecture and lab components of the class so that students could develop the ability to integrate the scientific rationale behind arboriculture techniques with the actual application of the techniques. I have learned that difficult material is much more accessible for most students when presented in context. I also bring in non-academic arboriculture professionals who present a realistic application of the concepts we learn in class and provide a level of subject-specific expertise that complements my knowledge. I have found that students greatly benefit from this exposure. The lab for this class is built around active learning because in this discipline, skill and knowledge are closely related. This integrated approach has allowed me to cover a tremendous amount of complex information from a wide range of disciplines, including soil

science, entomology, plant pathology, physiology and anatomy, as well as all aspects of tree care, from planting to large-scale removal.

The quest for knowledge is one of the primary driving forces in my life. My passion for teaching is an extension of my own desire to learn, and it is this passion that fuels my pursuit of excellence in teaching. I believe that aspiring to be a great teacher is one of the most noble of goals; in it is the power to impart knowledge, to influence thinking and to ultimately create positive change in the world. With this potential comes the responsibility and challenge to always strive towards becoming the best teacher I can be, and to never stop being a student.