Statement of Teaching Philosophy for Karen Kackley-Dutt

I believe that all students can learn; however, learning takes hard work and dedication, both from the student and the instructor. I love to learn and I want my students to feel that same way. I am passionate about biology and teaching. I am fascinated with all levels of biology, from the molecular to the ecosystem, and I enjoy researching these topics. Students comment that I convey my excitement and wonder to them. The best part of teaching is awakening a passion for learning in others. Students arrive at our campus with varied levels of preparation, and I do my best to meet the needs of them all. The best way to ensure student success is to ignite their desire to learn and to provide appropriate support when needed. I search for new pedagogical methods and use whatever tools are at my disposal to reach my students, whatever their level of preparedness, to challenge them to be the best they can be. I teach some of my campus's largest classes so this presents some interesting challenges. During a typical semester, I have approximately 10 to 15% of the campus student body in one of my courses. This is why I take the time to attend teaching conferences and to share what I have learned with others.

My teaching objectives are twofold: to teach students to use a scientific approach when evaluating issues and to provide them with a good background in the fundamentals of biology. Carl Sagan said it well, "Science is a way of thinking much more than it is a body of knowledge." Students trained in the scientific method develop critical thinking skills and the ability to draw their own conclusions. They are persuaded by facts, not fear. Equally essential to understanding the issues facing society is a strong background in the basics of molecular, cellular, organismal and ecosystem biology and evolutionary principles. These are life-long learning skills that prepare students to function effectively in an information age and to confront the challenges and perils facing our planet and global society. The ever increasing intersection between biology and society has high stakes in terms of potential good and harm to the planet and our global community. It is imperative that we have citizens and leaders who can interpret the information that bombards them on a daily basis and make sound decisions regarding these issues.

I approach teaching as more than a mere transfer of factual material. While it is important to impart the fundamentals of biology and the scientific method, I feel it is imperative to relate the subject matter to real-life situations, especially in introductory courses and courses for non-majors. One exercise I include in my non-majors classes is to assign article submissions from the current media. The students are required to submit articles that relate to the subject material being covered in the course at that time, with a brief summary of the article, and a personal statement of response. I am always impressed with the scope and variety of articles the students locate and with their ability to accurately summarize and state the relevance of their selected article.

I spark interest in a subject through classroom discussions. Controversial subjects such as genetically modified foods and medical genetic testing provide unique opportunities for teaching biological concepts. Unfortunately, large lectures can limit these discussions since students may feel inhibited to express their views in front of a crowd. I have found the use of classroom clickers to be a good way to assess student opinion and encourage student input. Once students see that there are others that share their ideas, they are more likely to voice their views and participate in discussions. Additionally, clickers provide opportunity for formative assessment and they facilitate peer instruction.

Since a single format is rarely the best way to teach or evaluate all students, I provide multiple formats for learning and assessment. I am a proponent of tools like ANGEL and Doceri. I record my class sessions and place them on ANGEL so that students can review them and so any students who are unable to attend class are able to stay current. Additional materials on ANGEL include study guides, video clips, reading quizzes, concept mapping tools, and links to websites. I encourage students to come to my office hours or to make appointments if my hours do not fit their schedule. Some students are hesitant to ask questions in a group situation and benefit from additional one-on-one instruction. Supervised peer instruction is a valuable resource and that is why I pushed to institute the teaching of BIOL 003 Peer Learning in Biology on our campus. Since not all students perform well on standard exams, I provide multiple formats for assessment. In addition, I provide guidance for Honors students and opportunities for them to work on projects of particular interest to them.

Field trips and hands-on demonstrations are extremely valuable additions to the curriculum and foster learning. Even a walk around campus to examine the components of an ecosystem can improve student comprehension and information retention. Students better remember what they see, hear, and feel. I have received grant money to purchase teaching equipment for field studies and will continue to seek additional funds for this purpose. Class travel, whether regional, national or especially international, provides expanded opportunities for education and growth. I am committed to providing these experiences and I work hard to make sure they happen. I have been able to include an international component in several of the courses I teach and have taken students to Costa Rica, Panama, and Mexico. I look forward to expanding these facets of my teaching repertoire and to continue to grow as a teacher. Teaching is learning, and I love learning!