

Teaching Philosophy Statement and Plans for Developing Teaching Skills by Professor W.L. Cleghorn

To be classified as a good teacher, one must not only be knowledgeable in the subject being taught, but must exhibit a manner and attitude suited to the situation. Teachers who want to excel in the profession should display sound judgement and good character. If all interpersonal and communicative activities are handled with civility, dignity, and compassion, then the environment will be suited for productive results.

Teachers should set high but realistic expectations for their students and themselves. They should display their enthusiasm in a manner that will inspire the students to achieve their own maximum potential. Students will be motivated if they see a teacher that is sincere and has genuine enthusiasm.

Teachers should always endeavor to stay current in the material they are presenting. It is mutually beneficial for teachers, who cover similar topics, to collaborate. Teachers should also learn from their students, which is a rewarding aspect of teaching. A question from a student may reveal to the teacher that a presentation may have been inadequate and in need of revision. Work completed by the students, either submitted during the term or written during the final examination, can reveal innovative and more efficient methods of solving assigned problems.

The knowledge teachers accumulate can be helpful in continually updating their lecture material. Teachers should periodically take the time to rewrite lectures, revise, improve and update the material being presented, to ensure that they are using examples and case studies with present-day relevance.

Patience is appropriate at all times, but in teaching, a student seeing the subject material for the first time, might find it to be a source of frustration and impatience. As a teacher, one should consider the consequences of an impatient offhand response that would destroy the very purpose of the relationship.

An important point for teachers to keep in mind is "seeing is believing." Whenever possible, visual aids should be incorporated into lectures to increase student interest, attention and understanding. These aids are useful in the courses for I teach, where motions of mechanical systems must be readily understood. Visual aids should complement the theoretical material being presented, and excite students the first time that a topic is presented.

In recent years, many new technologies have become available for use as innovative aids in presenting lecture material. Teachers must search for and be open to accepting these new technologies by actively participating in conferences and workshops on teaching. Such aids, which are in common use today include computer animations, a document camera along with a video projector to illustrate physical models; also, using video clips of systems that are too large to transport to a classroom.

One must be careful to present visual aids in a calm manner. It is essential that teachers become sufficiently familiar with the aids being used to enable their smooth integration. Regardless of the amount of practice, there is always a danger that something might go wrong. A teacher should be prepared for such occurrences with a backup plan.

Regardless of the technology used, it remains vitally important that teachers interact with their students on a personal basis. The amount of interaction with students is limited for large classes. In such instances, teachers should make it a point to attend the tutorials and laboratories of their course on a regular basis, and make themselves available to students during office hours. Personal attendance at such times provides an ideal opportunity for an instructor to interact with students one on one. Students tend to learn more readily from an approachable teacher. Communicating individually with students outside the classroom provides an excellent opportunity for teachers to understand the background knowledge of their students, and to consider using that knowledge as a basis for improving future presentations.

Students should be encouraged to be active participants in lectures. Even for large classes, they should at least be compelled to take notes rather than just listening and watching. Simply presenting a series of PowerPoint slides could be detrimental to a presentation. Students would become bored watching the slides, and may end up not even bothering to attend such lectures. One of the techniques I have found to be effective is, prior to the start of a lecture, distributing partially completed scaled diagrams of the mechanical system to be discussed. Then, during the lecture, the students can follow along by writing notes and adding annotations. Following this procedure, students not only leave the lecture with a properly scaled diagram, but they have also participated in its completion.

Teachers should strive to give assignments which require some form of communication with others, whether written or oral. Team work is extremely beneficial, and if at all possible in some way should be included. Teachers should go beyond the minimum requirements, by participating and promoting student activities, including extracurricular projects and competitions. I found that in the courses I teach, having students participate in design competitions, either within the university or with other institutions, is very beneficial and generates substantial student enthusiasm.

January 2006