

Reflection on Science Teaching
ESCI 5470/7470
Spring 2008
Mondays, 5:30-7:30, Aderhold Room 220

“The responsibility of science education in the scheme of our country’s future is paramount, for actual survival may be at stake.” Orval Peterson, 1959

Instructor

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Important Note: This syllabus is tentative. If needed, it will be modified.

Course Materials: You will need the GPS for the course(s) you are teaching and a copy of the 2003 NSTA Standards for science teaching preparation. I’ll provide you with the NSTA standards, but for the GPS you are on your own.

Academic Honesty:

In accordance with the **University Honor Code and Academic Honesty Policy**, academic work must meet the standards contained in *A Culture of Honesty*. Each student is responsible to inform themselves about those standards before performing any academic work. Details are available at <http://www.uga.edu/ovpi/honesty/acadhon.htm>

Course Description:

The primary purpose of this course is to facilitate your development as a PROFESSIONAL teacher. When this experience is over, you will be a professional teacher, no longer a student-teacher. Please note I believe the best teachers are always students of their practice. However, you will soon have the same demands placed on you as veteran teachers, and will not be able to claim “student-teacher” status anymore! In this course, we will work to ease this transition from college student to full fledge science teacher.

So, what does it mean to be a professional science teacher? A lot! It means much more than just working full-time in a school. We will work on defining and striving for this professional status in our weekly meetings. This work will include extensive critical reflection on your teaching, lesson design and revision to bring your instructional practice in line with your teaching philosophy. We (meaning not just the professor, but you too!) will try to foster a collaborative learning environment such that teachers are learning from each other through reflection, idea and lesson sharing, and a case-study approach.

Course Objectives:

By the end of this course, participating teachers should be able to:

1. Demonstrate skills as a reflective practitioner. This involves at least the following:
 - a. Recalling and describing specific experiences in your teaching in a critical manner (so you aren't just asking "what?" "But why?" "And how?"). These experiences can be those that go particularly well or those that tank! Good teachers consider each of these critically.
 - b. Experimenting with solutions to problems of practice and examining the consequences and implications of those solutions.
 - c. Reflecting actively not just on what you say, but what you do not say or do that may have implication in your students' progress.
2. Demonstrate a variety of effective teaching strategies and align those to the NSTA standards for Teacher prep in a teaching portfolio. These "strategies" will include at least the following:
 - a. Providing learning activities for a diverse student population.
 - b. Providing for inquiry-based instruction.
 - c. Providing multiple forms of assessment.
 - d. Incorporating the lab and outdoor learning environments in science teaching.

Course Expectations:

1. Active participation in all class activities.
2. Share resources, ideas and insights with class members.
3. Attend ALL class sessions. **I reserve the right to lower your grade by a letter if absenteeism becomes an issue. Three or more absences can lead to administrative withdrawal. 2 tardies will = 1 absence.**
4. Read, discuss, and reflect on all assignments.
5. In general, demonstrate that you are committed to bettering yourself as a teacher and using the time and resources in this course to help you reach that end.
6. Finally, communicate your ideas to me about how I can help this course accomplish the goal stated in number 5. I welcome constructive criticism.
7. Let's do supper! Remind me on night one, to start a sign up. Since we've all been teaching all day, we're going to be hungry.

Assignments and Grade Apportionment:

Class Participation and Attendance (30 points)

- Essentially this will be a two points a day all or nothing area. Everyone gets **ONE FREE MISS**. Naturally, if you are in danger of losing points, I will let you know. To get your point you have to here physically and mentally!

Critical Video Case (30 points) – This is due November 14.

- What better way to reflect than to watch yourself teach? During our second week of class you will each be outfitted with a video camera. You will use this camera to capture video, and then later upload it to the video analysis tool (VAT). The VAT is a really neat innovation, in that it allows you to study your teaching through various lenses or rubrics. You can refine clips, swap with each other, and indicate areas of your videos that provide evidence for certain attributes of your teaching (great use of questioning, lab safety practice, etc).
- In this assignment, you will choose a video segment that you believe BEST demonstrates your core teaching identity (we'll talk about what this is at our first meeting). That clip will be viewed by you, a peer in the class, me, and 2 other educational professionals—likely folks from leadership or special education. Specifically, folks will view this and comment on the teaching identity they see in the clips. You will take the commentary from all these individuals, and create a narrative reflection describing how this layered commentary changes your views of your own teaching. This is designed to help you develop metacognitive awareness of your teaching.

Video Presentation (20 points)—Due on October 31 or November 7.

- You will make a short (30 minutes) video presentation during class. You should show video, and then facilitate a meaningful discussion following the clip. In other words, you are leading professional development for 30 minutes. We'll sign up for these slots at our second meeting.

Cool Lesson Share (20 points)—Due on September 26 or October 3.

- Share a cool idea or lesson. This can be pretty informal. Your peers and I will evaluate you. Basically, you need to share a lesson such that your colleagues could take it and use it the next day. We'll sign up for time slots the 2nd week of class.