COURSE SYLLABUS

Seminar: Current Topics in Scientific Teaching
STO 692, 1 credit
[DRAFT]

Meeting times: TBA [1.5 hours per week]
Meeting place: TBA
Prerequisites: Graduate standing in a science or engineering; STO 666 (Scientific Teaching) or STO 6XX (Communicating Science) recommended

Instructor:
Dr. Christa Mulder, cpmulder@alaska.edu, Irving I rm 212, 474-5493.
Office hours: M & Wed 10:30-11:30 or by appointment

Course overview:
This graduate seminar course explores current trends in science education at the college and college levels. Topics may include diversity, technology, active learning, and others. The course will rely on readings from the primary literature (research articles) and discussion.

This course is designed for students enrolled in the Graduate Certificate in Science Teaching and Outreach, and it is therefore expected that students will either be actively engaged in teaching science at some level, or plan to do so in the near future. Therefore, topics selected will be driven in part by students' interests.

Course goals:
Most scientists are very familiar with the scientific literature in their own field of research endeavor, but few are aware of the large literature that exists on best practices in teaching science. Yet many of the questions that science teachers face daily (e.g., "Should I give out notes prior to class?" "What should the composition of project groups be based on?") have been addressed by science education. The primary goal of this course is to familiarize students with this literature so that they will be able to take advantage of information produced by studies in science education to improve their own teaching. A second goal is

expected to read additional articles to gain a broader understanding of the topic. He or she will give a short presentation (5-10 minutes) introducing the topic and its context, and then lead the group discussion. He or she is expected to come prepared with a set of questions to stimulate discussion, and actively encourage participation by all group members.

Grading

Grading is pass/fail (a pass requires a score of 80%). See rubrics at the end of this document for more details.

Item	Portion of Final Grade
Active participation in and preparation for weekly discussions	50%
Student presentation	50%

Attendance Policy

Since this course is based on class discussion, I expect you to attend EVERY class. If you cannot

Rubric for participation in discussion. Each higher level includes all of the activities from lower level

Score	Level of participation
0	The student is absent
3	The student is present, but does not appear to have read the papers
5	The student is present and has read the papers but does not actively participate beyond making one or two comments or answering a question
6-7	The student has read the papers and makes multiple contributions to the discussion. He or she is able to answer questions posed by the discussion leader and participates in, for example, explaining tables or figures.
8	The student has read and thought about the papers and makes multiple contributions to the discussion. He or she contributes actively by, for example, pro-10(f)3(o)-10(r)3(e)4(x