- # Course Syllabus PHYS 605

Prerequisites: Graduate Standing in a Science Discipline or permission of instructor

Materials Needed:

Required Text:	Five Easy Lessons, Author: R. D. Knight, Addison Wesley, 2004
	A New TA's Guide to Teaching Introductory: Physics, Author: K.A. Harper, 2008
Supplemental journal articles	DeHaan, R. L., 2005*: The Impending Revolution in Undergraduate Science Education*, Journal of Science Education and Technology, Vol. 14, No. 2, 253-269. Halloun, I. A, and Hestenes, D. 1985*: The initial knowledge state of college physics students*, American Journal of Physics, 53, 11, 1043-1048. Luft, J.A., Kurdziel, J. P., Roehrig, G. H., and J. Turner, *2004: Growing a Garden Without Water: Graduate Teaching Assistants in Introductory Science Laboratories at a Doctoral/Research University*, Journal of Research in Science Teaching, Vol. 41, No. 3, 211-233.

Lectures: Note room : Tentitively M 2-4 in Room 122 Reich. Building. If you miss the first class, check back here for any changes in schedule.

Assignments: will include reading excerpts from science education text and science education research journal articles as preparation for group discussion and presentation of classroom and lab teaching strategies. Students will also give presentations on topics relevant to course content, which will include preparation of sample work such as quizzes or active learning materials. Each student will give approximately 3 presentations, with supporting sample work, per semester.

Grading: The course will be graded on a pass/fail basis and the grade will consist of the following components (though we reserve the right to make grade adjustments based on performance trends):

Participation 50 %
Presentations 40 %
Sample work 10 %

We will grade on a curve, above 65% will be a passing grade.

Attendance:
Since 50% of the grade for this course is determined by participation, attendance of all lectures and practicum meetings is mandatory. If a student must miss class, they should notify the

instructors beforehand or as soon as possible. For approved absences, missed participation work will be made up at the instructorsâ€™ discretion. If a student is absent on a day they are set to present, the presentation will be done at a later class meeting.

Contacting Me: I have office hours as listed above. You can drop by at other times if I'm not busy, or make an appointment. I am (almost) *never* available before class.

Special Needs: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. We will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities.

Plagiarism etc: Plagiarism and cheating are matters of serious concern for students and academic institutions. This is true in this class as well. The UAF Honor Code (or Student Code of Conduct) defines academic standards expected at the University of Alaska Fairbanks which will be followed in this class. (Taken from the UAF plagiarism web site, which has many links with good information about this topic)

Complaints and Concerns: You are always welcome to talk to me about anything, however, if you have a non-subject matter question or concern that cannot be resolved by me, contact the department chair, Dr. Szuberla, Physics Department Office, room 102 NSCI.

Tentetive course schedule:

Week Topic
1 Teaching Pedagogy
2 Preparation
3 Teaching Pedagogy
4 Time Management
5 Teaching Pedagogy
6 Student/classroom management
7 Student/classroom management
8 Lab preparation and demo development
9 Lab preparation and demo development
10 Learning assessment
11 Cross cultural issues
12 Working with faculty, Personal/Professional balance
13 Teaching Pedagogy, Learning assessment
14 Lessons learned during the semester of teaching