

Chemistry 623 - College Chemistry Teaching

Spring, 2007

Location: 143 Hughes, 10-10:50 MW

2 Credit Hours

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Course Objectives/Rationale:

The objective of this course is to facilitate the transition from experienced graduate teaching assistant to a novice assistant professor for graduate students who are considering pursuing academic careers.

General Description:

We will explore practices appropriate for teaching chemistry at the college level. The course will have two broad categories. We will consider the “mechanical” aspects of college teaching and we will explore student learning. The text for the course will be the primary resource for this latter category.

We will consider different instructional strategies including lecture, cooperative learning, classroom demonstrations, computer technology, etc. We will survey different teaching resources such as the *Journal of Chemical Education*, *Journal of College Science Teaching* *JCE: Software*, *ChemSource*, etc.

Textbooks:

The Chemistry Classroom, Formulas for Successful Teaching, Herron, J. D., Oxford University Press (1996) *ISBN 0841232997*.

And Gladly Teach (For a complimentary copy, of contact the ACS Office of Graduate Education, GradEd@acs.org or the ACS Office of Society Services by phone at 800-227-5558 or 202-872-4600, or by e-mail at help@acs.org.)

Good Start: A Guidebook for New Faculty in Liberal Arts Colleges, Gibson, Gerald W., Anker Publishing Company (1992) *ISBN 0-9627042-3-7* (Optional)

Any current First-Year Chemistry textbook.

Readings:

Selected articles from a variety of sources, including the *Journal of Chemical Education* and the *Journal of College Science Teaching*

Other Resources:

JCE: Software materials, commercial software, WWW resources.

Course Requirements and Evaluation:

The evaluation in this course will consist of the xxx components that follow. *While the personal opinion of a teacher can be “the truth” in a classroom, in this course I will expect you to clearly distinguish between your personal opinions and documented research as you propose a plan or defend a plan.*

- ▶ **Class Discussion and Participation - xxx points.** Everyone will be expected to actively participate by completing the assigned readings and actively contributing to the class discussion.
- ▶ **Weekly Assignments - xxx points.** X assignments will be turned in during the semester. These assignments and the date due are shown on the accompanying schedule. The details of each assignment will be distributed at least one class before the assignment is due. Each assignment can earn up to Y points.
- ▶ Clicker question bank
- ▶ POGIL lesson review
- ▶ **Microteaching Lesson - xxx points.** Each of you will develop a 15 minute lesson on a first-year chemistry topic. You are encouraged to include appropriate demonstrations, interactive components, etc. The lesson will be presented to the group, videotaped, and assessed by your peers using the SII (strengths, improvements, insights) model.
- ▶ **Multimedia Lesson - xxx points.** Each of you will develop a 15 minute lesson using multimedia technology (computer graphics, simulations, modeling, videotape, videodisc, World Wide Web, etc.) to teach a first-year chemistry topic. The lesson will be presented to the group and critiqued. A list of resources available in the Department will be provided.
- ▶ **Final Exam - xxx points.** A take-home final exam will be administered. It will be distributed at the last class meeting and will be due at 7:45 a.m. on May 3, 2007

The Plus/Minus grading scale will be used.

97-100	A+	87-89	B+	77-79	C+	67-69	D+		
93-96	A	83-86	B	73-76	C	63-66	D	<60	F
90-92	A-	80-82	B-	70-72	C-	60-62	D-		