**CHEM-692: Graduate Chemistry Seminar**
**Course Syllabus**

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| **Course:** | Graduate Chemistry Seminar (CHEM-692); 1 credit |
| **Prerequisites:** | Currently enrollment in a UAF doctoral or master's program in chemistry |
| **Location:** | Reichardt 201 |
| **Meeting Time:** | T, R 4:00 – 5:00 pm |
| **Blackboard link:** | http://classes.uaf.edu |
| | All information and supporting documents for this course will be maintained on the UAF Blackboard website. It is therefore important that you check the site regularly for updates. Moreover, time-sensitive information and reminders will occasionally be sent to all students enrolled in the course, so it is important that you **verify that your email address is correct**. |
| **Instructor:** | Dr. Brian Edmonds |
| **Faculty Mentors:** | All Chemistry and Biochemistry faculty members can serve as mentors. A list of potential mentors will be provided. |
| **Office hours:** | MWF 10:30 AM – 12:00 PM (or by appointment) |
| **Office:** | Murie Building, Room 113E |
| **Research Lab:** | Murie Building, Room 110 |
| **Phone:** | 907-474-6527 |
| **E-mail:** | bwedmonds@alaska.edu |

**Preferred contact method:** e-mail

**Recommended Reference Text**

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| Title: | *The Craft of Scientific Presentations* |
| Author: | Alley, Michael |
| Publisher: | Springer-Verlag, New York |
| ISBN: | 0387955550 |
| Publication Date: | 2008 |

**Course Description:**

This is a course in oral communication for graduate students in chemistry. The course will provide students with experience in the presentation of scientific data with an emphasis on defense of data and interpretation. Presentations may be based on either peer-reviewed journal publications or original research conducted (ideally by the student) in the student's home laboratory. The course meets two hours per week together with undergraduates enrolled in Chem-481 and Chem-482. The Tuesday session will be open to the public and feature a presentation given by an undergraduate, graduate student, faculty, or invited speaker. The Thursday session will be closed (enrolled students only). Students are required to give one 40-minute oral presentation during the semester on a date scheduled by the instructor, attend all other public seminars (T), and participate in presentations and critiques during the Thursday sessions.

**Course Goals:**

Students who successfully complete this course will have an understanding of the principles of oral communication in science including accepted presentation techniques, listening skills, critical analysis of scientific research, participation in scientific discussions, and introduction of speakers. In addition,

Chem-692 students are expected to successfully defend interpretations of the research results that they present.

**Learning Outcomes:**

1. Demonstrate the ability to present scientific material during a 40-minute research presentation and two short presentations.
2. Demonstrate the ability to critically evaluate data presented, and to answer questions posed by the audience at the end of the presentation.
3. Demonstrate the ability to defend research approaches and conclusions by providing answers to questions on experimental rationale and alternative interpretations of the data.
4. Demonstrate the ability to listen to a research presentation and formulate thoughtful questions pertaining to the material presented.
5. Actively participate in a discussion of the strengths and weaknesses of a speaker's presentation, and the scientific merit of the material presented.
6. Provide clear written critiques of research and/or journal article presentations with respect to presentation style and content.

**Instructional Methods:**

Students are required to attend all class sessions and participate in all class activities. In addition, Chem-692 students are required to prepare and deliver their own seminar and give two ~10 minute practice presentations, which will be evaluated. Note that the student must **submit an abstract (with graphic) of their seminar topic one week prior to the seminar**. The abstract will be used to create a flier to advertise the seminar. Students are expected to listen to all seminar presentations (Tuesdays), and to ask relevant/thoughtful questions during the question and answer period following each presentation. Written critiques of all presentations are required, and students are expected to participate in discussions of these critiques during the Thursday sessions.

Chem-692 provides an opportunity to present research in a format similar to that expected at a professional meeting. The Thursday session will be used to extend the questioning and offer constructive suggestions for improvement of presentations skills. Students are encouraged to present their own original research if possible; however, if that is not possible, other data from the student's laboratory may be presented. As a last option, data from at least two peer-reviewed articles relevant to the student's research focus may be presented. Students are expected to critically analyze the approaches, results, and interpretations of the research they choose to present. Students are also expected to successfully field questions challenging any aspect of the study.

Students will utilize a mentor to facilitate development of their presentation. It is expected that the mentor will be the student's thesis advisor; however, exceptions are allowed with instructor approval. Students should invite their committee members to the public presentation, particularly if they are presenting their own research. Note that a draft PowerPoint presentation is must be submitted to the instructor by **September 29**.

A second, major component of the course is participation in a critical discussion of your presentation. This will likely involve questions regarding the content of the seminar, and constructive feedback (criticism) of other aspects of the presentation such as style, organization, and use of multimedia. Acceptance of criticism is an essential part of becoming a better scientist and developing effective presentation skills. Students are expected to conduct themselves in a professional manner during these discussions.

**Mentor Responsibilities:**

The student's major advisor is responsible for assisting the student in preparing for the seminar. It is expected that the mentor will listen to the presentation at least once and provide suggestions for improvement. Students are not required to submit a signed form from their advisor approving the topic; however, a "Mentor Agreement" form that includes the research topic and name of the Major Advisor

should be submitted (without the Major Advisor's signature) by the due date indicated on the form (**September 13**). A second, "Ready to Present" form is intended to verify that the student is prepared to give the seminar. This form should be filled out, signed by the student's major advisor, and submitted to the instructor no later than one week prior to the scheduled date of the seminar.

**Course Policies:**

**Attendance:**

Students are expected to attend class and actively participate. Attendance will be assessed using traditional methods throughout the course. Exceptions may occasionally be made to accommodate graduate student research activities.

**Exams:**

There are no traditional examinations in this course. Grades will be based on attendance, the quality of the work, and timely completion of the requirements (see Grading, below).

**Plagiarism Policy:**

Plagiarism is defined as the use of another's intellectual property without correct citation of the author. Intellectual property includes electronic, spoken, and print media. Students are expected to cite all sources used in oral and written presentations. Citations should be referenced according the Columbia Guide to Style (see: http://www.columbia.edu/cu/cup/cgos/idx_basic.html for more information). Cases of plagiarism will be dealt with severely. The minimum penalty is a grade of 0 for the assignment in question, and cases may be referred to the Department Chair and/or Dean for further action.

**Grading:**

It is expected that students will complete all of the Learning Objectives listed above.

Grading is A - F. Grades will be assigned based on performance on the required activities listed below. Each course requirement is assigned a point value and students will earn all or a portion of these points depending on the quality of the work. Oral presentations will be graded in accordance with the rubric distributed in class.

**Required Activities and Scoring**

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| "Ready to Present" signed by mentor and returned on time | 5 |
| PowerPoint presentation completed on time (see schedule) | 5 |
| Abstract (submitted one week prior to seminar) | 5 |
| Seminar Grade | 45 |
| Short (~ 10 minute) presentations | 15 |
| Attendance and Critiques | 25 |
| **Total** | **100** |

**Letter Grades (points)**

A: 90 – 100

B: 80 – 89

C: 70 – 79

D: 60 – 69

F: < 60

**Support Services:**

Support can be obtained through the University of Alaska Library system, online resources, and the instructor. Additional services are available through Student Support Services (http://www.uaf.edu/sssp/) at UAF.

**Speaking Lab:** Students are strongly encouraged to make use of the Speaking Lab located in the Department of Communication Speaking Center (Gruening, Room 507). The Speaking Center is a student-oriented service provided to facilitate the preparation of public presentations. Students can obtain expert assistance in all aspects of public speaking, including assistance with organization, refinement, and delivery of their presentation. It is possible to record and watch a practice presentation together with a Speaking Center coach, who can offer constructive feedback. The Speaking Center is open to all students enrolled in an oral intensive course.

http://www.uaf.edu/comm/

**Speaking Center Hours of Operation**

See www.uaf.edu/speak for updated information.

**Disabilities Services:**

We will work with the Office of Disabilities Services (http://www.uaf.edu/disability/; 203 WHIT, 474-7043) to provide accommodations for students with disabilities. If you have a disability and require special assistance, please contact the instructor within the first week of the course so that arrangements can be made without delay.