

CHE 400-001: Chemistry Seminar Fall 2007

Instructor: Dr. Heather Bullen

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Office Hours: I have an open door policy. Please stop by if you ever have questions, or contact me if you want to set up an appointment. My formal office hours are: M, W: 9:30-10:30 am; W: 2-3 pm; R: 10-11 am

Texts: There are no texts required for this course.

Learning Outcomes: This course's student learning outcomes fulfill the following programmatic goals of the Department of Chemistry.

At the end of this course students will be able to:

- *Apply effective strategies to understand and interpret scientific journal articles*
- *Utilize primary electronic search methods to find chemical information*
- *Implement various technologies in presenting chemical information*
- *Effectively communicate scientific information in the form of a seminar*
- *Prepare clear, succinct abstracts for a seminar*
- *Critically evaluate scientific literature and data*

Course Design:

Class Times: 12:15 pm -1:30 pm, Thursday SC 402 on seminar days
12:30 - 1:30 pm, Thursday SC 402 on non-seminar days
12:00 -1:00 pm Tuesday (as needed) SC 402

We will meet almost every week of the semester. The first few weeks will be devoted to learning how to search data bases of chemical information to survey the scientific literature, use Power Point and other software to prepare a presentation, give an effective technical presentation, and write a clear abstract. Homework assignments (to be graded) will be given to ensure student understanding of these key components to giving an effective seminar. Students will use the skills they learn during the course to prepare a seminar on a chosen paper, related to a topic of their interest.

In addition to attendance in class on Thursdays, students will be expected to attend class on Tuesdays for seminar presentations (at the end of the semester). Additionally students must attend and evaluate a 2 outside scientific seminars *before their own seminars*.

Attendance: Regular attendance is expected and tardiness is not tolerated.

Grading Policy: Your final letter grade will be assigned on the basis of the following:

Grade Distribution:		Grade Scale
Homework:	75 points	540 - 600 points = A
Attendance:	60 points	480 - 539 points = B
Topic choice:	25 points	420 - 479 points = C
Abstract:	70 points	360 - 419 points = D
Introduction of Speaker	15 points	0 - 359 points = F
Dress Rehearsal Seminar:	55 points	
Seminar:	300 points	
Total	600 points	

Homework: You will be given assignments that reinforce ideas presented in class. These assignments will fall early in the semester both to help you learn the ideas presented and to *coerce* you into researching your topic early. In addition these assignments are designed to keep you motivated and to stay on track for your deadline. **Late homework will not be accepted.**

Attendance:

(1) Attend 2 area scientific seminars, 20 points.

Attendance at other seminars gives the student a better understanding of what works and of what doesn't work in a seminar. To receive credit, you must fill in an "Outside Seminar Student Evaluation Form." Each evaluation from a seminar that you attend is worth a possible 10 points. *Note: You must obtain a faculty's signature (or speaker's signature, if no faculty are present) to verify your presence at the seminar to receive full credit. **This is NOT optional. To receive full credit you should attend seminars prior to your seminar date.***

(2) Attend all mandatory classes of CHE 400 and evaluate other students' talks, 40 points. **At each student seminar, you will be expected to write a full evaluation and to ask at least one question in order to receive full credit.**

Topic Choice Deadline: The deadline date for choosing a seminar paper is **SEPTEMBER 27**. This deadline is SOLID. Turning in your decision even one day late will result in a loss of all 25 points. This deadline is so set so that you can begin researching your paper very early, as your seminar deadline will sneak up on you. *Note: We will spend some time discussing potential seminar topics and faculty advisors who would be good for those topics. Your chosen faculty advisor(s) can help you in narrowing your search, understanding the literature, etc.* On or before this deadline, you will turn in the selected paper with your topic and a short (one paragraph) justification (reason) you chose this topic. This paper must be signed by your chosen advisor.

Abstract: You will prepare an abstract of your seminar presentation, with appropriate figures and references. Abstracts are due 1 week prior to your seminar date. They should be 1) approved by instructor and 2) submitted via email to all faculty by the noted deadline, along with a copy of your article.

Speaker Introduction: Part of giving and attending seminars is presenting a seminar speaker. You will have the opportunity to introduce your fellow classmates' seminars.

Dress Rehearsal: Each student is required to give a practice talk of their 25 minute seminar to the instructor well before the real seminar is given to the department. Practicing an important presentation in front of colleagues is a commonly accepted way for scientists to correct problems in a seminar before a general audience is exposed to it. **Please note that doing a practice seminar is *not* optional and that SIGNIFICANT points will be deducted if the practice is less than one week before the real seminar.**

Seminar: There are several requirements for your seminar which must be followed to obtain a high score.

- (1) Your seminar must present information on a paper of *current* chemical interest. It can be in any area of CHEMISTRY, but the paper must be approved
- (2) Use of power point is mandatory.
- (3) Dress appropriately for your presentation. A professional dress is required.
- (4) The seminar must be rehearsed to the extent that it flows smoothly. It SHOULD NOT BE MEMORIZED OR READ. Ideally, you will use your power point slides to guide you through the talk.
- (5) At the conclusion of your talk, you must be prepared to answer questions on your topic. Questions are often related tangentially to your talk, so extra reading on your topic and related areas is necessary.
- (6) Your talk must last 25 ± 3 minutes. FOR EVERY MINUTES over or under you will receive 10 points deduction. **The official time of talk will be determined by the instructor.**

The grade for your seminar will take into account your presentation skills, the scientific content, the use of visual aids, and your ability to answer questions. All faculty present will turn in an evaluation of your seminar. These evaluations will be compiled for you and used to compute a grade for your presentation. Note that *the seminar grade represents 50% of your grade for the course*. Spend your time accordingly.

Note: Failure to complete any aspect (i.e. homework, attendance, dress rehearsal etc.) of the course will result in a non passing grade for the class.

Seminar Information

You will present a seminar (25 ± 3 minutes) on a current paper 2003 or newer. You will become an expert on this paper, understanding the contents, background, and ramifications of the results. The goal of the seminar is to relate this information to your audience.

Other Important items:

- The paper should NOT 1) be related to a current or past research project or 2) a paper used for another class. However the paper should be on a topic you are interested in.
- Seminar must include original artwork (e.g. homemade graphics to explain a concept, or extensive ChemDraw of chemical structures)
- Notes may not be used in your presentation
- References: You will need to find a minimum of 10 other papers that will help in the presentation of the paper you have selected. Of these papers 50 % must be sources that are not referenced in the paper you will be presenting.

Papers can be selected from the list of Journals below:

Chemistry Multidisciplinary

Journal of the American Chemical Society

Inorganic Chemistry

Inorganic Chemistry

Organometallics

Materials Science and Nanotechnology

Chemistry of Materials

Langmuir

Nano Letters (note: the papers in this journal will be too short for a seminar, but will give you an idea of "hot" topics in nanotechnology)

Analytical and Physical Chemistry

Analytical Chemistry

Journal of Physical Chemistry A

Journal of Physical Chemistry B

Organic Chemistry

The Journal of Organic Chemistry

Macromolecules

Biochemistry

Biochemistry

The Journal of Biological Chemistry

Chemical Biology (New ACS Journal)

At times there may be a subject area of interest, where the article would be in a more specialized journal. If you find a paper in a journal not listed above this paper must be approved by not only the instructor, but an additional faculty member as well.

CHE 400: Seminar Schedule Fall 2007

12:25-1:00 pm Tuesday
12:15-1:30 pm Thursday

Date	Speaker 1	Speaker 2	Abstract Deadline
Thursday October 18 th	1)	2)	10/11
Tuesday October 23 rd	3)	X	10/17
Thursday October 25 th	4)	5)	10/18
Tuesday October 30 th	6)	X	10/24
Thursday November 1 st	7)	8)	10/25
Tuesday November 6 th	9)	X	10/30
Thursday November 8 th	10)	11)	11/1
Tuesday November 13 th	12)	X	11/6
Thursday November 15 th	13)	14)	11/8
Tuesday November 20 th	15)	X	11/13
Tuesday November 27 th	16)	X	11/20
Thursday November 29 th	17)	18)	11/20
Tuesday December 4 th	19)	X	11/27
Thursday December 6 th	20)	21)	

Policies of the Department of Chemistry at Northern Kentucky University

- All items on syllabi are subject to change by the instructor.
- Students are responsible for reading and understanding all items on the syllabi. Any items not understood must be brought to the attention of the instructor within the first two weeks of class.
- The work you will do in any course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.
- Cheating will not be tolerated. In accordance with the Code of Student Rights and Responsibilities, faculty members have the right to determine actions to be taken when a student is caught cheating.
- Faculty members reserve the right to dismiss or to have removed a disruptive student from their classrooms.
- Students with disabilities who require accommodations (Academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. Please contact the Disability Service Office immediately in the University Center, Suite 320 or call 859/572/6373 for more information. Verification of your disability is required in the Disability Services Office for you to receive reasonable academic accommodations.

Department of Chemistry Student Learning Outcomes

1. Explain the major concepts and experimental findings in the chemical sciences.
2. Demonstrate the ability to carry out experimental protocols using modern instrumentation and methods.
3. Utilize critical thinking skills to apply concept knowledge and adapt experimental techniques to: a) form and test hypotheses and b) solve scientific problems
4. Compile, critically evaluate, and interpret scientific information and data.
5. Effectively communicate scientific information through written and oral means.
6. Apply effective group strategies to solve scientific problems.
7. Evaluate the relationships between chemistry and mathematics, physics, biology, and other disciplines and between chemistry and society.
8. Apply computer technology and other technologies in the comprehension, interpretation, and presentation of the chemical sciences.