Fayetteville State University  
College of Arts and Sciences  
Department of Chemistry and Physics  
CHEM 410-01 Chemistry Seminar  
Fall Semester/Year 2011

I. Locator Information:

Instructor: Shubo Han, Ph. D  
Office Location: Lyons 326  
Office Phone: 910-672-1303  
Email address: shan@uncfsu.edu

Course # and Name: CHEM 410-01 Chemistry Seminar  
Semester Credit Hours: 1  
Total Contact Hours for Class: 1  
Day and Time Class Meets: R4.00PM-4:50PM

FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail. Rules and regulations governing the use of FSU email may be found at http://www.uncfsu.edu/PDFs/EmailPolicyFinal.pdf

How the above policy applies to this class is as follows: I will only accept work and reply to correspondence that was sent from your FSU email account. This is designed to protect you in two ways:

- Inquiries about grades and the like are kept confidential, because your FSU email account is given to you alone. Anybody can get an email account like "xyz@aol.com” and claim to be you.
- FSU email has your name on it as a username, making it easier for me to keep track of your correspondence—and any work you turn in by email.

I. COURSE DESCRIPTION

A detailed examination of the chemical literature on a relatively narrow topic for presentation of written and oral reports. Prerequisites: CHEM 210, CHEM 222, CHEM 324 or CHEM 314

II. DISABLED STUDENT SERVICES

In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ADA) of 1990, if you have a disability or think you have a disability, please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910 672-1203.

III. TEXTBOOK

None required. The ACS Style Guide is recommended.
IV. STUDENT LEARNING OUTCOMES

This course is designed to fulfill the following FSU core student outcomes:

<table>
<thead>
<tr>
<th>FSU outcome #</th>
<th>FSU core student outcome. Students will...</th>
<th>Assessment method in this class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.02</td>
<td>Analyze an assigned audience; offer a appropriate, clearly articulated and developed message for audience and purpose, considering constraints.</td>
<td>Written paper</td>
</tr>
<tr>
<td>1.03</td>
<td>Select appropriate communication channels (speech, email, report, phone call, brochure, etc.). Choose and implement appropriate technologies (PPT, web, handouts, posterboard displays, props, etc.). Use technology to enhance and reinforce rather than overshadow the content communicated.</td>
<td>Oral presentation</td>
</tr>
<tr>
<td>1.04</td>
<td>Choose an organizational strategy to assemble their material into a clear beginning, middle and end, the content/duration/style of which sections are adapted to purpose and audience</td>
<td>Oral presentation</td>
</tr>
<tr>
<td>1.08</td>
<td>Implement strategies to manage apprehension before public speaking</td>
<td>Oral presentation</td>
</tr>
<tr>
<td>1.09</td>
<td>Implement vocal and physical behaviors to support communication, and interject appropriate, spontaneous comments based on audience response, during public speaking</td>
<td>Oral presentation</td>
</tr>
<tr>
<td>2a.02</td>
<td>Identify correctly the conclusion and supporting reasons and evidence in written and oral passages</td>
<td>Written paper</td>
</tr>
<tr>
<td>2a.08</td>
<td>Develop original conclusions or hypotheses appropriate to their major using various forms of evidence drawn from multiple sources</td>
<td>Oral presentation</td>
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</tbody>
</table>

V. COURSE REQUIREMENTS AND EVALUATION CRITERIA

The progress of each student will be evaluated by means of three hour examinations and a final examination, as well as quizzes and homework assignments.

1) Grading scale:

The final letter grade assigned to the student will be based upon the following numerical equivalencies.

- A = 90% – 100%
- B = 80% – 89%
- C = 70% – 79%
- D = 60% – 69%
- F = 59% or less (failure)

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1 The FSU core student outcomes are in a document that was derived from the Six Core Review Task Force Reports and
- Submitted by the Editorial Reconciliation Committee, Spring 2007
- Approved by the University College Advisory Board, April 3, 2007
- Approved by the Faculty Senate, November 15, 2007
- Approved by Provost and Chancellor, December 2007
2) Attendance:
Please show up on time; a class this small requires everybody's input and participation. If there is any situation that will affect your attendance, please let me know as soon as it comes to your attention.

3) Grade distribution:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Grade Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>25</td>
</tr>
<tr>
<td>Topic summary</td>
<td>10</td>
</tr>
<tr>
<td>Paper review</td>
<td>10</td>
</tr>
<tr>
<td>Literature report</td>
<td>10</td>
</tr>
<tr>
<td>Paper presentation</td>
<td>20</td>
</tr>
<tr>
<td>Final talk</td>
<td>25</td>
</tr>
</tbody>
</table>

A detailed rubric for how the talk will be graded will be provided. Basically, the points of what I am looking for are as follows:

**(1) Participation:** Your participation grade is largely based on your attendance and active engagement with the seminars. This engagement will be measured three ways: 1) the thorough completion of a seminar evaluation form; 2) writing at least one relevant scientific question on your seminar evaluation form for every seminar; and 3) orally asking four scientific questions to the speakers during the term. In addition, each student will introduce one of their fellow students before they present their seminar.

**(2) Paper Selection:** The topic for your seminar will be a chemistry/biochemistry research full paper (no communications, letters or notes) published in 2006 or later. The paper should NOT 1) be related to your current or past research project(s) or 2) be previously used by you in another class. However, the paper should be on a topic of interest to you. You will also 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 / Inorganic / Materials**
- Journal of the American Chemical Society
- Inorganic Chemistry
- Organometallics
- Materials Science and Nanotechnology
- Chemistry of Materials
- Langmuir
- Nano Letters (for reference only, as no full papers are in this journal)
- ACS Nano

**Analytical and Physical Chemistry**
- Analytical Chemistry
- Journal of Physical Chemistry A, B, or C

**Organic Chemistry**
- The Journal of Organic Chemistry
- Macromolecules

**Biochemistry**
- Biochemistry
- The Journal of Biological Chemistry
- Chemical Biology
At times there may be a subject area of interest where the article would be in a more specialized journal, and will be considered on a case by case basis by the instructor.

(3) Oral Presentation:

- The talk needs to be sufficiently advertised and planned so people can attend.
- The topic chosen must be of appropriate breadth for a 20-minute talk; neither too broad nor too narrow.
- The talk and paper need to be well organized, with each part leading to the next in a logical sequence that tells a story.
- The oral delivery needs to be polished and well-rehearsed (not read entirely from note cards!)
- Visual aids must be used appropriately (easy to read, not too plain or too flashy, not too many words).
- The presenter must be comfortable answering questions (there should be some things you know about your topic that you chose not to include in the talk).
- The references chosen must be of sufficient number, with enough of them primary sources, and include current developments in the field.

4) I cannot change the time of the final exam (to be determined). Do not make travel arrangements that conflict with the final exam. Although there will be no final examination as such, we are still required to meet then; so the time can be used for some of your seminars.

5) In case of a campus-wide emergency of an extended nature, such as a hurricane or epidemic, online delivery will be used to the maximum extent possible.

VI. COURSE REQUIREMENTS

The course will comprise two parts: the written paper and the accompanying presentation. Both will have drafts that you do during the course of the semester. Also, I plan on arranging for a class to be given in the library by a reference librarian for you to attend during the regular class hours.

Choose a topic quickly, or one will be assigned to you. The topic may not be that of any research topic you conducted; learning a new topic is part of the course. Please turn in drafts, present practice talks, and turn in the final paper on the assigned deadlines.

The final talk will be presented in a forum to which all faculty are invited. You must advertise this talk ten (10) calendar days in advance in the form of flyers. These flyers must contain:

a) Your name
b) Title of the talk
c) Place, date, and time of the talk
d) Abstract of the talk
e) A representative visual aid (graph, crystal structure, etc.) to catch people’s attention

These flyers should be posted on key locations in the building.

This semester, the new Department of Chemistry and Physics is planning to organize a monthly Seminar Series. Be on the lookout for emails informing you of the seminar times. You are expected to attend the seminars and write a report on them; details of what goes in the report, length, etc. will be made available.
VII. COURSE OUTLINE

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
</tr>
<tr>
<td>2</td>
<td>Topic Selection</td>
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<tr>
<td>3</td>
<td>Departmental Seminar</td>
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<tr>
<td>4</td>
<td>Topic summary</td>
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<tr>
<td>5</td>
<td>Present oral topic summary</td>
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<tr>
<td>6</td>
<td>Paper review</td>
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<tr>
<td>7</td>
<td>10-minute paper presentation</td>
</tr>
<tr>
<td>8</td>
<td>Departmental Seminar</td>
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<tr>
<td>9</td>
<td>10-minute paper presentation</td>
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<tr>
<td>10</td>
<td>10-minute paper presentation</td>
</tr>
<tr>
<td>11</td>
<td>Literature report</td>
</tr>
<tr>
<td>12</td>
<td>Departmental Seminar</td>
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<tr>
<td>13</td>
<td>Presentation</td>
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<tr>
<td>14</td>
<td>Presentation</td>
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<tr>
<td>15</td>
<td>Presentation</td>
</tr>
<tr>
<td>16</td>
<td>Presentation</td>
</tr>
</tbody>
</table>

VIII. TEACHING STRATEGIES

This is a chance for you to research a topic and present it; it is a great way to learn because you not only “own” the material, but you can even give suggestions on further research on the topic. This is a challenging course to teach because it is mainly about the methodology of scholarly research in chemistry in general and making sure you are on track to give a talk and paper.