Napoleon’s Buttons: Molecules That Changed The History of the World

Syllabus

Instructor: Dr. Ronald Nohr
Office: Physics 307
Phone: 303-871-2984

Office Hours: M-W 11:00 to 1:00
T-R 8:00 to 10:00

Course expectations and grading criteria

Reading assignments – should read not later than the day prior to the class day. There ‘may’ be a pop quiz at the beginning of class on the assigned reading (including prior assigned reading).

Writing assignments – we will have several short writing assignments through the quarter (1-2 pages) that will normally be due the next class period. Late submissions will not be tolerated and will be penalized 33% per day including weekends. Emphasis will be placed equally on content, spelling, grammar and format. The final exam will be a 5-10 page group project term paper where the group will do the research together, but each member must write their own original paper (topics TBA).

Attendance - is mandatory (including assigned outside lectures/activities). Your final grade will be reduced down a grade for every two missed classes (i.e., A to A-, etc.) Excused absences are rarely granted and must be approved in advance (except for documented health or family emergencies). Students arriving more than 5 minutes late will be considered absent for the day.

Group presentations – a major part of the ‘seminar’ nature of the course will be cooperative learning group presentations, where there will be a moderator and usually a pro- and con- viewpoint. Group presentations will be graded on the basis of understanding the material, content, and convincing arguments. While the evaluation will be based on how well the group performed, we will also include two peer evaluations during the quarter. Your attendance and participation with your group is essential.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short papers (6 total)</td>
<td>20%</td>
</tr>
<tr>
<td>Group presentations</td>
<td>30%</td>
</tr>
<tr>
<td>Peer evaluations</td>
<td>05%</td>
</tr>
<tr>
<td>Pop quizzes (worksheets)</td>
<td>15%</td>
</tr>
<tr>
<td>Term paper</td>
<td>36%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>
Napoleon’s Buttons: Molecules That Changed The History of the World

CLASS SCHEDULE

WEEK

M, Sept. 8  
Course Objectives, Expectations, Reading/Writing Assignments, Grading. Discussion of the History of Modern Science and the Industrial Revolution

W, Sept. 10  
Selective Background Leading to the Discovery of Seventeen Chemical Compounds That Changed the History of Mankind......NAPOLEON’S BUTTONS

M, Sept. 15  
Selection of Teams to Prepare a Presentation on a Selected Chemical Compound. Discussion of Presentation Content and Process

W, Sept. 17  
Selection of Teams to Prepare a Pro and Con Presentation on Selected Environmental Issues....TAking sides

M, Sept. 22  
Guest Speaker: Discuss the Impact of Nobel Prize Discoveries in Biochemistry and Medicine on Society Followed by Group Discussion

W, Sept. 24  
First Presentation on Selected Chemical Compound Followed by Group Discussion

M, Sept. 29  
First Presentation on Clashing Views of Selected Environmental Issue Followed by Group Discussion

W, Oct. 1  
Second Presentation on Selected Chemical Compound Followed by Group Discussion

M, Oct. 6  
Second Presentation on Pros and Cons of Selected Environmental Issue Followed by Group Discussion

W, Oct. 8  
Guest Speaker: Stress and Time Management: Group Discussion

M, Oct. 13  
Third Presentation on Selected Chemical Compound Followed by Group Discussion

W, Oct. 15  
Third Presentation on Pros and Cons of Selected Environmental Issue Followed by Group Discussion

M, Oct. 20  
Fourth Presentation on Selected Chemical Compound Followed by Group Discussion

W, Oct. 22  
Fourth Presentation on Pros and Cons of Selected Environmental Issue Followed by Group Discussion

M, Oct. 27  
Guest Speaker: Internships and the Career Center Followed by Group Discussion

W, Oct. 29  
Fifth Presentation on Selected Chemical Compound Followed by Group Discussion

M, Nov. 3  
Fifth Presentation on Pros and Cons of Selected Environmental Issue Followed by Group Discussion

W, Nov. 5  
Term Paper Presentations by Teams

M, Nov. 10  
Term Paper Presentations by Teams Continued

W, Nov. 12  
Term Paper Presentations by Teams Continued and Summary Discussions
Napoleon’s Buttons: Molecules That Changed The History of the World

Napoleon’s Buttons Candidates:

Ascorbic Acid
Nitro Compounds
Silk and Nylon
Morphine, Nicotine, and Caffeine
Phenol
Wonder Drugs

Taking Sides Candidates:

Energy Issues
.....open to oil drilling?
.....our fossil-fuel addition?

Food and Population
.....falling birth rates.....
.....genetic engineering the.....

Toxic Chemicals
.....should DDT be...
.....hormone mimics.....
Cooperative Learning Group Presentations — from *Taking Sides*.

1. Each group fills in a worksheet during the class period preceding the presentation day — this is turned in and graded as a group. We will assess 25 pts, (pop quiz category) scaled to 15% weighting at the end of the course.

2. Group roles: each person takes on the role of **Moderator, Pro** and **Con**. You should rotate these duties for the next Group Presentation. We will try to do all Group Presentations in one class period (see Revised Syllabus).

3. **Moderator**: is the MC, who introduces the subject and then later asks two questions to each member of his/her group - of course, this was ‘rehearsed’ in advance. The Moderator will also briefly present the relevance of this topic to a Nobel Prize (this may require some internet/library searching.) At the end, the Moderator asks the gallery of spectators if they have any questions.

4. **Pro** summarizes any relevant supporting material from the essay, especially that which supports the key pro argument.

5. **Con** summarizes any relevant supporting material from the essay, especially that which supports his/her the key pro argument

6. **Format of presentation**: can be blackboard, handouts, Powerpoint, movie, nothing or whatever.

7. **Maximum time**: strictly enforced = 30 min. (+ up to 5 min. for questions).

8. **Grading**: We will assess 50 pts, group presentations category, scaled to 30% weighting at the end of the course. It will be evaluated on the basis of:

   - **Content/Knowledge of Material** (20 pts)
   - **Relevance/Excitement/Persuasiveness** (20 pts)
   - **Format-clarity, outline/visual aids – if any** (10 pts)

9. There will also be two Peer Evaluations conducted during the course (worth 5% of your grade).
Format for Term Paper

The final exam will be a 5-10 page group project term paper where the group will do the research together, but each member must write their own original paper. The term paper represents 30% of your grade, comprise of the group oral presentation and individual paper.

1. Length: 5 (minimum) to 10 pages (maximum) - excluding title page, works cited, tables and figures; may include up to one-half page of Works Cited.

2. Font: Times Roman 12 pt or Arial 11pt; Margins: 1 inch all around (note that the Word default is 1.25" not 1.00").

3. Style: variable – your choice

4. Level: should be aimed at advanced undergraduate readers who are nevertheless unfamiliar with the level of material. Try to explain it at a lay person’s level

5. Reference and citation format:

Citations in the text should be either a number (1); or Author, year (Anderson et al, 1999).

References in the Works Cited/References should include full titles and page numbers.

6. Internet references: No more than 1/3 of your references may be from internet sources; The remainder MUST be from library print sources (books, journals, or newspaper articles). If you paraphrase material from an outside source, please be sure to reference it, otherwise you will be committing plagiarism.

7. Deadline Friday, Nov. 14 Term paper deadline: 4PM Olin 204. Late submissions will not be tolerated and will be penalized 33% per day including weekends.

8. GRADING: Emphasis will be placed equally on content, spelling, grammar and format. Identical sections and phrases in papers of group members will be severely penalized as not representing original writing (ie., plagiarism)

9. Help is always available. This is YOUR project and we hope that you will learn a lot. Have fun!
FYS EVALUATION SHEET

PRESENTATION__________________________________________

Presenters_______________________________________________

Topic Organization

Knowledge of Presentation

Quality of Presentation

Quality of Answers to Questions

Overall Assessment of Talks

Grade for Talks__________________________________________

Evaluators Name_________________________________________
DEBATE EVALUATION FORM

Name: ____________________________

Course: ____________________________

Book: ____________________________

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>POOR</th>
<th>FAIR</th>
<th>GOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>NEW INFORMATION</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>ORGANIZATION</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>ENTHUSIASM</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>WRITTEN (TYPESCRIPT)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OUTLINE STRUCTURE</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>SCHOLARLY SOURCES</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>PROOFREADING</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

GENERAL COMMENTS ON DEBATE PRESENTATION

STRENGTHS:

WEAKNESSES:

Debate Score (18 points possible)
(Equivalent of a major test)
**CLASS EVALUATION SCALE**

NAME: 

COURSE: 

EVALUATION FOR: 

For each question, use a scale of 0 to 4, with 0 = poor and 4 = excellent, to indicate your grade for each team (Pro and Con).

<table>
<thead>
<tr>
<th></th>
<th>PRO Team</th>
<th>CON Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Did the team appear to have done its homework?</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Was the team presentation well organized and effective?</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Did the team make its presentation interesting to the class?</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Was the team empirical as it presented and defended its points?</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Did the team go beyond the issue as presented in the text?</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Was the team perceptive to the weak points on the opposite side?</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Did the team appear to work as a team?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>How effective was the stater?</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>How effective was the prover?</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>How effective was the attacker?</td>
<td></td>
</tr>
</tbody>
</table>
INSTRUCTOR EVALUATION SCALE

STUDENT NAME: 

DEBATE TEAM: 

DEBATE TITLE: 

For each question, use a scale of 0 to 4, with 0 = poor and 4 = excellent, to indicate your grade for each student.

<table>
<thead>
<tr>
<th>Question</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did the student appear to have done his/her homework?</td>
<td></td>
</tr>
<tr>
<td>2. Was the student's participation in the debate well evident?</td>
<td></td>
</tr>
<tr>
<td>3. Was the student's presentation well organized and effective?</td>
<td></td>
</tr>
<tr>
<td>4. Did the student provide empirical evidence to support his/her arguments?</td>
<td></td>
</tr>
<tr>
<td>5. Did the student make his/her presentation interesting to the class?</td>
<td></td>
</tr>
<tr>
<td>6. Did the student make use of supporting materials outside of the readings?</td>
<td></td>
</tr>
<tr>
<td>7. Did the student go well beyond the issue as presented in the text?</td>
<td></td>
</tr>
<tr>
<td>8. Was the student perceptive to the weak points on the opposite side?</td>
<td></td>
</tr>
<tr>
<td>9. Did the student appear to understand the key points on her/his side of the debate?</td>
<td></td>
</tr>
<tr>
<td>10. Did the student anticipate well questions and/or opposing viewpoints?</td>
<td></td>
</tr>
</tbody>
</table>