

CHEM 2801RBT (1 credit), Summer 2016-Study Abroad in Lyon, France

Special Topics-Chemistry: Scientific Discoveries and Historical Perspectives

INSTRUCTOR

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Schedule

The course will include student technical presentations, field trips to Vieux-Lyon, Institute Lumiere, Pasteur and Curie Museums, CERN, a local chemical company visit, a group project, and a final exam.

Textbook: *Napoleon's Buttons: 17 Molecules that Changed History* by Le Couteur and Burreson

Free CHEM Draw Software: <http://sitelicense.cambridgesoft.com/sitelicense.cfm?sid=100>

Photography device: A smart phone or camera that is able to take high resolution photographs (*at least* 2400 X 3000 pixels or 3000 X 2400 pixels).

POLICIES, PROCEDURES AND GRADES

Powerpoint Presentations	60 points
Attendance/participation	40 points
Group Project	200 points
Final project	100 points

Topics for the course include discussion of: selected chapters from *Napoleon's Buttons*; the interface of chemistry and biology at the Pasteur Institute, chemistry of wine/winemaking, chemistry of photography, nuclear chemistry at CERN, radiochemistry, current research in materials chemistry.

Each student will make three 15-minute technical presentations on an assigned chapter from the text. CHEM 2311 and 2312 students will be invited to attend the presentations.

The group project includes generation of 30 ppt slides. Each slide must contain a single, high resolution (*at least* 2400 X 3000 pixels or 3000 X 2400 pixels), visually-appealing photograph (**made by members of the team while abroad this summer**) that relates to an organic molecule. Downloadable photos from the internet are not allowed. Each slide should also contain the name of the molecule, a chemical structure using CHEMDRAW, and a textbox with 2-4 sentences that describe the significance of the molecule. For example, you may take a picture of a vineyard landscape, draw the structure of resveratrol, and briefly describe the significance of resveratrol.

For the final, students will be asked to create a poster (electronic version) for a general non-technical audience which describes history, science, and technology learned at one of the sites: Vieux-Lyon, Institute Lumiere, Pasteur Institute, Curie Institute, CERN, or the local chemical facility.

Course attendance is mandatory. Since this course is offered as part of a study abroad program, dropping the course is not permitted. In addition, Institute policies regarding Final Instructional Class Days and Reading Periods are not applicable. Be sure to review the academic course schedule for this 8-week study abroad program.

The course will be graded on the basis of 400 points:

- 88% (352 points) will guarantee an "A"
- 70% (280 points) guarantees a "B"
- 60% (240 points) guarantees a "C"
- 50% (200 points) guarantees a "D"

MATERIAL COVERED/STUDENT RESPONSIBILITIES

You are responsible for all material presented in lectures and in assigned readings. You are also responsible for announcements made in class, which will also be posted on the [www](#) page or distributed by email. You must check the web site and your *mail.gatech.edu* account on a regular basis. Note: there are potential problems associated with automatic forwarding of messages from *GT email* to other email addresses; check your *email* account even if you have it set up to forward email elsewhere.

All participants are expected to abide by the Georgia Tech Honor Code.

Assigned topic

Name	Assigned Topic/Chapter	Presentation Date	Time
Tyson	Course Overview	Tuesday, May 24, 2016	8:30-9:00
Choi	6. Silk and Nylon	Wednesday, May 25, 2016	8:30-9:00
Lee	7. Phenol	Wednesday, May 25, 2016	8:30-9:00
Ballew	8. Isoprene	Thursday, May 26, 2016	8:30-9:00
Choi	9. Dyes	Thursday, May 26, 2016	8:30-9:00
Lee	10. Wonder drugs	Monday, May 30, 2016	8:30-9:00
Ballew	12. Molecules of Witchcraft	Tuesday, May 31, 2016	8:30-9:00
Choi	13. Morphine, Nicotine, Caffeine	Tuesday, May 31, 2016	8:30-9:00
Lee	14. Oleic Acid	Wednesday, June 1, 2016	8:30-9:00
Ballew	5: Nitro Compounds	Wednesday, June 1, 2016	8:30-9:00