CHEM 98, Chemistry Scholars Workshop

University of Vermont, Fall Semester, 2020

General Information

Instructor: Prof. Giuseppe Petrucci
Office: Innovation E354
E-mail: Giuseppe.petrucci@uvm.edu
Phone: 656-0957
Meeting Time: Tue/Thur, 11:40 am–12:55 pm
Meeting room: On-line/Teams
Office Hours: by appointment

The instructor reserves the right to change everything, with notice.

Course Description

Educational goals: The primary goals of this course are to introduce you to the research currently being performed in the Department of Chemistry, and to start your research career at the University of Vermont. The mechanism for accomplishing these goals is to have you listen to research presentations by the chemistry faculty and undergraduates throughout the semester. We will also talk about how chemical research is performed, learn about how results are usually presented in the form of posters, presentations at meetings, and publications, and we will discuss how to perform online searches of the chemical literature. By the end of the semester, you will select a faculty member to work with on a research project in the spring. Hopefully, this person will be your research advisor for the rest of your four-year undergraduate career at UVM.

As Chemistry Scholars, you are also guaranteed a paid summer research experience at some point during your time at UVM. That can happen through a variety of pathways: (1) a competitive fellowship offered by UVM; (2) a non-competitive fellowship sponsored by the Department of Chemistry or the Undergraduate Biochemistry Program; (3) payment directly from the Department of Chemistry, if one of the fellowship opportunities is not available. We will discuss these opportunities as part of the course.

Course structure: We will meet on selected Tuesdays and Thursdays each month. On most days, we will finish by 12:30pm, but on days when faculty are giving presentations we may run longer. Because you may not yet have the chemical background required to completely understand the topics, I will also spend some time "checking in" throughout the faculty presentations, to answer your questions and to break down faculty research in more detail. I also think it would be useful for you to hear from some of our current upper-level undergraduates about how they chose their research advisors and what they are currently doing, so some sessions will be devoted to this activity.

Assessment: Although the main purpose of this course is for you to make a match with a research advisor, it is worth thinking critically about how scientists come up with research topics in general. Consequently, at the beginning of the semester, you will be asked to identify the hypothesis in an assigned research article. After you choose a research advisor, you will obtain one of their research articles and identify the hypothesis in it. Finally, you will meet with your advisor to formulate a hypothesis for your research project. Each component will be worth 25 points; another 25 points will be devoted to class participation, and meetings with faculty. Your grade will be determined by your score out of the 100 points.

Textbook: There is no textbook for this class. We will use some online resources, and most class time will be devoted to talking about research or listening to research presentations.

Inclusion: It is my intention to create an inclusive environment, with a diverse range of opinions and perspectives. If you ever find that is not the case, I hope you will set up a time with me to discuss the problem.

Anyone wishing to apply to be a Chem Scholar should send a short Word or Text document to the instructor at: Giuseppe.Petrucci@uvm.edu. **The application deadline is Friday, September 4, 2020 at 5:00 pm.** Decisions will be announced by end of day Wed, September 9, 2020.

The document should consist of two paragraphs:

Paragraph 1: A little bit about yourself, including what excited you to pursue a degree in Chemistry, what Chemistry, Physics and Calculus classes you took in high school, and what you would hope to get out of a program like the Chem Scholars

Paragraph 2: What are your career aspirations and goals and how would participation in Chem Scholars help you achieve those goals.