# Point Loma Nazarene University Department of Chemistry

# CHE467 – Advanced Inorganic Chemistry Laboratory Spring Term, 2018 Thursdays, 1:30 – 5:00 pm, Sator Hall 216

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Office hours: M, 1 - 2 pm, WF, 12:15 - 2:00 pm, Th, noon - 1 pm

## Prerequisite

Completion or enrollment in CHE468 is required.

# **Course Description**

The preparation, purification and characterization of main group and transition metal inorganic and organometallic compounds.

### **Course Objectives**

At the completion of this course, students will be able to:

- synthesize inorganic compounds using literature procedures.
- characterize inorganic compounds using a range of techniques, including NMR, UV/vis, FT-IR, and magnetic susceptibility..
- communicate the results of experiments clearly and concisely using the journal format of the American Chemical Society.

## Prelabs

Prelab write-ups of procedure are required before starting any lab. It should include a flow diagram of what you expect to accomplish during that lab period, brief procedures, waste handling, and safety considerations. Prelabs should be emailed to me the night before you wish to work in lab.

#### Lab Notebooks

Lab notebooks are an essential component of research. A handout will be provided with guidelines for proper notebook format and notebooks will be graded.

## Lab Reports

Three lab reports are required for this class. Further details regarding these reports will be distributed. For each report, a rough draft is due at least one week before the due date. The first report is due on Friday, March 2. The due dates for the second and third report will be determined.

#### Recommended texts

There are no specific textbooks required for this course, but I recommend that you own at least one general inorganic text. Suitable books include,

<sup>&</sup>quot;Inorganic Chemistry" Miessler and Tarr, any edition.

<sup>&</sup>quot;Inorganic Chemistry" Shriver and Atkins, any edition.

<sup>&</sup>quot;Concepts and Models of Inorganic Chemistry" Douglas, McDaniel, & Alexander, Wiley.

<sup>&</sup>quot;Inorganic Chemistry" Huheey, Keiter, & Keiter, Harper Collins.

| Notebook                  | 10%  |  |
|---------------------------|------|--|
| Product Yield             | 10%  |  |
| & Appearance              | 1070 |  |
| Prelab                    | 10%  |  |
| Rough Draft of Lab Report | 10%  |  |
| Lab Reports               | 60%  |  |

Letter grades will be assigned using the following scale.

| A | 90 – 100 % |
|---|------------|
| В | 80 – 90 %  |
| C | 70 – 80 %  |
| D | 60 – 70 %  |
| F | < 60 %     |

#### **OTHER MATTERS:**

<u>Academic Accommodations Policy</u>: If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at <u>DRC@pointloma.edu</u>. See <u>Disability Resource</u> Center for additional information.

Academic Honesty Policy: Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic <u>dishonesty</u> is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See Academic Policies for definitions of kinds of academic dishonesty and for further policy information.

<u>Final Examination Policy</u>: Successful completion of this class requires taking the final examination **on its scheduled day**. The final examination schedule is posted on the <u>Class Schedules</u> site. No requests for early examinations or alternative days will be approved.

<u>PLNU Copyright Policy</u>: Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

<u>PLNU Mission</u>: Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.