

COURSE DESCRIPTION

CHEM 4460/4461 – Materials Chemistry & lab (4 cr.) – Prerequisite: CHEM 3510 with a grade of "C" or higher. Corequisite: CHEM 4461. The chemistry of metals, ceramics, polymers, composites, and nanomaterials, structure of solids; properties of materials, phase diagrams, application and processing of materials.

SCENARIO

Students are required to write a 5-8 page paper on a current topic in the inorganic chemistry research with at least 5 references. No more than 60% of your paper can be referenced from internet sources, and all sources must be cited using The ACS Style Guide: Effective Communication for Scientific Information, 3rd Ed, using the Online Style Guides webpage at http://library.apsu.edu/guides/1_3_14.htm to aid them in correctly citing their sources.

Librarian will facilitate CHEM 4460/4461 students to use the SciFinder database modules of Exploring References, Exploring Substances, and Exploring Reactions; and citing their sources. Students will learn to use the bibliography management software, RefWorks; and the interlibrary loan software, ILLiad, for materials not available in the library. Students will learn to evaluate online websites.

STUDENT LEARNING OUTCOMES [a=audience, b=behavior, c=condition, d=degree of accomplishment]

After the research instruction session facilitated by a librarian [c], students [a] will demonstrate that they have learned to utilize the SciFinder database [b], by correctly completing the worksheet designed to reinforce the skills necessary to use all three database modules [d].

Following the introduction of internet website evaluation process [c], students [a] will demonstrate their understanding of assessing websites [b] by the in-session group presentations of the pre-selected materials chemistry websites [d].

Following participation in the research session [c], students [a] will demonstrate they have learned to recognize and use appropriate resources [b] by the sources used to complete their assignment [d].

POSSIBLE ASSESSMENTS

Correctly completing the SciFinder worksheet during class.

Successful group presentations evaluating pre-selected websites.

Completing the research paper assignment.