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Sarah Shujah sarah.shujah@utoronto.ca EV368 Quercus before semester starts.
(librarian)

Biological inorganic chemistry course (CHMD69H3) will bring you the world of inorganic chemistry in living systems. We shall predominantly concentrate on structure and reactivity of metalloproteins: proteins whose structure and/or function depend on the presence of one or more metallic centers; focusing on their structure, reactivity and role in the living systems. Applications of physical methods to the problems in biological inorganic chemistry will also be briefly discussed using specific examples. In order to follow the course material some background in following topics is very important and will be assumed through the course:

3. Metal ion transport and storage
 - Control of metal ion concentration
 - Recognition of metal ions
 - Transport and storage of selected ions
4. Metal ion receptors and signaling
 - Metalloregulatory proteins
 - Role of Zn^{2+} binding domains
 - Role of Ca^{2+} in cells of higher organisms
5. Non-redox metalloenzymes
 - Overview
 - Metal dependent lyase and hydrolase
 - Aconitase
 - Carboxypeptidase
 - Carbonic anhydrase
6. Redox metalloproteins.
 - Electron carriers vs. oxido-reductases
 - Electron sources and electron chains in living systems
 - Iron sulfur proteins
 - Cytochromes
 - Copper proteins
 - Respiration
7. Further on oxygen metabolism.
 - Superoxide dismutase
 - Peroxidases
8. Hydrogen metabolism - hydrogenases
9. Nitrogen metabolism t nitrogenases

Assignment	10%
Abstract of your paper/talk	5%
Review paper	20%
Lecture based on paper	20%
Final exam	45%

The assignment is going to be posted on Quercus on _____ and is due in class

You are required to write a paper (1800 to 2000 words in length) and give a 20 min lecture (15 min for your talk + 5 min for Q&A) on a topic you select. The list of suggested topics will be provided separately on the blackboard. You can also suggest a topic that is not on the list but you have to check the suitability of your choice with me. More details on the paper requirements will be provided with the list of possible topics.

To obtain assistance on any assignment.

To provide assistance to another student. **This includes showing another student completed work**

To submit their own work for credit in without the permission of the instructor.

To or any documentation required by the University. This includes, but is not limited to, doctor's notes.

To use or possess an unauthorized aid in any test or exam.

There are other offences covered under the Code, but these are by far the most common. Please respect these rules and the values which they protect. Offences against academic integrity will be dealt with according to the