COURSE TITLE: LONG-TERM ENVIRONMENTAL CHANGE  
COURSE NUMBER: BIOL-822  
TERM OFFERED: 2159 FALL 2015  
INSTRUCTOR: John Smol  
CONTACT INFORMATION: BioSciences Complex Room 4307a  
Phone: 533 6147  Email: smolj@queensu.ca  
Office Hours: No set times  
Meeting Room: BioSciences Complex, Room 3110  
Meeting Times: Wednesdays at 9:30 – 12:30  
Website: http://post.queensu.ca/~biol822/  

OUTLINE OF TOPICS:  
It is becoming increasingly clear that long-term environmental data are required to assess many global concerns. It is therefore not surprising that a large number of paleoenvironmental techniques and approaches are currently available to infer global and more local environmental changes. The main focus of this course will be to review and assess the many techniques currently available to track long-term environmental change. An emphasis will be placed on biological approaches dealing with sedimentary analyses, but other proxy methods (e.g. ice cores, tree rings, packrat middens, etc.) will also be covered. General topics will include climatic change, acidification, eutrophication, lake and reservoir management, UV penetration, contaminant transport, etc.

METHODS OF INSTRUCTION AND HOURS PER WEEK:  
The class will typically meet for one 3-hour class a week. Time and location TBA. Formal lectures by the professor will be emphasized in the first part of the course, followed by presentations and discussions by the students.

EVALUATION:  
Seminar #1: 10%  
Term Paper: 65%  
Seminar #2: 25%  

TEXTBOOK:  

PREREQUISITE AND ASSUMED BACKGROUND:  
None. An interest in long-term environmental change.