Introduction

This course reviews the geological and environmental evolution of the North American continent over the past 4 billion years by exploring the range of plate tectonic processes involved in continental growth and how those processes are expressed today as geologic hazards. The course will also review the origins

supercontinents). Geologists have recognized a cycle of supercontinent formation and breakup (the Wilson cycle) which is the basic rhythm of Earth history.

North America's geology and supercontinent cycles

North Americaôs geology reflects events during the formation and breakup of several supercontinents over the last 3 billion years most notably *Arctica* about 2.7 billion years ago, *Rodinia* which formed about 1 billion years ago, and *Pangea* which formed between 400 and 200 million years ago. These episodes were associated with the active growth of North America when new crust was added by plate collisions. Rifting of these supercontinents resulted in the formation of new ocean basins and continued accretion of new crust. The supercontinent cycle forms a simple organizing framework for examining this long history. Planet Earth is currently in a phase of

Notes

1). The course textbook is *Canada Rocks -the Geologic Journey* available in the Bookstore. It frames the geological history of Canada and Ontario against what is known of modern global plate tectonics. Relevant chapters for each week are shown on the attached lecture schedule.

2). **http://planetrocks.utsc.utoronto.ca** is a web site detailing more than 500 hundred sites of special geological or cultural importance across Ontario. Take a look at it and use it for your poster presentation.

3). Please check the Quercus course site regularly for updates. Shane will be available during regularly-scheduled office hours which he will announce shortly.

4). If you have a disability/health consideration that may require accommodations, please feel free to approach the AccessAbility Services Office who will work with you to ensure you can achieve your learning goals in this course. All enquiries are confidential. The UTSC AccessAbility Services staff members are available by appointment at 416-287-7560 or ability@utsc.utoronto.ca.

5).This course meets the requirements of the Association of Professional Geoscientists of Ontario.

6) Plagiarism will not be tolerated and it is a severe academic offence reportable to the Dean for sanctions. "Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their

Nick Eyles
eyles@utsc.utoronto.ca

January 2019