This 4-unit course constitutes one half of the curriculum for the Global Seminar in Geneva this summer. It is designed to give you a more in-depth understanding of the geology of the Alps, with an emphasis on its geologic formation and evolution over the past 65 million years since the range was created during the late Mesozoic Alpine Orogeny. We will examine the tectonics of the region and subsequent geologic processes that have shaped it (e.g. glaciation). Classroom study will be strongly augmented with local field excursions. Overall, students will develop a strong understanding of the geology, tectonics, glaciology, and geomorphology of the Alps region.

**Class Organization and Grading:**
This class will include weekly lectures, demonstrations, and discussions that will take place during the regularly assigned class periods. In addition, we will have several excursions in the field that will build on the lectures.

Your grade will be based on the following:
- In class exercises, homework, quizzes, and field exercises (75%)
- Final exam (25%)

**Textbooks and Readings:**
The text for the class is *Geology of the Alps* by O. Adrian Pfiffner. It is expected that you will complete all assigned readings. In addition, various handouts and papers will be distributed.

**Learning Goals:**
Students will be able to:

- Identify geologic features in the Alps region.
- Explain the relationship between tectonics and the geologic formations in the region.
- Define the various steps in the geologic evolution of the Alps.
- Distinguish between alpine features (geomorphologic) and categorize them with respect to their processes of formation.
## SIO 121GS Schedule - Summer Session 2018

**General Note:** This syllabus is an outline of proposed events. It is subject to change; however, never without notification, and never to advance the due dates of assignments.

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Topics</th>
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<td><strong>Week 1:</strong></td>
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| 6/30 | Welcome and introduction  
Review of basic regional geography, geology and tectonics  
General tectonic and petrologic history of the region  
**Local field trips to outcrops around Geneva** |
| **Week 2:**  |
| 7/7 | Tectonic Structure of the Alps:  
Western Alps, Central Alps, Eastern Alps  
**Local field trips to outcrops around Geneva** |
| **Week 3:**  |
| 7/14 | Alpine Metamorphism  
Mesozoic and Cenozoic orogenic events  
**Field excursion to Chamonix, France** |
| **Week 4:**  |
| 7/21 | Glacial history and geomorphology  
**Overnight excursion to Zermatt and the Matterhorn** |
| **Week 5:**  |
| 7-28 | Mass Wasting and rockslides  
Neotectonic processes  
Future geologic events  
**Local field trips around Geneva** |

**Final Exam**