

# Exploration and Seismic Interpretation

*Winter 2016 - G410/510*

**Lecture:** M/W 12:45-1:50, Cramer Hall (CH) S59

**Lab:** F 11:30-1:20, Cramer Hall (CH) 1

**Prerequisite:** Sedimentology and Stratigraphy (G435)

**Course Description:** We will study sedimentary basins using 2D and 3D seismic data. Fundamentals of seismic acquisition and interpretation will be covered with an emphasis on exploration using industry-standard software. Students will gain insight into basin formation and evolution, the depositional architecture and stratigraphy of sedimentary facies, and the presence/distribution of fluids therein. Students are provided the opportunity to compete in IBA (Imperial Barrel Award) late in the term.

**Instructor: John Bershaw**

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Office Hours: 1.5 hours following class (Mon/Fri) or setup an appointment

**Grading:** Labs: 30%; Project: 30%; Exam: 15%; Field Trip Report: 15%; Assignments: 10%

**Textbook:** OPTIONAL: [Interpretation of 3D Seismic Data](#), by Alistair Brown

OPTIONAL: [Basin Analysis](#), by Allen and Allen

**Field Trip:** Day-trip to Mist Field in NW Oregon (Details TBD)

## TOPICS COVERED

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Basins Introduction

Seismic Acquisition and Processing

Depth Conversion (Tying Wells to Seismic)

2D and 3D Seismic Interpretation

Seismic Geomorphology

Seismic Attributes

Petroleum Systems

Exploration

**Exams:** Mid-term early February. There will be no final exam.

**Presentation:** Group presentation at the end of term.