科目ナンバリング	U-LAS70 10002 SE50						
授業科目名 <英訳>	ILAS Seminar-E2 :Frontiers of Earthquake Science（地震学の最前線） ILAS Seminar-E2 :Frontiers of Earthquake Science			担当者所属 職名・氏名	理学研究科　准教授　ENESCU, Bogdan Dumitru		
群	少人数群	単位数	2単位	週コマ数	1コマ	授業形態	ゼミナール（対面授業科目）
開講年度・開講期	2024・前期	受講定員 (1回生定員)	12 (10) 人	配当学年	主として1回生	対象学生	全学向
曜時限	水5	教室	理学研究科1号館264号室 (北部構内)			使用言語	英語
キーワード	Earthquakes （地震） / Tsunami （津波） / Disaster Prevention （防災） / Volcanoes（火山）						

[授業の概要・目的]

We are going to read scientific papers related to important/frontier topics of Earthquake Science. The purpose is to understand the key-message of the paper, rather than the detailed technical background. To facilitate understanding, some materials/vocabulary in Japanese will be provided during the seminar.
日本語のキーワード等もだしますので、遠慮なく参加してください。楽しく最前線の科学の面白さを学びながら、英語の能力も向上しましょう！

[到達目標]

The student will become familiar with current important topics of Earthquake Science. The seminar also aims enabling the student to discuss earthquake related research topics in English.

[授業計画と内容]

Each student is going to choose a paper in the field of Earthquake Science, and prepare a short report (few PowerPoint slides), summarizing the main ideas of the study. The paper can be chosen freely; some broad suggestions include:
- Megathrust earthquakes: physics and possibility of prediction;
- Tsunami: physics and early warning;
- The deep structure of the Earth 'illuminated' by seismic waves;
- Earthquake disaster prevention;
- Earthquake simulations and laboratory experiments;
- Artificial intelligence (AI) in Earthquake Sciences.

The first class will give students some broad options of topics/papers.
During the second class we will decide the paper that each student is going to present. I will exemplify with a research presentation during the third and fourth classes. Starting with the fifth class each student is going to present the chosen paper and get feedback for improving his report. In the examination day, each student should present briefly his updated/revised report.

Depending on the number of students and available time, we will visit the underground seismic base isolation at the "Kyoto University Clock Tower", go to the nearby Hanaore Fault and visit the Disaster Prevention Research Institute (DPRI), Kyoto University (Uji campus), to discuss with Professor Masumi Yamada on the Earthquake Early Warning system in Japan.

For students interested in more advanced topics, including computer programming (in Python, C/C++, Matlab, Fortran or other computer languages) for Geosciences, I can provide additional materials and

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guidance.

Note: there are 14 classes, one examination, and one feedback class.

[履修要件]

特になし

[成績評価の方法・観点]

Grading will be based on attendance and participation (60%) and presentation of chosen paper (40%).

[教科書]

使用しない

[授業外学修（予習・復習）等]

The student will have to prepare the assigned paper.

[その他（オフィスアワー等）]

- Students can meet me during office hours with prior appointment.
- Since we may go outside the campus during the class (see "Course schedule and contents"), I advice students on taking accident insurance (e.g. Personal Accident Insurance for Students Pursuing Education & Research).