科目ナンバリング	U-LAS60 10002 LE17				
授業科目名<英訳>	Interdisciplinary Sciences-E2 :Global Changes Interdisciplinary Sciences-E2 :Global Changes	担当者所属職名・氏名	防災研究所　教授　Sameh Kantoush 理学研究科　教授　ZWINGMANN, Horst Friedrich August 防災研究所　講師　LAHOURNAT, Florence		
群	統合科学科目群	分野(分類)	統合科学	使用言語	英語
旧群		単位数	2単位	週コマ数	1コマ	授業形態	講義（対面授業科目）
開講年度・開講期	2026・後期	曜時限	木5	配当学年	主として1回生	対象学生	全学向

[授業の概要・目的]

The main purpose of this course is to address the phenomenon of climate change from a variety of angles, using the IPCC 6th Assessment Reports (Summary for Policymakers) as a base for learning, reflection, and discussion.

Along the semester, we will be using the three IPCC Working Group reports:

WG I: The physical science basis,
WG II: Impacts, adaptation, and vulnerability, and
WG III: Mitigation of climate change.

This course encourages students to develop self-learning skills and English expression skills, through assigned self-directed group discussions and presentations.

[到達目標]

To gain knowledge regarding the current understanding of the scientific basis of the global warming issue, and some of the perspectives for adaptation and mitigation.

[授業計画と内容]

1. Detailed orientation (1 week)“Preparation to understand the class”
- Short self-introduction from each lecturer
- Identification of each part of the class as independent and expertise area
- Description of the class outline and objectives
- Schedule, assignments, evaluation, textbooks/references, …

2. General introduction (1 week)“Fundamental perspectives on global changes based on the IPCC reports”
- General Q&A session about global changes
- Group composition
  we expect six groups (about 5 students/group) working through each theme and re-shuffling to ensure a good balance of nationality, background, and gender within each group
- Self-introduction of all students

3.~6. Theme 1 (4 weeks)“The physical science basis of global warming”
- Week 1: short lecture by Zwingmann, and the commencement of group work
- Week 2: group work (preparation of presentation)
- Week 3 & 4: group presentations and discussions (25 min x 3 groups x 2 weeks)

★Feedback will be given at the end of the presentation sessions (15 min)

7.~10. Theme 2 (4 weeks)“Impacts, adaptation and vulnerability”
- Week 1: short lecture by Lahournat, and the commencement of group work
- Week 2: group work (preparation of presentation)
- Week 3 & 4: group presentations and discussions (25 min x 3 groups x 2 weeks)

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★Feedback will be given at the end of the presentation sessions (15 min)

11.~14. Theme 3 (4 weeks)“Mitigation of climate change”
- Week 1: short lecture by Kantoush, and the commencement of group work
- Week 2: group work (preparation of presentation)
- Week 3 & 4: group presentations and discussions (25 min x 3 groups x 2 weeks)

★Feedback will be given at the end of the presentation sessions (15 min)

15. Feedback (1 week)“Closing session”
- General discussion: remarks and comments by all
- Final remarks

[履修要件]

特になし

[成績評価の方法・観点]

Assessment for the class will base on the following four criteria:
1. Class attendance/active participation in the group work (40%),
2. Group presentations for the three Themes (40%), and
3. Individual report for one of the three Themes (20%).

Details on each criterion will be announced during the first week of class.

[教科書]

使用しない

No textbook. Use the pdf files of the IPCC WG reports, which will be available on LMS.

[参考書等]

（参考書）

IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Pean, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekci, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3－32, doi:10.1017/9781009157896.001.

IPCC, 2022: Summary for Policymakers. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [H.-O. Poertner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegria, M. Craig, S. Langsdorf, S. Loeschke, V. Moeller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press. pp. 1-35. https://www.ipcc.ch/report/ar6/wg2/

IPCC, 2022: Summary for Policymakers. In: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. pp. 1-52. doi: 10.1017/9781009157926.001.

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Also, some reference books as
Koonin, S. E., 2021: Unsettled: What Climate Science Tells Us, What It Doesn't, and Why It Matters. BenBella Books, Inc., Dallas, 306pp.

クーニン スティーブン・E（著）三木 俊哉（訳）, 2022: **気候変動の真実 科学は何を語り、何を語っていないか**? **日経**BP, 372pp.

Vince, G., 2022: Nomad Century: How to Survive the Climate Upheaval. Allen Lane, 288pp.

ヴィンス, ガイア（著）小坂恵理（訳）, 2023: **気候崩壊後の人類大移動**. **河出書房新社**, 320pp.

Schultz, D. M., 2009: Eloquent Science. A practical guide to becoming a better writer, speaker, and atmospheric scientist. American Meteorological Society, pp. 412.

木下是雄, 1981: **理科系の作文技術**. **中公新書** 624, pp. 244.

[授業外学修（予習・復習）等]

Students are expected to read the recommended resources for each WG report, to be able to actively participate during discussion.
To prepare for each presentation, students may need to meet with their group in between sessions, outside the class time.

[その他（オフィスアワー等）]

■ The expected number of students is about 30, distributed across 6 groups of about 5 students each. Priority will be given to the ILAS International Education Program students (compulsory credits) and the Kyoto iUP students enrolled in the programs, with any remaining slots open to other students.
■ Students are expected to bring their own computer device (laptop, tablet, etc.).
■ Regarding office hours, use LMS to send an e-mail to request an appointment.

[主要授業科目（学部・学科名）]

理学部