# 平成２６年度研究科横断型教育プログラム（Ａタイプ）授業科目

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| 開講方式 | Ａタイプ（研究科開講型） | 研究科名 | Global Environmental Studies | カテゴリー | 環境・生命・医療科目群 | 横断区分 | 文理横断型 |
| 授業科目名（英訳） | Frontier of Sustainability Science | | | 講義担当者所属・氏名 | Akihisa MORI, Global Environmental Studies<br>Satoshi KONISHI, Institute of Advanced Energy, etc | 開講場所 | Integrated Research Bld. #5, Yoshida campus |
| 配当学年 | Master | 単位数 | ２単位 | 開講期 | First semester | 曜時限 | Intensive（planned July 19, 20, 21） |
| 授業形態 | Lecture& Presentation | | | | | | |

〔授業の概要・目的〕

This class is designed for graduate students to acknowledge research frontier of Sustainability Science. Sustainability Science is multidisciplinary research that was lately created advance sustainable development and sustainable society. This class aims to provide integrated and inter-disciplinary approaches to global environmental challenges such as climate change, which has multiple implications to society and biology, and can be mitigated by a variety of measures. By understanding a variety of approaches, students are expected to come up with feasible proposals that can mitigate and adapt to the impacts of climate change, without solely adhering to technological solutions.

本講義は，サステイナビリティ学という持続可能な発展・社会を実現するために新たに創設された複合的な学問領域で行われている先端の研究に関する知見を学び，実現可能な持続可能な発展や社会のビジョンを受講生１人１人が構想することを目的としている．本講義では特に，人間社会や生態系に多面的な影響を及ぼし，また多様な取り組みが存在する地球環境問題を取り上げ，それぞれの学問領域で，そしてそれらを統合して，問題や原因の同定や対応戦略・政策にどのように取り組んでいるのかを学び，実現可能で技術的解決法のみに依存しないビジョンや戦略を作成することが期待される．

【研究科横断型教育の概要・目的】

By giving lectures on a specific global environmental issues such as climate challenge from a variety of academic field in Kyoto University, as well as collaborated universities such as University of Tokyo, Osaka University and Ibaraki University, students are expected to share a holistic view on this issue, and knowledge learn pros and cons of various approaches as well as their own academic field.

This class aims to provide an integrated and inter-disciplinary approach to climate change, which has multiple implications to society and biology, and can be mitigated by a variety of measures. Lectures consist of a variety of academic field, including philosophy, politics, economics, energy, architecture, meteorology and biology and so on. In this sense, this class welcomes students from a variety of research area. Students are encouraged to share ideas, knowledge and deep understanding on ways to advance sustainable development through group discussions and presentation that followed by the lectures.

本講義は，気候変動などの地球環境問題に関わる様々な分野の教員―シミュレーションや生態学，哲学，政治学，エネルギー技術論，防災，環境デザイン学，経済学など―によるリレー方式での講義を通じて，受講生が自分の専門分野を超えた知見を取得し，得られた知見を活用して解決法を探求することを目的とする．そこで，多様な学問分野の学生が集い，講義を受講するだけでなく，グループ討議と報告を行うことで，持続可能な発展・社会を実現するためのアイデアや理解を深めることを目的としている．

〔授業計画と内容〕

Professors of five universities give lectures: Hokkaido University, Ibaragi University, University of Tokyo, Osaka University and Kyoto University. All the lectures and group works are given in English. Students are expected to raise questions to the lecturers.

Course outline (tentative):

Lecture 1: Introduction: What is sustainability science?

Lecture 2-3: Scientific aspects

Lecture 4–6: Engineering and energy aspects
Lecture 7–8: Economic and policy aspects
Lecture 9–10: Community aspects
Lecture 11–12: Developing country perspective
Lecture 13–15 Group works and presentation

〔履修要件〕

Participants are required to have basic knowledge on global environmental challenges.
地球環境問題に関しての基本的な知見を持っていることが望ましい.

〔成績評価の方法・基準〕

– Attendance rate, including performance of group presentation (40%)
– Writing assignments (60%)

〔教科書〕

None

〔参考書等〕

a) Komiyama, Hiroshi et al (eds.), *Sustainability Science: A Multidisciplinary Approach*, Tokyo: UNU Press, 2011
b) Akimasa Sumi, et al (eds.), *Climate Change and Global Sustainability: A Holistic Approach*, Tokyo: UNU Press, 2011
c) Sawa, Takamitsu et al (eds.), *Achieving Global Sustainability: Policy Recommendations*, Tokyo: UNU Press, 2012

〔その他(授業外学習の指示・オフィスアワー等)〕

I'll contact to applicants by email in advance to confirm their attendance and update lecture materials on the KULASIS.
事前にメールで出席確認と詳細の連絡を行うとともに，直前に講義資料を KULASIS にアップロードします.