

Course number		G-LAS15 80005 LB77									
Course title (and course title in English)		地球生存リスク特論 Global Survivability Risk Management			Instructor's name, job title, and department of affiliation		Graduate School of Advanced Integrated Studies in Human Survivability Professor, YAMASHIKI YOSUKE				
Group		Interdisciplinary Graduate Courses		Field(Classification)		Interdisciplinary Courses					
Language of instruction		English (Japanese)			Old group				Number of credits 2		
Number of weekly time blocks		1	Class style		Lecture (Face-to-face course)		Year/semesters		2025・Second semester		
Days and periods		Wed.3		Target year		Graduate students		Eligible students		For all majors	
(Students of Graduate School of Advanced Integrated Studies in Human Survivability cannot take this course as liberal arts and general education course. Please register the course with your department.)											
[Overview and purpose of the course]											
<p>(授業概要) この授業では、国内外の災害や環境悪化の事例、防災と環境保全の両立を目指した取り組みを紹介する。これらをもとに、環境への悪影響や災害を最小限に抑えるための考え方や技術について学ぶ。また、社会科学的・心理学的な視点も取り入れ、教員と学生が対話を通じて議論を深める形式で進める。</p> <p>(学習目標) 地球生態システムの理解と過去の大絶滅事象に関する理解を基礎に、現代文明の発達にともなって顕著となった新たなリスクの種類と想定されるメカニズムを理解し、適切なリスク評価を行うことのできる知識の獲得を目指す。特に地球規模の気候変動によるリスク評価と、原子力発電所や放射性廃棄物などによるリスク、様々な環境問題のもたらすリスクについて詳細な知識と想定される問題点を列挙でき評価できる人材育成を目指す。最終的に「持続可能な文明」について全体像を議論する。</p> <p>(Outline)In this lecture, we introduce several environmental risks on a global scale, together with the potential risk for survivability for all living creatures on Earth. This is done by making an inter-comparison among each of those risks, scales, and occurrence probability, as well as the social impacts. Especially, we study the potential hazards in association with global warming, general risk analysis, catastrophic mass extinction events (asteroid impacts & massive volcanic eruption), and complex and multiple disasters based on modern civilization.</p> <p>(Objective) Students are expected to learn about Earth ' s (terrestrial) ecological systems based on the GAIA concept, and new types of risks which have become critical issues throughout the progress of civilization. Special focus is given to the issues of global warming, nuclear disasters including environmental risks caused by nuclear waste, and other possible environmental disasters and hazards which may affect human civilization. Our final goal is to develop an overall image of a "sustainable civilization" .</p>											
[Course objectives]											
<p>地球生態システムに関する理解を深め、人間の(Anthropogenic)活動と、自然の(Natural)応答との相互連環について、現在存在する理想的な形態について学び、そのバランスの重要性について理解をする。現代において顕著となった文明に伴う新たなリスクの種類と想定される被害メカニズムを理解し、適切なリスク評価を行うことのできる知識の獲得を目指す。</p> <p>特に地球温暖化に伴う想定被害のリスク評価と、破局的シナリオによって想定される様々な極端被害、また原子力発電所や放射性廃棄物などによる環境災害リスクについて理解し、現代に生きる我</p> <p>Continue to 地球生存リスク特論(2)</p>											

地球生存リスク特論(2)

々が未来の地球を保全してゆくために必要となる知識想定について学ぶ。

Students will deepen their understanding of the Earth's ecological system and learn about the ideal mutual linkage between human (Anthropogenic) activity and natural (Natural) response, and well as understand the importance of the balance between them. Students will understand the new types of present-day risks and damage mechanisms associated with civilians, and acquire the knowledge to conduct appropriate risk assessments. Especially, students will evaluate the risk assessment of assumed damage caused by global warming, various extreme damage caused by catastrophic scenarios, and understand the risk of environmental disaster by nuclear power plants and radioactive waste; they will learn the necessary knowledge to help preserve the future of the Earth.

[Course schedule and contents)]

【第1回】地球に対する人間活動(Anthropogenic)と自然活動(Natural)について学ぶ。

(Introduction of the difference between "anthropogenic" and "natural" impacts on Earth systems.)

【第2回】リスクの様々な定義と概念を学ぶ。

(Introduction to Risk Studies)

【第3回】災害リスクとその軽減について仙台防災枠組と関連付けて学ぶ

(Disaster Risk: How can we reduce it? Sendai Framework for Disaster Risk Reduction)

【第4回】自然(Nature)とは地球における人間活動(Anthropogenic)の影響について概念を学ぶ。

(Learn the concept of "anthropogenic" and "natural" impacts on Earth systems.)

【第5回】森・流域における森林の機能について学ぶ

(Learn the function of a forest in an integrated river basin system.)

【第6-8回】

山敷：大気圏(Atmosphere)の役割について、主に対流圏(troposphere)、成層圏(stratosphere)を比較しながら学ぶ。

(Learn the roll of an atmospheric system on Earth systems, focusing mainly on the comparative study of the troposphere and stratosphere.)

【第9回】大陸と海洋と、その相互作用(Continental-Oceanic Mutual Interaction)について 学ぶ。

(Learn the concept of Continental-Oceanic Mutual Interaction.)

【第10回】複合災害(原子力災害を例に)のリスクについて学ぶ

(Evaluation of Complex disaster induced by human activities, by introducing nuclear disaster)

【第11回】近年の世界の水災害リスク

(Recent Water-Related Disaster Events)

-emerging infectious disease focusing on Ebola Haemorrhagic Fever.)

【第12-13回】リスク想定演習 グループ毎に想定するリスクとその評価を行う。(Exercise of

Practical Risk Assessment by setting hypothetical crisis and evaluate its potential impacts by group.)

【第14回】 Natural hazard triggered technological accidents.

【第15回】地球温暖化の影響について学び、いくつかの破局的シナリオ(メタンハイドレートの大量放出による超温暖化など)について学ぶ。

[Course requirements]

None

[Evaluation methods and policy]

講義中に行う簡単なレポートと、最終回に提示するレポートにより評価する。

Students will be evaluated based on simple lecture reports, as well as a final presentation report.

Continue to 地球生存リスク特論(3)

地球生存リスク特論(3)

[Textbooks]

川井秀一、藤田正勝、池田裕一（編）：『総合生存学 グローバルリーダーのために』（京都大学学術出版会,2015）

[Study outside of class (preparation and review)]

破局的シナリオについて、National GeographicのEvacuate Earthシリーズや他の番組を見て、それらの「現実性」について想像を巡らせてほしい。

Please watch some programs related to catastrophic scenarios, such as the “ Evacuate Earth ” series by National Geographic, and imagine the “ realities ” of these.

[Other information (office hours, etc.)]

事前にe-mailでアポを取ること．メールアドレスはyamashiki.yosuke.3u@kyoto-u.ac.jp

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