

Course number		U-LAS61 10012 LE68						
Course title (and course title in English)	Introduction to Biological Invasion-E2 Introduction to Biological Invasion-E2				Instructor's name, job title, and department of affiliation	Research Institute for Sustainable Humanosphere Senior Lecturer, YANG, Chin-Cheng		
Group	Interdisciplinary Sciences			Field(Classification)	Environmental Sciences			
Language of instruction	English			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	Thu.4		Target year	Mainly 1st & 2nd year students		Eligible students	For all majors	
[Overview and purpose of the course]								
The purpose of this introductory course is to provide students a fundamental understanding of biological invasions. Invasive alien species represent the 2nd severest threat on Earth's ecosystems but seems to be overlooked. This lecture will introduce various red-flagged invasive species (from virus to vertebrate) that have been introduced into Japan and other parts of the world, and focus on how these species impact the ecosystem. In addition to lectures, students will have opportunities to explore the invasive species through a diverse set of practices including field trip (campus or national park), movie and hands-on section.								
[Course objectives]								
Students will gain an understanding of the core principles of biology and management of invasive species from infamous examples (ex. fire ants, cane toad...). The ultimate goal is to have students confront the problems that we human beings have been ignoring and thus facilitate the global attention on this costly issue.								
[Course schedule and contents)]								
In principal, the course will be offered as the following plan. However, the order or time for each theme may change depending on the progressive of the course or handling on current topics. Note that students may have to pay their own transportation fee for the proposed field trips.								
Week 01: Course introduction								
Week 02: Introduction to biological invasion I - General introduction of invasive species								
Week 03: Introduction to biological invasion II - How to become a successful invasive species								
Week 04: World worst invasive insect - Introduce world's worst invasive insects								
Week 05: Hands-on session - Aggression behaviors of invasive ants								
Week 06: World worst invasive arthropod - Introduce world's worst invasive non-insect arthropods								

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Week 07: Movie for invasive disease/discussion

- Watch a movie themed with invasive pathogen and discussion

Week 08: World worst invasive mammals 01

- Introduce world's worst invasive mammals

Week 09: World worst invasive mammals 02

- Introduce world's worst invasive mammals

Week 10: Invasive species vs. global change/Discussion

Week 11: How to control invasive species/Discussion

Week 12: Student oral presentation 01

- Group presentation

Week 13: Student oral presentation 02

- Group presentation

Week 14: Student oral presentation 03

- Group presentation

Week 15: Term papers

Week 16: Feedback

[Course requirements]

None

[Evaluation methods and policy]

50% in-class discussion; 30% term paper; 20% presentation

[Textbooks]

MA Davis 『Invasion biology』 (Oxford University Press, 2009)

[References, etc.]

(References, etc.)

MN Clout, PA Williams 『Invasive species management: a handbook of principles and techniques』 (Oxford University Press, 2009)

[Study outside of class (preparation and review)]

Students are encouraged to preview lecture materials and participate in class discussion, as lecture materials and most of the supplementary readings will be posted on KULASIS and Panda at least 1 day in advance.

[Other information (office hours, etc.)]

Lecturer: Chin Cheng Scotty Yang (ccyang@rish.kyoto u.ac.jp)

Office: HW 412, Research Building No. 1, Uji Campus

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Office hours: to be announced

Note: Students are advised to obtain the insurance for study and research “ Personal Accident Insurance for Students Pursuing Ed. & Rsch.(学生教育研究災害傷害保険) ” if you decide to take the class

[Essential courses]