

Course Name	Regional Sciences (Lecture): General Theory of Invasive Alien Species Management		
Semester, Year	First Semester, 2019	Number of Credits	2 credits
Course level	5000	Course Number	027007
Instructor(s) (Institution)	Toru IKEDA 大学院文学研究院		
Course Objectives	<p>Invasive Alien Species (IAS) are a concern around the world and the management of IAS is urgent problem to prevent or reduce their impacts. Many countries struggle with this problem with varying amounts of success. New Zealand, because it has very high numbers of IAS, has very highly developed systems and tools and strategies for IAS management. This course provides the latest information about IAS control not only in New Zealand but also globally including recent developments for management of IAS in Japan. Course objective is to learn the fundamental knowledge and techniques for controlling IAS and frameworks for thinking systematically about IAS management actions and outcomes. The course will also consider social and political aspects of IAS issues which are becoming increasingly important in influencing ability to control species and the tools that can be used.</p>		
Course Goals	<p>By the end of this course you will:</p> <ol style="list-style-type: none"> 1. Have an understanding why should we eradicate or control IAS 2. Have an understanding about the basic approaches to IAS issues: Prevention, EDRR, Eradication and Sustained Control 3. Have an understanding of the methods and tools available for IAS control and eradication, including legislation 4. Know the criteria for eradication and understand the difference from sustained control 5. Have an understanding about social and political aspects of IAS issues 		
Course Schedule	<p>We will learn basic knowledge about IAS control and discuss the effective and efficient methods for management of IAS. The course will cover following topics, providing examples from Japan, New Zealand and other countries.</p> <ol style="list-style-type: none"> 1. Course introduction - Invasion curve and management responses 2. Invasive species management - principles and strategies 3. Legislation 4. Weed management 5. Disease management 6. Vertebrate pest management 7. Control Methods (1) Trapping/exclusion/shooting/etc. 8. Control Methods (2) Chemical control - toxins, repellents 9. Control methods (3) Biological control 10. Eradication 11. Surveillance and Monitoring methods 12. Social issues, non-target risks and animal welfare 13. Cost and benefits of management 14. Discussion toward the implementation of effective measures in Japan 15. General discussion of global IAS issues 		
Homework	Students are recommended to read the publications listed below. At the end of each lecture you will be given a short test about the topic covered in the lecture. You will also be asked to write an essay about the eradication of invasive species on islands.		
Grading System	<ol style="list-style-type: none"> 1. Test results: 70% 2. Essay about invasive species management: 30% 		
Textbooks / Reading List	<p>No textbook required. Handouts will be distributed http://www.pestsmart.org.au/wp-content/uploads/2016/02/300Braysher.pdf Veitch, C. R., Clout, M. N. and Towns, D. R. (eds.). (2011) Island invasives: eradication and management. IUCN, Gland, Switzerland. ISBN: 978-2-8317-1291-8 (Available free at http://www.issg.org/pdf/publications/Island_Invasives/IslandInvasives.pdf) http://www.landcareresearch.co.nz/science/plants-animals-fungi/plants/weeds</p>		
Websites	<p>This course will be provided as part of the Hokkaido Summer Institute. For more information (invited lecturers, course details, etc.), please visit the website below: https://hokkaidosummerinstitute.oia.hokudai.ac.jp/courses/CourseDetail=G088</p>		
Website of Laboratory	<p>https://www.let.hokudai.ac.jp/research/human-sciences/4-4regional/ [Japanese] https://www.landcareresearch.co.nz/home</p>		
Additional Information	<p>For HU students: HSI2019 'Social Ecology : Principles of Invasion Ecology 2019' is recommended to be taken as a foundation for invasive alien species issues. Please visit the following website that shows actual class activities in 2018 in Japanese: https://www.let.hokudai.ac.jp/news/2018/08/14683/ in English: https://www.let.hokudai.ac.jp/en/2018/12/11/general-theory-of-invasive-alien-species-management-was-held-hokkaido-summer-institute-2018/</p>		