

科目ナンバリング											
授業科目名 <英訳>		Introduction to Ecology-E2 Introduction to Ecology-E2				担当者所属 職名・氏名		理学研究科 准教授 BARNETT , Craig Antony			
群	自然科学科目群			分野(分類)		生物学(各論)			使用言語	英語	
旧群	B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	2024・前期		曜時限	月2		配当学年	主として1・2回生	対象学生	全学向		
【授業の概要・目的】											
Ecology is the investigation of how living organisms interact with their environment. We will start with the question of how individual organisms handle the difficulties of their environments, and then work up the scale of ecological organization, from looking at individuals to populations, communities, ecosystems, and global and conservation ecology. Beyond description, we will focus on simple but elegant mathematical models that explain patterns we see in the world and processes that may produce them.											
【到達目標】											
1) To understand the principles of how organisms respond to your environments, populations grow and go extinct, species interact through food webs and mutualisms, communities are structured, and ecosystems work as systems, cycling nutrients and energy. 2) To learn about the environmental challenges that we will encounter in the coming century, and how ecological principles inform our solutions to mitigate and adapt to them. 3) To be able to describe the ideas behind mathematical ecological theories using graphs, and to appreciate their predictions and assumptions. 4) To sharpen listening skills, and interact in a classroom setting in English.											
【授業計画と内容】											
1) Introduction 2) The physical environment and the world' s biomes 3) Coping with water, temperature, and energy 4) Evolution and ecology; life histories 5) Behavioural ecology 6) Population distribution, abundance, growth, and regulation 7) Population dynamics and competition 8) Predation and herbivory 9) Other species interactions 10) The nature of and change in communities 11) Biogeography and species diversity 12) Ecosystem productivity; energy flow, food webs, and nutrient cycling 13) Conservation Biology 14) Landscape and global ecology 15) Final Exam 16) Feedback											
【履修要件】											
Understanding of high school biology is recommended.											
【成績評価の方法・観点】											
Assessment will comprise of class attendance and completion of quizzes (10%), assignments (30%), and a final examination (60%). The final examination will test whether students have achieved the course goals.											
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## Introduction to Ecology-E2(2)

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Students who are absent more than five times will not be credited.

### **[教科書]**

未定

### **[参考書等]**

（参考書）

Krebs, C.J. 『Ecology: The experimental Analysis of Distribution and Abundance』 （ Pearson ） ISBN:978-1-29202-627-5

### **[授業外学修（予習・復習）等]**

To achieve the course goals students should review the course materials plus optionally the according chapters in the recommended text books after each class. The time necessary for review should be in the range of 2-3 hours per class.

### **[その他（オフィスアワー等）]**