

環境と生態 II

科目ナンバリング ECE-104

【VII】 選択 2単位

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1. 授業の概要(ねらい)

1) [Environmental ecology I and II] include a study of the environment and living organisms, and how they interact with their physical environment. Topics to be covered in the course include environmental systems, biodiversity, population ecology, community ecology, renewable and nonrenewable energy sources, sustainable cities, as well as other related themes.

2) The course will begin with basic knowledge to enable students from different backgrounds to cope with the teaching materials.

2. 授業の到達目標

Students are expected to be able to:

1) understand and explain the climate and biodiversity.

2) understand and explain aquatic biodiversity.

3) understand and explain renewable and nonrenewable energy sources.

3. 成績評価の方法および基準

1. Term-end written exam will be held (totally 60 points).

2. Quizzes throughout the whole course will be conducted (totally 30 points).

3. Activities and participation though classes (totally 10 points).

4. 教科書・参考文献

教科書

Jay H. Withgott, Matthew Laposata Essential Environment: The Science Behind the Stories 6th
Pearson

参考文献

Michael Begon, Robert W. Howarth, Colin R. Townsend Essentials of Ecology 4th Wiley

5. 準備学修の内容

[Prior the class]

Students are highly encouraged to read the relevant chapters from the reference book in advance, to ensure the maximum benefits of the class. They should not hesitate to contact the instructor for any further explanation if needed.

[Post the class]

Students are required to read the taught subjects at home.

6. その他履修上の注意事項

7. 授業内容

- 【第1回】 An overview and guidance
- 【第2回】 Climate and terrestrial biodiversity
- 【第3回】 Atmospheric science, air quality, pollution control
- 【第4回】 Fresh water, oceans, coasts
- 【第5回】 Aquatic biodiversity
- 【第6回】 Sustaining aquatic biodiversity
- 【第7回】 Sustaining biodiversity: the species approach
- 【第8回】 Differentiation within and between species
- 【第9回】 Visitor/dental ecology
- 【第10回】 Global climate change
- 【第11回】 Nonrenewable energy sources, their impacts, energy conservation
- 【第12回】 Renewable energy alternatives
- 【第13回】 Managing our waste
- 【第14回】 The urban environment: creating sustainable cities
- 【第15回】 Term-end exam