



Vegetation Ecology

植群生態學

EEB 5085, semester 107-1, **in English**

Instructor: **David Zelený** (澤大衛)

When & Where: Wednesday 14:20-16:20, R1217 (Life Science Building)

Link to CEIBA: <https://ceiba.ntu.edu.tw/course/d2d7f1/index.htm>

About the class

The course is introducing main concepts in vegetation ecology. We will focus on different aspects of plant ecology at the community level, including topics like vegetation-environment relationship, vegetation dynamics, plant invasions, diversity patterns, plant traits, vegetation classification, biomes of the World etc.

The course is focused on senior undergraduate and graduate students, who want to gain theoretical knowledge about vegetation ecology. Additionally to theoretical lectures, I will also encourage students to deepen their view and interest by reading of suggested papers, as well as moderating

discussions on potentially interesting or controversial topics related to vegetation ecology. To conclude the class, each student needs to write and present the essay on selected topic, and pass through oral examination.

Overview of teaching schedule

(18 x 2 hours per week)

Broad topics we will talk about:

- Introduction to vegetation ecology (including historical overview and important persons)
- Vegetation and environment
- Diversity along environmental and spatial gradients (like latitude, productivity, pH etc.)
- Mechanisms of species coexistence in vegetation (assembly rules, niche- vs neutral, storage effect, priority effect)
- Plant functional traits at community level
- Plant invasions and invasibility of plant communities
- Biomes of the World

If we have enough time, we will include also:

- Vegetation dynamics (succession, disturbance)
- Vegetation classification and vegetation maps

Class activity: assigned readings and discussion

Activity in the class will be based on reporting and discussion of assigned readings. There will be several (~6) assigned readings, each more or less related to individual topic of the class. **All students need to read the paper** and write a very brief **“paper summary”** into a Word file uploaded to CEIBA the day before the class begins (so as I have time to read through it). For each class, one group of students will be selected to do the reading overview (short 5-10 minutes report, NOT longer), followed by brief discussion.

Check [instructions for assigned readings and discussion](#) to know how to do that (there is also Word file template, in which you will fill your paper summary).

Evaluation

Part of the final evaluation will be written essay on selected topic (in English) and its presentation in the class. Final evaluation will be based on activity in the class, written essay and its presentation, and final oral exam.

Class activity (assigned readings and discussion in the class)	30% (60 points for assigned reading, 40 points for group discussion)
Final essay	40% (essay + presentation)
Final examination (oral)	30%

References:

- van der Maarel E. & Franklin J. (2012): *Vegetation Ecology. 2nd edition.* Willey-Blackwell [NTU online source](#)
- Mittelbach G.G. (2012): *Community Ecology.* Sinauer Associates.
- Mueller-Dombois D. & Ellenberg H. (1974): *Aims and Methods of Vegetation Ecology.* John Wiley & Sons.
- Archibold O.W. (1995): *Ecology of World Vegetation.* Chapman & Hall.

