

OCE151 Wetlands Conservation and Environmental Education

Level: 1

Credit Units: 2.5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY SEMESTER

Synopsis:

Coastal habitats such as mangroves and seagrasses cover less than 0.5% of the sea bed but account for about 71% of all carbon storage in ocean sediments. They also perform key ecosystem functions such as goods provision (e.g. wild plant and animal resources) and services (e.g. tourism, transportation, storm protection), and offer cultural benefits. Unfortunately, mangroves around the world are highly threatened and undergo largescale deforestation. Less than 5% of original mangroves remains in Singapore. There is an urgent need to understand and communicate the importance of conserving this ecosystem.

The course provides students with the conceptual tools and learning experience to develop a deeper understanding of blue carbon and the importance of mangrove conservation vis-a-vis the United Nations' Sustainable Development Goals (SDG). The course learning outcomes will be achieved through a combination of e-learning, classroom activities and outfield, experiential learning.

The course will expose students to mangrove ecology and the impact of human activities on the mangrove ecosystem. Working with related community partners such as the National Parks Board (NParks) on community-based projects related to mangrove conservation, students will participate in and gain experience on conservation projects. They will be guided to reflect critically on the importance of mangrove conservation in Singapore and the region, and recognise the inherent challenges and emergent opportunities.

Topics:

- Understanding the biodiversity of Singapore
- Introduction to the mangrove ecosystem, mangrove plant species and wildlife
- Nature journaling: a learning tool to improve observations
- Evaluating ecosystem services of the coastal habitats
- Assessing human impact on coastal habitats
- Challenges and opportunities in the conservation of coastal and marine ecosystems

Learning Outcome:

- Name key species of mangrove flora and fauna in Singapore wetlands
- Identify the importance of wetlands in environmental conservation
- Discuss the challenges and opportunities in environmental conservation
- Interpret the importance of mangrove ecosystem services from multiple perspectives (e.g. social, economic, policy etc.)
- Present a detailed proposal for a nature guided tour
- Execute nature guided tour(s) with confidence

Assessment Strategies (Daytime Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	10
	TUTOR-MARKED ASSIGNMENT 1	40
	GROUP BASED ASSIGNMENT 1	50
Total		100