SEMESTER I
LSM3254 ECOLOGY OF AQUATIC ENVIRONMENTS

Prerequisite: LSM2251
Workload: 26 lecture hours + 24 tutorial/practical hours

Course description:
Aquatic environments make up >70% of the Earth’s surface. They host a huge diversity of life and ecosystems, many of which are vital to man. Topics covered in this module include the diversity and ecology of freshwater and marine habitats and organisms, the impacts of humans on these environments, and the conservation and management of these critical resources. Overall learning outcomes include an appreciation and understanding of aquatic habitats, their physical and biological properties and their associated ecosystems. The importance of both marine and freshwater environments to Singapore will be highlighted.

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<tr>
<th>S/N</th>
<th>Topics</th>
<th>Lecture hours</th>
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<tbody>
<tr>
<td>1.</td>
<td>Freshwater and Marine environments: Introduction: Course overview; linking freshwater and marine biology</td>
<td>2 DY/PT</td>
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| 2.  | Freshwater environments: Topics covered will include:  
- Ecological characteristics of fresh water  
- A brief survey of freshwater environments including natural lotic (e.g., streams) and lentic (e.g., lakes) environments, and artificial or modified environments (e.g., urban habitats such as canals and reservoirs) and their respective biodiversity  
- Population and community ecology in freshwater environments  
- Ecology of freshwater ecosystems | 10 DY |
| 3.  | Marine environments: Topics covered will include:  
- Estuaries and the interface between freshwater and marine systems.  
- Introduction to oceanography and the marine environment  
- Plankton and primary productivity  
- Intertidal (rocky shore and soft sediments)  
- Coral reefs, sea grasses and mangroves | 10 PT |
| 4.  | Freshwater and Marine environments: Conservation and management of aquatic environments; course review | 4 DY/PT |

Total Lectures: 26h
Practicals + Tutorial: 24h
Total hours: 50h

REFERENCES (Recommended text*):
Freshwater environments

Marine environments

Freshwater and Marine environments

MODE OF ASSESSMENT: Continual assessment 60%; final open-book exam 40%

MODULE CO-ORDINATOR/LECTURER:
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LECTURER: