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INSTITUTE OF
OCEANOGRAPHY
AND ENVIRONMENT

MMS3003: Environment: Issue and Global Perspectives (Lecture Note)

Course Developers: Assoc. Prof. Dr. Ong Meng Chuan, Assoc. Prof. Dr. Roswati Md Amin



LECTURE NOTE ENVIRONMENT: ISSUE AND GLOBAL PERSPECTIVE (MMS3003)

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PREFACE

This course is an elective subject with 3 credits (5 ECTS), offered specifically to Bachelor of Science (Marine Science) students; and was developed by Faculty of Science & Marine Environment, Universiti Malaysia Terengganu. Students will be introduced to environmental science knowledge and develop the ability to understand the recent global environmental issues that occurred not only in Malaysia region but around the world. Students will be able to devise ethical and politically viable plans and strategies to address these issues while balancing society, economy and environment. Students will propose appropriate methods or strategies to solve the environmental problems and the environment's impact via written reports and presentations during the lecture. Throughout the course, the online teaching, video lectures, group discussion and industrial in the classroom are involved as the teaching methods. In the meantime, students are assessed via written report, videos/poster presentation and final examination. The chapters in this course are:

Chapter #1: Global Issue and Sustainability

Chapter #2: Environmental Pollution Issues

Chapter #3: Act Locally Think Globally

Chapter #4: Climate Change and Global Warming

Chapter #5: Care Our Home

Chapter #6: Ocean Resources and Values

Chapter #7: Renewable and Non-Renewable Energy.

Chapter #8: Perspectives of Human's Relationship with Nature

Chapter #9: Politics, Socio-Economic, Environment and Sustainable Development

Target audience: Open for all students from Year 2 and Year 3.



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BIOGRAPHY OF THE AUTHORS

1. Dr. Ong Meng Chuan is an Associate Professor at the Marine Science Program, Faculty of Science and Marine Environment, Universiti Malaysia Terengganu, Terengganu, Malaysia. He holds a doctoral degree in Marine Pollution specifically in metals pollution from the University of South Brittany, France. His research focuses on the metal content in sediment samples which can act as geo-marker for pollution studies. Apart from the sediment samples, his research also included biota samples of fishes, crustaceans, bivalves, molluscs and plants such as seaweed and seagrass. From these biota samples, the suitability of using these organisms as bioindicator can be identified which best reflect the environmental quality. Hence, risk assessment towards human health by consuming these organisms can be estimated. He is currently actively gathering all the Malaysian marine aquatic environment data to be stored in the GIS database. With this database, these data can easily refer by other researchers for their studies.
2. Dr. Roswati Md Amin is an Associate Professor at the Marine Biology Program, Faculty of Science and Marine Environment, University Malaysia Terengganu, Terengganu, Malaysia. She holds a doctoral degree in Marine Biology specifically in plankton physiology and mainly copepods in marine ecosystem involving a combination of experimental lab work and field studies. Her recent focuses on spatial and temporal variation of phytoplankton and zooplankton distribution in coastal water of Peninsular Malaysia. Another major interest is to evaluate the current issue regarding microplastic on zooplankton in the field and using copepods to elucidate their physiological responses (reproductive success, fecal pellet production, ingestion and respiration rate) and understand its relation to different concentration of microplastic (synthetic and biodegradable) in the lab..