29. MO18-5312 Operation and Maintenance Management

Module name	Operation and Maintenance Management
Module level, if applicable	Master
Code, if applicable	MO18-5312
Subtitle, if applicable	-
Course, if applicable	Operation and Maintenance Management
Semester	3rd Semester
Person responsible for the module	Dr. Eng. Yeyes Mulyadi, S.T., M.Sc.
Lecturer	Dr. Eng. Yeyes Mulyadi, S.T., M.Sc.
Language	Indonesian
Relation to curriculum	Elective course for master degree program in Ocean Engineering
Type of teaching, contact hours	Lecture, <50 students 150 minutes x 16 weeks per semester
Workload	7. Class, 3 × 50' = 150 minutes per week 8. Independent Study, 3 × 60' = 180 minutes per week 9. Structured Activities, 3 × 60' = 180 minutes per week
Credit points	3 CREDITS ~ 4.8 ECTS CREDITS × 1.6 ECTS
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.
Recommended prerequisites	-

Learning outcomes **and their corresponding PLOs**	CLO.5. Able to understand, explain and conduct assessment on marine operation system CLO.6. Able to understand the concept of marine operations and services which is process of lifting, towing, load out, and installation of jacket platform, also berthing. CLO.7. Able to implement the concept and modeling also analysis of a marine operation CLO.8. Able to understand and explain the integrated management system in offshore structure and operations.	LO.8. Able to identify, formulize and solved the science and technology problems related to ocean engineering through the accurate and innovative theoretical, experimental or computational approach
Content	The course of Operation Research Models teaches the students to the basic principles, types of activities and characteristics of marine operations by considering the management system. The material is divided into subjects covering: offshore structural integrated management systems, types and characteristics of marine operations and services. This course is fundamental for ocean engineer to manage ocean resources as effective and efficient as possible. - Marine Management System - Offshore structural integrity management system - Design criteria & Procedures Operation Requirement - Marine Operation System and Services - Load-out process and analysis - Ballasting system of floating platform - Towing operation: stability and maneuvering, wet and dry transport system - Offshore installation: lifting analysis, process launching, pipe-laying, jacking mechanism, mooring analysis. - Offshore removal system and operation - Ship and port safety management system: transport system, Oil and gas handling safety system.	
Study and examination requirements and forms of examination	30. In-class exercise 31. Assignment 32. Mid-term exam 33. Final exam	
Media employed	Offline: LCD, whiteboard, PowerPoint presentation Online: websites (myITS Classroom), Zoom, Microsoft Teams, PowerPoint presentation.	

Reading list	6. Gerwick, Ben C. “Construction of Marine and Offshore Structures, 3rd edition”, CRC Press, Taylor and Francis Group, 2007 7. Subrata K. Chakrabarti: Handbook of Ocean Engineering, Elsevier, London, 2005. 8. Nielsen, F.G.: "Marine Operations. Lecture Notes" (Jan. 2006) 9. Berg, T. E.:"Marine Operations - Subsea Vehicles. Lecture Notes “ 10. Institute of Energy, Guidelines for the Management of Safety Critical Elements, 2007.