8. MO18-5204 Structural Response Analysis

Module name	Structural Response Analysis
Module level, if applicable	Master
Code, if applicable	MO18-5204
Subtitle, if applicable	-
Course, if applicable	Structural Response Analysis
Semester	2nd Semester
Person responsible for the module	Ir. Handayanu, M.Sc., Ph.D Yoyok Setyo Hadiwidodo, S.T., M.T., Ph.D
Lecturer	Ir. Handayanu, M.Sc., Ph.D Yoyok Setyo Hadiwidodo, S.T., M.T., Ph.D
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	10. Class, 3 × 50' = 150 minutes per week 11. Independent Study, 3 × 60' = 180 minutes per week 12. 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.1. Able to understand the concepts of finite element method (FEM) in design of offshore platforms CLO.2. Able to perform structural static analysis in design of offshore platforms by using FEM CLO.3. Able to perform structural dynamic response analysis on design of offshore platforms by using FEM	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	This course provide relevant studies related to finite element method concept for structural static and dynamic analysis in design of offshore structures	
Study and examination requirements and forms of examination	9. In-class exercise 10. Assignment 11. Mid-term exam 12. Final exam	
Media employed	Offline: LCD, whiteboard, PowerPoint presentation Online: websites (myITS Classroom), Zoom, Microsoft Teams, PowerPoint presentation.	
Reading list	1. Cook, R.D., Malkus, D.S., Plesha, M.E., 1989, *Concepts and Applications of Finite Element Analysis*, 3rd Ed., Wiley & Sons, New York. 2. Logan, D. L., 1992, *A First Course in the Finite Element Method*, Second Edition, PWS-KENT Publishing Co., Boston, USA. 3. Yang, T. Y, 1986, *Finite Element Structural Analysis*, Prentice-Hall, Inc. Englewood Cliffs, New Jersey, 07632, USA. 4. Weaver, W. and Johnson, P.R., Structural Dynamic by Finite Elements, New Jersey, Prentice-Hall, Inc. Englewood Cliffs, 1987.	