

23. MO18-5310 Ocean energy Potential Assessment

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| Module name | Ocean energy Potential Assessment |
| Module level, if applicable | Master |
| Code, if applicable | MO18-5310 |
| Subtitle, if applicable | - |
| Course, if applicable | Ocean energy Potential Assessment |
| Semester | 3 rd Semester |
| Person responsible for the module | Prof. Ir. Mukhtasor, M.Eng., Ph.D. Dr. Eng. Shade Rahmawati S.T., M.T. |
| Lecturer | Prof. Ir. Mukhtasor, M.Eng., Ph.D. Dr. Eng. Shade Rahmawati S.T., M.T. |
| 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 | 1. Class, $3 \times 50' = 150$ minutes per week 2. Independent Study, $3 \times 60' = 180$ minutes per week 3. Structured Activities, $3 \times 60' = 180$ minutes per week |
| Credit points | 3 CREDITS ~ 4.8 ECTS CREDITS \times 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 | - |

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| Learning outcomes and their corresponding PLOs | <p>CLO.1. Able to apply knowledge in the field of marine engineering in numerical modeling of ocean currents</p> <p>CLO.2. Able to apply knowledge in the field of marine engineering in numerical modeling of ocean waves</p> <p>CLO.3. Able to analyze the energy potential of ocean currents and waves to develop marine resource management.</p> | 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 | <p>This course will discuss about the management of ocean resources and activities through a contextual and up-to-date interdisciplinary approach. Main subjects of this course are:</p> <ul style="list-style-type: none"> ■ Introduction to modeling ■ Ocean current modeling ■ Ocean wave modeling ■ Introduction to the analysis of ocean energy potential ■ Analysis of the energy potential of ocean currents ■ Analysis of ocean wave energy potential | |
| Study and examination requirements and forms of examination | <p>24. In-class exercise</p> <p>25. Assignment</p> <p>26. Mid-term exam</p> <p>27. Final exam</p> | |
| Media employed | <p>Offline: LCD, whiteboard, PowerPoint presentation</p> <p>Online: websites (myITS Classroom), Zoom, PowerPoint presentation.</p> | |
| Reading list | | |

