



MINISTRY OF EDUCATION AND CULTURE
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS

Ketintang Campus, Jalan Ketintang, C3 Building, Surabaya 60231
Website: <http://s1-fisika.fmipa.unesa.ac.id/>, email: s1-fisika@unesa.ac.id

Undergraduate Programme In Physics

Module Handbook

Module Name :	<i>Fisika Oseanografi</i> Physical Oceanography
Module level :	Bachelor degree/Undergraduate Programme
Course Code :	4520102075
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not Applicable
Semester/Term	7/Fourth Year
Module coordinator(s)	Tjipto Prastowo, Ph.D
Lecturer(s):	Tjipto Prastowo, Ph.D
Language:	<i>Bahasa Indonesia</i> (Indonesian Language)
Classification within the curriculum:	Compulsory / Elective
Teaching format/class hours per week during the semester:	2 contact hours of lectures (sks or credit unit*)
Workload :	Lecture: 2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester. 79.33 total hours per semester ~ 3.18 ECTS **
Credit Point:	2 sks (3.18 ECTS)
Requirements:	Thermodynamics Waves
Learning goals/competencies:	1. Understanding the systematic study of ocean dynamics as a physical system and its roles in human life and living organisms. 2. Understanding interdependence of human and the ocean. 3. Understanding ocean's structure and its corresponding characteristics in the context of exploration of ocean resources. 4. Understanding potential threats from hydro-meteorological hazards associated with ocean hydrological cycle influenced by conditions on local, regional and global climates
Content	Indonesia is a marine country with area coverage of seas wider than lands. This calls for a specific course discussing issues related to knowledge and use of ocean resources in the country territory. During class discussions, a phenomenological approach is utilised with discussions are focused on aspects of physical oceanography. Class discussions include the properties of ocean



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	water, ocean wave and energy, ocean tides and currents, ocean circulation on regional and global scales, the Indonesian Throughflow, hydro-meteorological hazards associated with ocean hydrological cycle, and characteristic of a tsunami wave.										
Attribute Soft skill:	Scientific report, public speaking, and team work										
Study/exam achievements:	Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio: <table border="1"> <thead> <tr> <th>Assessment Components</th><th>Percentage of contribution</th></tr> </thead> <tbody> <tr> <td>Participation</td><td>20%</td></tr> <tr> <td>Assignment</td><td>30%</td></tr> <tr> <td>Mid-semester test</td><td>20%</td></tr> <tr> <td>Final semester test</td><td>30%</td></tr> </tbody> </table>	Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%	Final semester test	30%
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Final semester test	30%										
Learning Methods :	Student-centered approach, lecture and discussion, and presentations (structured activities)										
Form of Media:	Power Point slides, e-book file, and multimedia.										
Literature (primary references):	1. Prastowo, T. 2012. Sains Kebumihan. Unpublished work, pp.1-31. 2. Burhanudin, S. dkk. 2003. Sejarah Maritim Indonesia. Jakarta: BRKP Kementerian Perikanan dan Kelautan, pp.1-185 3. Supangat dan Susanna. 2005. Pengantar Oseanografi. Jakarta: BRKP Kementerian Perikanan dan Kelautan, pp.2-286. 4. Pinet, P. R. 1998. Invitation to Oceanography. London, UK: Jones and Bartlett Publishers, pp.1-620										
Notes:	*1 credit unit or <i>sks</i> in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018. **1 credit unit or <i>sks</i> = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2019										