PROGRAM STUDI MAGISTER TEKNIK GEOMATIKA
MASTER OF GEOMATICS ENGINEERING

BUKU PEDOMAN MATA KULIAH

COURSES MODULE HANDBOOK

ASPEK GEODETIK DALAM HUKUM LAUT
GEODETIC ASPECTS OF THE LAW OF THE SEA

DEPARTEMEN TEKNIK GEOMATIKA
Fakultas Teknik Sipil, Perencanaan, dan Kebumian

DEPARTMENT OF GEOMATICS ENGINEERING
Faculty of Civil Engineering, Planning, and Geo Engineering

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

27. Aspek Geodetik dalam Hukum Laut / *Geodetic Aspects of the Law of the Sea*

Nama modul *Module name*	Aspek Geodetik dalam Hukum Laut *Geodetic Aspects of Law of the Sea*
Tingkatan *Module level*	Pasca Sarjana (S2) *Master Degree*
Kode *Code*	CM235804
Mata kuliah *Course*	Aspek Geodetik dalam Hukum Laut *Geodetic Aspects of Law of the Sea*
Semester *Semester*	III (tiga) atau IV (empat) *III (three) or IV (four)*
Penanggung jawab mata kuliah *Person responsible for the module*	Danar Guruh Pratomo, S.T., M.T., Ph.D.
Dosen *Lecturer*	Danar Guruh Pratomo, S.T., M.T., Ph.D.
Bahasa *Language*	Bahasa Indonesia dan Bahasa Inggris *Indonesian and English*
Relasi pada kurikulum *Relation to curriculum*	Mata kuliah pilihan untuk Program Master Teknik Geomatika *Elective Courses for Master of Geomatics Engineering*
Tipe pertemuan, jam tatap muka *Type of teaching, contact hours*	Kuliah, 1.67 jam x 16 minggu per semester *Lecture, 1.67 hours x 16 weeks per semester*
Beban belajar *Workload*	Kuliah: 1.67 jam x 14 minggu = 23.38 jam Penugasan terstruktur: 2 jam x 14 minggu= 28 jam Kegiatan mandiri: 2 jam x 14 minggu = 28 jam Ujian: 1.67 jam x 2 kali = 3.34 jam Paper review: 2.83 jam x 14 = 39.62 Studi Case-based: 2.83 jam x 14 = 39.62 Total = 161.96 jam *Lecture: 1.67 hours x 14 weeks = 23.38 hours* *Structured exercises and assignments: 2 hours x 14 weeks = 28 hours* *Independent activities: 2 hours x 14 weeks = 28 hours* *Exam: 1.67 hours x 2 time = 3.34 hours* *Paper review: 2.83 jam x 14 = 39.62* *Case-based study: 2.83 jam x 14 = 39.62* *Total = 161.96 hours*
Kredit *Credits*	2 SKS + 2 SKS tambahan beban *2 credits + 2 credits additional activities*
Persyaratan sesuai dengan peraturan ujian	Minimum 80% kehadiran untuk mengikuti ujian tertulis

Requirements according to the examination regulations	*Minimum 80% attendance in this course in order to take the exams*
Deskripsi Mata Kuliah	Mata kuliah ini menjelaskan mengenai keterkaitan antara kondisi fisik laut dari sisi geodesi terhadap hukum laut. Mahasiswa akan mendapatkan berbagai materi dari aspek teknis dan legal mengenai hukum laut tersebut. Materi-materi tersebut disampaikan pada teacher-based, student-based, dan project-based selama masa pembelajaran. Secara garis besar materi yang akan dipelajari antara lain: hukum laut internasional, kondisi fisik perairan Indonesia, Geodetic Aspects of the Law of the Sea (GALOS), dan datum yang digunakan serta luaran berupa peta laut.
Description of Course	*This course explains the relationship between the physical condition of the sea from the geodetic point of view and the law of the sea. Students will get various materials from the technical and legal aspects of the law of the sea. These materials are delivered to teacher-based, student-based, and project-based during the learning period. Broadly speaking, the materials to be studied include: international law of the sea, the physical condition of Indonesian waters, Geodetic Aspects of the Law of the Sea (GALOS), and the datum used and the output in the form of a marine map.*
Capaian Pembelajaran / *Course Learning Outcomes*	1. Mampu memahami aspek geodesi: model bumi, datum horisontal, datum vertikal, dan parameter transformasi 2. Mampu memahami proyeksi peta: jarak geodesi dan loxodrome 3. Mampu menyebutkan dan menjelaskan jenis peta laut: conventional charts dan electronic nautical chart 4. Mampu menjelaskan sources and reliability: S100, S57, S53 IHO 5. Mampu menentukan baselines laut 6. Mampu menentukan maritime zones 7. Mampu merencanakan zonasi wilayah pesisir dan pulau-pulau kecil melalui RZWP3K 8. Mampu memanfaatkan marine cadastre dalam penentuan hukum laut berdasarkan aspek geodetik
Module objectives/ Course learning outcomes	*1. Able to understand aspects of geodesy: earth model, horizontal datum, vertical datum, and datum transformation parameters* *2. Able to understand map projections: geodetic and loxodrome distances*

		3.	Able to name and explain types of nautical charts: conventional charts and electronic nautical charts								

3. Able to name and explain types of nautical charts: conventional charts and electronic nautical charts
4. Able to explain sources and reliability: S100, S57, S53 IHO
5. Able to determine ocean baselines
6. Able to determine maritime zones
7. Able to plan zoning of coastal areas and small islands through RZWP3K
8. Able to utilize marine cadastre in determining maritime law based on geodetic aspects

CPMK dan hubungan dengan CPL Prodi *Learning outcomes and their corresponding to PLOs*	PLO.1	PLO.2	PLO.3	PLO.4	PLO.5	PLO.6	PLO.7	PLO.8	PLO.9
CLO.1				✓					
CLO.2				✓					
CLO.3				✓			✓		
CLO.4								✓	
CLO.5							✓		
CLO.6							✓	✓	
CLO.7								✓	
								✓	

Mata kuliah wajib prasyarat *Mandatory prerequisites*	-

Pokok Bahasan	1. Aspek geodetik meliputi model bumi, datum horisontal, dan datum vertical

Pokok Bahasan

1. Aspek geodetik meliputi model bumi, datum horisontal, dan datum vertical
2. Parameter transformasi datum berdasarkan aspek geodesi
3. Proyeksi peta: jarak geodesi dan loxodrome
4. Jenis peta laut: conventional charts dan electronic nautical chart
5. Sources and reliability aspek geodetik dalam hukum laut berdasarkan pada : S100, S57, S53 IHO
6. Baselines laut berdasarkan aspek geodetik dalam hukum laut
7. Maritime zones pada hukum laut berdasarkan aspek geodetik
8. Data dan informasi perencanaan zonasi wilayah pesisir dan pulau-pulau kecil melalui RZWP3K
9. Marine cadastre dalam penentuan hukum laut berdasarkan aspek geodetik

Content

1. *Geodetic aspects include the earth model, horizontal datum, and vertical datum*
2. *Datum transformation parameters based on geodetic aspects*
3. *Map projections: geodetic and loxodrome distances*

	4. Types of nautical charts: conventional charts and electronic nautical charts 5. Sources and reliability of geodetic aspects in maritime law are based on: S100, S57, S53 IHO 6. Marine baselines are based on the geodetic aspect of maritime law 7. Marine baselines are based on the geodetic aspect of maritime law 8. Data and information on zoning planning for coastal areas and small islands through RZWP3K 9. Marine cadastre in determining maritime law based on geodetic aspects
Pembelajaran dan Persyaratan Ujian *Study and examination requirements and forms of examination*	<table><tr><th>Rencana Evaluasi</th><th>Bobot Weight</th></tr><tr><td>Tugas 1 Assignment 1</td><td>10%</td></tr><tr><td>Kuis 1 Quiz 1</td><td>10%</td></tr><tr><td>Evaluasi Tengah Semester Mid Exam</td><td>25%</td></tr><tr><td>Tugas 2 Assignment 2</td><td>15%</td></tr><tr><td>Tugas 3 Assignment 3</td><td>15%</td></tr><tr><td>Evaluasi Akhir Semester Final Exam</td><td>25%</td></tr></table>
Media yang digunakan *Media employed*	Classical teaching tools with white board and power point presentation
Daftar Pustaka *Reading list*	1) Alexander 1993, International Maritime Boundaries, National Legislative Series, Netherlands 2) Beazley 1987, Maritime Limits and Baseline, The Hydrographic Society, UK 3) Sjamsir Mira 1993 dan 1997, GALOS Proceedings I dan II, Penerbit ITB