CP234102 - Natural Resources and Environmental Systems

Module Name	Natural Resources and Environment Systems
Module level, if applicable	Basic BoURP
Code, if applicable	CP234102
Subtitle, if applicable	-
Course, if applicable	Natural Resources and Environmental System
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	Surya Hadi Kusuma, S.T., M.T.
Lecturer	Surya Hadi Kusuma, S.T., M.T. Vely Kukinul Siswanto, S.T., M.T., M.Sc. Ema Umilia, S.T., M.T. Arwi Yudhi Koswara, S.T., M.T.
Language	Indonesian, English
Relation to curriculum	Compulsory Courses for undergraduate program in Urban and Regional Planning
Type of teaching, contact hours	M3: Case study M4: Collaborative learning M5: Cooperative learning 2.83 hours x 14 weeks = 40 hours
Workload	Regular (4 SKS) Class: 2.83 hours x 14 weeks = 40 hours Structured activities: 6 hours x 14 weeks = 84 hours Independent Study: 2.83 hours x 14 weeks = 40 hours Exam: 5 hours x 4 weeks = 20 hours Total = 184 hours
Credit points	4 SKS ~ 6.4 ECTS
Requirements according to the examination regulations	Registered in this course Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intendedlearning outcomes	***General knowloedge:*** 1. Able to understand the theoretical concepts of urban and regional planning in the aspects of urban studies, regional studies, coastal studies, spatial science, planning science, data science, built environment design, infrastructure and transportation systems, environmental management, social systems, economics, management studies, and research /project.

	2. Able to understand the techniques and processes of urban and regional planning qualitatively, quantitatively, and spatial modeling (geographical information systems) and presentation techniques. ***Specific knowledge*:** ***1.*** Able to understand the theoretical concepts of basic physical and environmental aspects in planning to achieve sustainable development goals. ***2.*** Able to identify regional, urban, and coastal spatial characteristics, by understanding the interrelationships between aspatial and spatial aspects, so that information is available as a basis for compiling analyzes as well as planning models and concepts. ***3.*** Able to identify regional, urban, and coastal spatial characteristics, by understanding the interrelationships between aspatial and spatial aspects, so that information is available as a basis for compiling analyzes as well as planning models and concepts. ***4.*** Able to understand the techniques and planning processes qualitatively, quantitatively, and spatial modeling (Geographical Information Systems) on the basic physical and environmental aspects in the preparation of spatial planning. ***5.*** Able to understand the techniques and planning processes qualitatively, quantitatively, and spatial modeling (Geographical Information Systems) on the basic physical and environmental aspects in the preparation of spatial planning.
Content	1. The Concept of Sustainable Development in Spatial Planning 2. Concepts and Techniques of Analysis of Natural Resource Systems and Land Environment (Land): Land Capability and Land Suitability 3. Concepts and Techniques of Analysis of Natural Resources Systems and Land Environment (Land): Land Balance and Water Balance 4. Concepts and Techniques of Analysis of Natural Resource Systems and Land Environment (Land): Air Balance and Vegetation 5. Concepts and Techniques for Analysis of Natural Resources Systems and Land Environment (Land): Other Natural Resources Balance 6. Concepts and Analysis Techniques for Natural Resource Systems and Coastal (Marine) Environment: Coastal Ecosystems, and Utilization of Existing Sea Space 7. Concepts and Analysis Techniques for Natural Resource Systems and Coastal (Marine) Environment: Bathymetry and Geomorphology, and

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<tr><td></td><td>Disaster Risk
8. Concepts and Analysis Techniques for Natural Resource Systems and the Coastal (Marine) Environment: Oceanography
9. Concepts and Analysis Techniques of Natural Resource Systems and Coastal (Marine) Environment: Fishery Resources and Tourism Zone Suitability
10. Application of Concepts and Techniques for Analysis of Natural Resources Systems and Environment on Land (Land) and Coastal (Ocean)</td></tr>
<tr><td>Study and examination requirements and forms ofexamination</td><td>4 assessments:

<table><tr><th>Evaluation</th><th>Method</th><th>Weight</th></tr><tr><td>1</td><td>Weekly Group Presentation</td><td>15%</td></tr><tr><td>2</td><td>Quiz 1</td><td>30%</td></tr><tr><td>3</td><td>Quiz 2</td><td>30%</td></tr><tr><td>4</td><td>Study Case Group Task</td><td>25%</td></tr></table>
1. Weekly Group Presentation – week 2 until week 6 and week 8 until week 11
2. Quiz 1 – week 7
3. Task Report – week 12
4. Final-Term Test – week 16</td></tr>
<tr><td>Media employed</td><td>Classical teaching tools with white board and power point presentation, audiovisual, zoom meeting, ITS online classroom.</td></tr>
<tr><td>Reading list</td><td>Main reference:
1. Departemen Pekerjaan Umum (2008). Modul Terapan Pedoman Teknik Analisis Aspek Fisik & Lingkungan, Ekonomi serta Sosial Budaya dalam Penyusunan Rencana Tata Ruang (Peraturan Menteri Pekerjaan Umum No. 20/PRT/M/2007). Direktorat Jenderal Penataan Ruang
2. Kementerian Lingkungan Hidup (2010). Pengembangan Pedoman Evaluasi Pemanfaatan Ruang (Penyempurnaan Lampiran Permen LH 17/2009).
3. Kementerian Kelautan dan Perikanan (2016). Pedoman Teknis Penyusunan Peta Rencana Zonasi Wilayah Pesisir dan Pulau-Pulau Kecil (RZWP3K) Provinsi. Direktorat Tata Ruang Laut, Pesisir dan Pulau-Pulau Kecil.

Supporting reference:
1. Subandono Diposaptono (2017). Membangun Poros Maritim Dunia dalam Perspektif Tata Ruang Laut. Kementerian Kelautan dan Perikanan
2. IPCC Panel (2019). 2019 Refinement to the 2006</td></tr>
</table>

	IPCC Guidelines for National Greenhouse Gas Inventories. 3. Undang-Undang Republik Indonesia Nomor 3 Tahun 2020 Tentang Pertambangan Mineral dan Batubara 4. Peraturan Menteri Agaria dan Tata Ruang/Kepala Badan Pertanahan Nasional Nomor 14 Tahun 2022 tentang Penyediaan dan Pemanfaatan Ruang Terbuka Hijau 5. Peraturan Pemerintah Nomor 22 Tahun 2021 Tentang Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup 6. Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor P.14/MENLHK/SETJEN/KUM.1/7/2020 Tentang Indeks Standar Pencemaran Udara 7. Peraturan Menteri Energi dan Sumber Daya Mineral Republik Indonesia Nomor 16 Tahun 2021 Tentang Tata Cara Pemberian Izin Wilayah, Perizinan, dan Pelaporan Pada Kegiatan Usaha Pertambangan Mineral dan Batubara