

PROGRAM STUDI MAGISTER TEKNIK GEOMATIKA
MASTER OF GEOMATICS ENGINEERING



BUKU PEDOMAN MATA KULIAH *COURSES MODULE HANDBOOK*

3D KADASTER DAN BIM
3D CADASTRE AND BIM

DEPARTEMEN TEKNIK GEOMATIKA
Fakultas Teknik Sipil, Perencanaan, dan Kebumihan

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

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

<p><i>Description of Course</i></p>	<p><i>ruang yang diterapkan secara luas di beberapa negara juga dipelajari sebagai perbandingan. Mata kuliah ini juga mempelajari tentang perolehan data teknik dan metode yang kemudian divisualisasikan dalam 3 dimensi menggunakan perangkat lunak yang mendukung tersebut. Pemodelan Informasi Geospasial (GIM) menunjukkan metode pemodelan digital dari fenomena terkait ruang angkasa. dari dunia nyata. Hal ini ditandai dengan deskripsi multidimensi fitur geospasial berdasarkan lokasi dan orientasi dalam Sistem Referensi Spasial (SRS), geometri dan topologi raster/vektor, data atribut, dan waktu. Dengan demikian, GIM digunakan sebagai dokumentasi digital keadaan dunia nyata dan dapat diterapkan pada berbagai pertanyaan terkait spasial.</i></p> <p><i>In this course, students learn about the registration system for property rights of space. The implementation of the right of ownership of flats is the focus of this subject, especially in Indonesia. The registration system of right to space which is implemented broadly in several countries is also studied as a comparison. This course also studies data acquisition techniques and methods which are then visualized in 3 dimensions using software that supports this. Geospatial Information Modelling (GIM) denotes the digital modeling method of space-related phenomena. of the real world. It is characterized by multidimensional descriptions of geospatial features by location and orientation in Spatial Reference System (SRS), raster/vector geometry and topology, attribute data, and time. Thus, GIM is used as a digital documentation of real-world states and can be applied to a variety of spatially related questions. Geospatial Information Modeling (GIM) denotes a method of digital modeling of space-related phenomena. from the real world. It is characterized by a multidimensional description of geospatial features based on location and orientation in a Spatial Reference System (SRS), raster/vector geometry and topology, attribute data, and time. Thus, GIM is used as a digital documentation of real world conditions and can be applied to various spatial questions.</i></p>
<p>Capaian Pembelajaran / Course Learning Outcomes</p>	<ol style="list-style-type: none"> 1. Mahasiswa mampu menjelaskan pemodelan semantik dalam BIM 2. Mahasiswa mampu melakukan pemodelan BIM dan geometri termasuk pemodelan detail dan ketelitian

<p><i>Module objectives / Course learning outcomes</i></p>	<ol style="list-style-type: none"> 3. Mahasiswa mampu menjelaskan konsep dan prinsip sistem pendaftaran hak atas ruang (3-D Cadastre). 4. Mahasiswa mampu menjelaskan landasan hukum/peraturan yang berlaku di Indonesia terhadap kegiatan sistem pendaftaran hak atas ruang dan pelaksanaannya. 5. Mahasiswa mampu menjelaskan praktik kadaster 3D terkini di Indonesia dan luar negeri: studi kasus: Kompleks bangunan, Objek infrastruktur bawah permukaan, realisasi infrastruktur geo-Informasi <ol style="list-style-type: none"> 1. <i>Students are able to explain semantic modeling in BIM</i> 2. <i>Students are able to carry out modeling and geometry BIM including modeling details and accuracy.</i> 3. <i>Students are able to explain the concepts and principles of the registration system of rights to space (3-D Cadastre)</i> 4. <i>Students are able to explain the legal/regulatory basis that applies in Indonesia for the activities of the registration system of rights to space and its implementation</i> 5. <i>Students are able to explain the current practice of 3D cadaster in Indonesia and abroad: case studies: Building complex, Subsurface infrastructure objects, realization of geo-Information infrastructure.</i> 																																																												
<p>CPL Prodi yang dibebankan <i>Learning outcomes and their corresponding to PLOs</i></p>	<table border="1" data-bbox="694 1323 1283 1592"> <thead> <tr> <th></th> <th>PLO.1</th> <th>PLO.2</th> <th>PLO.3</th> <th>PLO.4</th> <th>PLO.5</th> <th>PLO.6</th> <th>PLO.7</th> <th>PLO.8</th> <th>PLO.9</th> </tr> </thead> <tbody> <tr> <td>CLO.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>CLO.3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>CLO.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table>		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						✓	✓		
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Pembelajaran dan Persyaratan Ujian <i>Study and examination requirements and forms of examination</i>	<table border="1"> <thead> <tr> <th>Rencana Evaluasi</th> <th>Bobot Weight</th> </tr> </thead> <tbody> <tr> <td>Tugas 1 <i>Assignment 1</i></td> <td>15%</td> </tr> <tr> <td>Evaluasi Tengah Semester <i>Mid Semester Exam</i></td> <td>15%</td> </tr> <tr> <td>Tugas 2 <i>Assignment 2</i></td> <td>40%</td> </tr> <tr> <td>Evaluasi Akhir Semester <i>Final Semester Exam</i></td> <td>30%</td> </tr> </tbody> </table>		Rencana Evaluasi	Bobot Weight	Tugas 1 <i>Assignment 1</i>	15%	Evaluasi Tengah Semester <i>Mid Semester Exam</i>	15%	Tugas 2 <i>Assignment 2</i>	40%	Evaluasi Akhir Semester <i>Final Semester Exam</i>	30%
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Media yang digunakan <i>Media employed</i>												
Classical teaching tools with whiteboard and powerpoint presentation												
Daftar Pustaka <i>Reading list</i>												