

PROGRAM STUDI MAGISTER TEKNIK GEOMATIKA
MASTER OF GEOMATICS ENGINEERING



BUKU PEDOMAN MATA KULIAH *COURSES MODULE HANDBOOK*

METODOLOGI PENELITIAN DAN PENULISAN PROPOSAL
RESEARCH METHODOLOGY AND PROPOSAL WRITING

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

5. Metodologi Penelitian dan Penulisan Proposal / Research Methodology and Proposal Writing

Nama modul <i>Module name</i>	Metodologi Penelitian dan Penulisan Proposal <i>Research Methodology and Proposal Writing</i>
Tingkatan <i>Module level</i>	Pasca Sarjana (S2) <i>Master Degree</i>
Kode <i>Code</i>	CM235201
Mata kuliah <i>Course</i>	Metodologi Penelitian dan Penulisan Proposal <i>Research Methodology and Proposal Writing</i>
Semester <i>Semester</i>	II (dua) <i>II (two)</i>
Penanggung jawab mata kuliah <i>Person responsible for the module</i>	Dr. Eko Yuli Handoko, S.T., M.T.
Dosen <i>Lecturer</i>	Prof. Mokhamad Nur Cahyadi, S.T., M.Sc., Ph.D. Dr. Eko Yuli Handoko, S.T., M.T.
Bahasa <i>Language</i>	Bahasa Indonesia dan Bahasa Inggris <i>Indonesian and English</i>
Relasi pada kurikulum <i>Relation to curriculum</i>	Mata kuliah wajib untuk Program Master Teknik Geomatika <i>Compulsory Courses for Master Program of Geomatics Engineering</i>
Tipe pertemuan, jam tatap muka <i>Type of teaching, contact hours</i>	Kuliah, 1.67 jam x 16 minggu per semester <i>Lecture, 1.67 hours x 16 weeks per semester</i>
Beban belajar <i>Workload</i>	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 Total = 82.72 jam <i>Lecture: 1.67 hours x 14 weeks = 23.38 hours</i> <i>Structured exercises and assignments: 4 hours x 14 weeks = 28 hours</i> <i>Independent activities: 4 hours x 14 weeks = 28 hours</i> <i>Exam: 1.67 hours x 2 time = 3.34 hours</i> <i>Total = 82.72 hours</i>
Kredit <i>Credits</i>	2 SKS <i>2 credits</i>
Persyaratan sesuai dengan peraturan ujian <i>Requirements according to the examination regulations</i>	Minimum 80% kehadiran untuk mengikuti ujian tertulis <i>Minimum 80% attendance in this course in order to take the exams</i>

<p>Deskripsi Mata Kuliah</p> <p><i>Description of Course</i></p>	<p>Mata kuliah ini bertujuan untuk membekali para mahasiswa agar mampu mengidentifikasi, menganalisis, dan mengembangkan pengetahuan dan teknologi dalam teknik geomatika. Serta mahasiswa mampu untuk mengelola penelitian untuk pengembangan yang bermanfaat dalam kerangka pemikiran logis , kritis dan sistematis yang di terapkan dalam penyusunan tesis.</p> <p><i>This course aims to equip students with the ability to identify, analyze, and develop knowledge and technology in geomatics engineering. Students can also use critical, logical, and systematic thinking when they write their thesis to help them manage their research for useful growth.</i></p>
<p>Capaian Pembelajaran / Course Learning Outcomes</p>	<ol style="list-style-type: none"> 1. Mampu melakukan validasi akademik atau kajian sesuai bidang keahliannya dalam menyelesaikan masalah di masyarakat atau industri yang relevan melalui pengembangan pengetahuan dan keahliannya. 2. Mampu menyusun ide, hasil pemikiran, dan argumen saintifik secara bertanggung jawab dan berdasarkan etika akademik, serta mengkomunikasikannya melalui media kepada masyarakat akademik dan masyarakat luas. 3. Mampu mengidentifikasi bidang keilmuan yang menjadi obyek penelitiannya dan memosisikan ke dalam suatu peta penelitian yang dikembangkan melalui pendekatan interdisiplin atau multidisiplin. 4. Mampu mengambil keputusan dalam konteks menyelesaikan masalah pengembangan ilmu pengetahuan dan teknologi yang memperhatikan dan menerapkan nilai humaniora berdasarkan kajian analisis atau eksperimental terhadap informasi dan data. 5. Mampu meningkatkan kapasitas pembelajaran secara mandiri. 6. Mampu mendokumentasikan, menyimpan, mengamankan, dan menemukan kembali data hasil penelitian dalam rangka menjamin kesahihan dan mencegah plagiasi. 7. Mampu mengimplementasikan prinsip keberlanjutan dalam mengembangkan pengetahuan. 8. Memiliki pengetahuan tentang teori sains-rekayasa pada bidang teknik geomatika.

<p><i>Module objectives/ Course learning outcomes</i></p>	<ol style="list-style-type: none"> 1. <i>Able to carry out academic validation or studies according to their field of expertise in solving problems in society or relevant industry through developing their knowledge and expertise.</i> 2. <i>Able to compile ideas, thoughts and scientific arguments responsibly and based on academic ethics, and communicate them through the media to the academic community and the wider community.</i> 3. <i>Able to identify the scientific field that is the object of research and position it on a research map developed through an interdisciplinary or multidisciplinary approach.</i> 4. <i>Able to make decisions in the context of solving science and technology development problems that pay attention to and apply humanities values based on analytical or experimental studies of information and data.</i> 5. <i>Able to increase learning capacity independently.</i> 6. <i>Able to document, store, secure and retrieve research data in order to ensure validity and prevent plagiarism.</i> 7. <i>Able to implement the principles of sustainability in developing knowledge.</i> 8. <i>Have knowledge of engineering sciences theory in the field of geomatics engineering.</i> 																																																																																										
<p>CPMK dan hubungan dengan CPL Prodi <i>Learning outcomes and their corresponding to PLOs</i></p>	<table border="1" style="width: 100%; text-align: center;"> <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> <tr> <td>CLO.6</td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.7</td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.8</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		✓	✓							CLO.6		✓	✓							CLO.7		✓	✓							CLO.8		✓	✓				✓		
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<p>Mata kuliah wajib prasyarat <i>Mandatory prerequisites</i></p>	<p style="text-align: center;">-</p>																																																																																										
<p>Pokok Bahasan</p>	<ol style="list-style-type: none"> 1. Persepsi penelitian 2. Konsep dasar dalam metodologi penelitian 3. Rumusan masalah untuk penelitian 4. Pengambilan sampel untuk penelitian 5. Metodologi survei 6. Struktur proposal dan laporan Thesis 7. Sitasi dan referensi 8. Gap Penelitian 																																																																																										

<p><i>Content</i></p>	<ol style="list-style-type: none"> 9. Teknik Presentasi 10. Menulis proposal penelitian 1. Research perceptions 2. Basic concepts in research methodology 3. Problem Formula for research 4. Plan sampling for research 5. Survey methodology 6. Structure of thesis proposal and report 7. Citations and references 8. Research Gaps 9. Presentation Techniques 10. Write a research proposal 										
<p>Pembelajaran dan Persyaratan Ujian <i>Study and examination requirements and forms of examination</i></p>	<table border="1" data-bbox="711 703 1430 1099"> <thead> <tr> <th data-bbox="711 703 1238 779">Rencana Evaluasi</th> <th data-bbox="1238 703 1430 779">Bobot Weight</th> </tr> </thead> <tbody> <tr> <td data-bbox="711 779 1238 857">Tugas 1 <i>Assessment 1</i></td> <td data-bbox="1238 779 1430 857">24%</td> </tr> <tr> <td data-bbox="711 857 1238 936">Tugas 2 <i>Assessment 2</i></td> <td data-bbox="1238 857 1430 936">21%</td> </tr> <tr> <td data-bbox="711 936 1238 1014">Evaluasi Tengah Semester <i>Mid Semester Exam</i></td> <td data-bbox="1238 936 1430 1014">27%</td> </tr> <tr> <td data-bbox="711 1014 1238 1099">Evaluasi Akhir Semester <i>Final Exam</i></td> <td data-bbox="1238 1014 1430 1099">28%</td> </tr> </tbody> </table>	Rencana Evaluasi	Bobot Weight	Tugas 1 <i>Assessment 1</i>	24%	Tugas 2 <i>Assessment 2</i>	21%	Evaluasi Tengah Semester <i>Mid Semester Exam</i>	27%	Evaluasi Akhir Semester <i>Final Exam</i>	28%
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<p>Media yang digunakan <i>Media employed</i></p>	<p>Classical teaching tools with whiteboard and powerpoint presentation</p>										
<p>Daftar Pustaka <i>Reading list</i></p>	<ol style="list-style-type: none"> 1. Program Pasca Sarjana ITS, 2014, <i>Pedoman penyusunan thesis</i>, Pasca Sarjana ITS Surabaya. 2. Purbo-hadiwidjojo, 1993, <i>Menyusun Laporan Teknik</i>, Penerbit ITB, Bandung 3. Leedy, Paul D. and Jeanne Ellis Ormrod. 2010. <i>Practical Research: Planning and Design, Ninth Edition</i>. Pearson Education, Inc 										