

PROGRAM STUDI MAGISTER TEKNIK GEOMATIKA
MASTER OF GEOMATICS ENGINEERING



BUKU PEDOMAN MATA KULIAH
COURSE MODULE HANDBOOK

METODOLOGI PENELITIAN
RESEARCH METHODOLOGY

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

MATA KULIAH WAJIB (COMPULSORY COURSE)

Metodologi Penelitian / *Research Methodology*

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| Nama modul <i>Module name</i> | Metodologi Penelitian <i>Research Methodology</i> |
| Tingkatan <i>Module level</i> | Pasca Sarjana (S2) <i>Master Degree</i> |
| Kode <i>Code</i> | RM185204 |
| Mata kuliah <i>Course</i> | Metodologi Penelitian <i>Research Methodology</i> |
| Semester <i>Semester</i> | II (dua) <i>II (two)</i> |
| Penanggung jawab mata kuliah <i>Person responsible for the module</i> | Eko Yuli Handoko |
| Dosen <i>Lecturer</i> | Eko Yuli Handoko Mokhamad Nur Cahyadi |
| 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: 4 jam x 14 minggu = 56 jam Kegiatan mandiri: 4 jam x 14 minggu = 56 jam Ujian: 1.67 jam x 2 kali = 3.34 jam Total = 138.72 jam <i>Lecture: 1.67 hours x 14 weeks = 23.38 hours</i> <i>Structured exercises and assignments: 4 hours x 14 weeks = 56 hours</i> <i>Independent activities: 4 hours x 14 weeks = 56 hours</i> <i>Exam: 1.67 hours x 2 time = 3.34 hours</i> <i>Total = 138.72 hours</i> |
| Kredit <i>Credits</i> | 2 SKS <i>2 credits</i> |
| Persyaratan sesuai dengan peraturan ujian <i>Requirements according to</i> | Minimum 80% kehadiran untuk mengikuti ujian tertulis <i>Minimum 80% attendance in this course in order to take</i> |

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| <i>the examination regulations</i> | <i>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> <p><i>Module objectives/ Course learning outcomes</i></p> | <ol style="list-style-type: none"> 1. Mampu mengidentifikasi, menganalisis permasalahan dalam teknik geomatika untuk penyusunan laporan tesis berdasarkan langkah-langkah penelitian yang sesuai dengan topik ataupun permasalahan Tesis. 2. Mampu bertanggung jawab kepada masyarakat dalam menyelesaikan permasalahan teknik di bidang geodesi, surveying, hidrografi, penginderaan jauh, fotogrametri, sistem informasi geografis, dan kadaster sesuai dengan etika profesi. 3. Mampu melaksanakan penelitian dalam bidang geodesi, surveying, hidrografi, penginderaan jauh, fotogrametri, sistem informasi geografis, dan kadaster secara berkelanjutan dan berwawasan lingkungan. <ol style="list-style-type: none"> 1. <i>Able to identify and analyze problems in geomatics techniques for the preparation of a thesis report based on research steps that are in accordance with the topic or thesis problem.</i> 2. <i>In order to be responsible to the public in solving technical problems in the fields of geodesy, surveying, hydrographic, remote sensing, photogrammetry, geographic information systems, and cadastres in accordance with professional ethics.</i> 3. <i>Students can do research in the fields of geodesy, surveying, hydrography, remote sensing, photogrammetry, geographic information systems, and cadastres in a way that is both safe and good for the earth.</i> |

| <p>CPMK dan hubungan dengan CPL Prodi <i>Learning outcomes and their corresponding to PLOs</i></p> | <table border="1"> <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> <th>PLO.10</th> <th>PLO.11</th> <th>PLO.12</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> <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> <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> <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 | PLO.10 | PLO.11 | PLO.12 | CLO.1 | | | ✓ | | ✓ | ✓ | | | | | | | CLO.2 | | | ✓ | | ✓ | ✓ | | | | | | | CLO.3 | | | ✓ | | ✓ | ✓ | | | | | | |
|---|--|------------------|--------------|--|-------|--|-------|----------------------------|-------|-------------------------------|--------|--------|--------|--------|-------|--|--|---|--|---|---|--|--|--|--|--|--|-------|--|--|---|--|---|---|--|--|--|--|--|--|-------|--|--|---|--|---|---|--|--|--|--|--|--|
| | PLO.1 | PLO.2 | PLO.3 | PLO.4 | PLO.5 | PLO.6 | PLO.7 | PLO.8 | PLO.9 | PLO.10 | PLO.11 | PLO.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO.1 | | | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO.2 | | | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO.3 | | | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Mata kuliah wajib prasyarat <i>Mandatory prerequisites</i></p> | <p>-</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Pokok Bahasan <i>Content</i></p> | <ul style="list-style-type: none"> • Studi pustaka, definisi masalah, tujuan dan manfaat, pengumpulan data, metodologi penelitian/penyelesaian masalah, pelaksanaan penelitian/penyelesaian masalah, analisa hasil, kesimpulan dan saran • <i>Library study, problem definition, objectives and benefits, data collection, research / problem solving methodology, research / problem solving, results analysis, conclusions and suggestions.</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Pembelajaran dan Persyaratan Ujian <i>Study and examination requirements and forms of examination</i></p> | <table border="1"> <thead> <tr> <th>Rencana Evaluasi</th> <th>Bobot Weight</th> </tr> </thead> <tbody> <tr> <td>Evaluasi Tengah Semester <i>Mid Semester Exam</i></td> <td>40%</td> </tr> <tr> <td>Evaluasi Akhir Semester <i>Final Exam</i></td> <td>40%</td> </tr> <tr> <td>Tugas <i>Assessment</i></td> <td>10%</td> </tr> <tr> <td>Kuis <i>Cognitive quiz</i></td> <td>10%</td> </tr> </tbody> </table> | Rencana Evaluasi | Bobot Weight | Evaluasi Tengah Semester <i>Mid Semester Exam</i> | 40% | Evaluasi Akhir Semester <i>Final Exam</i> | 40% | Tugas <i>Assessment</i> | 10% | Kuis <i>Cognitive quiz</i> | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rencana Evaluasi | Bobot Weight | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Evaluasi Tengah Semester <i>Mid Semester Exam</i> | 40% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Evaluasi Akhir Semester <i>Final Exam</i> | 40% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tugas <i>Assessment</i> | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kuis <i>Cognitive quiz</i> | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Media yang digunakan <i>Media employed</i></p> | <p>Media pengajaran secara klasik dengan papan tulis dan presentasi power point <i>Classical teaching tools with white board and power point presentation</i></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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |