## Module Description

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| Module name: | Cartography and Remote Sensing |
| Module level, if applicable | - |
| Code, if applicable | 110D5224 |
| Subtitle, if applicable | - |
| Courses, if applicable | Cartography and Remote Sensing |
| Semester(s) in which the module is taught | 2 |
| Person responsible for the module | 1. Dr. Eng. Abdul Rachman Rasyid, ST., M.Si<br>2. Laode Muhammad Asfan, S.T., M.T |
| Lecturer | 1. Dr. Eng. Abdul Rachman Rasyid, ST., M.Si.<br>2. Ilham Alimuddin, ST., M.GIS., Ph.D.<br>3. Gafar Lakatupa, ST., MT<br>4. Laode Muhammad Asfan Mujahid, ST., M.T<br>5. Sri Wahyuni, ST., MT<br>6. Suci Anugrah Yanti, ST., M.Si. |
| Language | Bahasa Indonesia/ English |
| Relation to curriculum | This course is one of mandatory subjects which is available in the first year/second semester. This course supports all courses related to mapping. The course is presented with a weight of four Credit Points/6.8 ECTS. |
| Type of teaching, contact hours | The learning method used is Student Center Learning. The method is oriented towards students as the center, in other words, students are trained to learn actively and independently. The course applies some methods: lectures, discussion, survey, and presentation. |
| Workload | This course consists of 4 credits in one meeting/ week. 1 credit equal to 50 minutes classroom meeting (face to face) plus 60 min teamwork assignment plus 60 min independent learning (outside class). |
| Credit points | 4 |
| Requirements according to the examination regulations | The number of student attendance is at least 80% of the total meeting. |
| Recommended prerequisites | - |

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<td>Module objectives/intended learning outcomes</td>
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CLO 1 Students are able to know the need for hardware and software for the systematic collection, editing and analysis of spatial data based on their function and mastering mapping software and its use in the field of Urban and Regional Planning appropriately. (supports ILO 1, PI-1/3, ILO 4, PI-2/3).<br>
CLO 2 Students are able to present the theory of cartography, remote sensing, the relationship of remote sensing to maps, the basics of image interpretation, and its role in the field of structured urban planning (supports ILO 2, PI-3/4, ILO 3, PI-2/3, ILO 4, PI-3/3).<br>
CLO 3 Students are able to apply digital mapping systems in the field of urban planning, operate GPS (Global Position System) in measuring locations using polygon techniques, process data, and apply construction techniques and reconstruction of field conditions in urban planning activities. (ILO 4, PI-3/3, ILO 8, PI-1/2, ILO 10, PI-2/4).<br><br>
The following table is mapping of the ILO and CLO in this course:
<table>
<tr><td></td><td>ILO 1</td><td>ILO 2</td><td>ILO 3</td><td>ILO 4</td><td>ILO 8</td><td>ILO 10</td></tr>
<tr><td>CLO 1</td><td>x</td><td></td><td></td><td>x</td><td></td><td></td></tr>
<tr><td>CLO 2</td><td></td><td>x</td><td>x</td><td>x</td><td></td><td></td></tr>
<tr><td>CLO 3</td><td></td><td></td><td></td><td>x</td><td>x</td><td>x</td></tr>
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<td>Content and relation to the studio works</td>
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This course supports the core courses of Data Collection Studio, Site Planning Studio, Urban Planning Studio, Regional Planning studio and Urban and Regional Development Planning Studio. The content of the course mainly as follow:<br><br>
1. Digital data analysis techniques are spatial in nature<br>
2. Fundamentals of cartography and maps.<br>
3. Geographic Information System software.<br>
4. Remote sensing concept.<br>
5. Uses and benefits of digital mapping.<br><br>
6. Practice Mapping with GPS.<br><br>
Student will exercise their knowledge and understanding in studio works when making data visualization with map.
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<td>Study and examination requirements and forms of examination</td>
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This course will be graded as follows:<br>
1. Midterms Exam (30%)<br>
2. Final Exam (35%)<br>
3. Quiz (15%)<br>
4. Task (20%)<br><br>
<table>
<tr><th>Percentage of Achievement</th><th>Grade</th><th>Conversion Value</th></tr>
<tr><td>85 – 100</td><td>A</td><td>4.00</td></tr>
<tr><td>80 - <85</td><td>A-</td><td>3.75</td></tr>
<tr><td>75 - < 80</td><td>B+</td><td>3.5</td></tr>
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<tr><td>70 - < 75</td><td>B</td><td>3.0</td></tr>
<tr><td>65 - < 70</td><td>B-</td><td>2.75</td></tr>
<tr><td>60 - < 65</td><td>C+</td><td>2.5</td></tr>
<tr><td>50 - < 60</td><td>C</td><td>2.00</td></tr>
<tr><td>40 - < 50</td><td>D</td><td>1.00</td></tr>
<tr><td>< 40</td><td>E</td><td>0.00</td></tr>
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<tr><td>Media employed</td><td>SIKOLA, Zoom</td></tr>
<tr><td>Reading list</td><td>Books:<br>1. Ramadhani Fatwa, Pengantar Ilmu Geo informatika. 2017, UB Press. Indonesia<br>2. Pedoman Pelatihan Sistem Informasi Geografi (SIG). 2017. Witaris LPPM Unhas. Indonesia<br>3. De Mers, (2004), Principles of Geographic Information System, Sydney, Australia<br>4. Aronoff, Stan, 1998, GIS A Management Perspective<br>5. Chrisman Nicholas, 1997 Exploring GIS.<br>6. Prahasta Eddy, 2004, Konsep Sistem Informasi Geografis, Bandung<br>7. Nuarsa, I Wayan, 2004, Mengolah Data Spasial dengan Mapinfo Profesional, Penerbit Andi, Yogyakarta.<br>8. Longley, Paul, Michael F. Goodchild, David J. Maguire, and David W. Rhind. 2001. Geographic Information Systems and Science. West Sussex, England: John Wiley & Sons Ltd.<br>9. Chang, Kang -Tsung. 2002, Introdcution To Geographic Information Systems. New York: McGraw-Hill.<br>10. Economic and Social Commission for Asia and the Pasific. , 1996, Manual on GIS for Planner and Decision Makers. New York: United Nations.<br>11. Environmental Systems Research Institute (ESRI), Inc. ESRI.Com. 2006. www.esri.com (accessed March 12, 2007).<br>12. Prahasta, Eddy. 2001. Konsep-konsep Dasar Sistem Informasi Geografis. Bandung.<br>13. Eddy Prahasta, Ir, MT, 2004, Sistem Informasi Geografis Tools dan Plug-Ins, Penerbit Informatika, Bandung.<br>14. Niccolas Chrisman, 2002, Exploring Geographic Information Systems: Second Edition, John Wiley & Sons, New York.<br>Others:<br>1. Practical Guide for Geographic Spatial Information Systems<br>2. KLHK PPIK Land Cover Guidelines</td></tr>
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