MODULE HANDBOOK

<table>
<tr><th colspan="7">SPATIAL DATA MANAGEMENT</th></tr>
<tr><th colspan="2">Module/Course Title</th><th>Student Workload</th><th>Credits</th><th>Semester</th><th>Frequency</th><th>Duration</th></tr>
<tr><td colspan="2">8720202193</td><td>2 CU X 16 X 170'= 90,6618</td><td>2</td><td>Odd</td><td>28 CU</td><td>14 x meetings</td></tr>
<tr><td>1</td><td colspan="2">Types of courses

LECTURER
PRACTICUM</td><td>Contact hours

(2CU X 1,59
ECTS)
X{(50:170') X
28,51
Workhours=
26,64</td><td>Independent Study

(2CU X 1,59
ECTS)
X{(60:170')X
28,51
Workhours=
31,96</td><td>Structured Study

(2CU X 1,59
ECTS)
X{(60:170')X
28,51
Workhours=
31,96</td><td>Class size

32</td></tr>
<tr><td>2</td><td colspan="6">Prerequisites for participation (if applicable)
-</td></tr>
<tr><td rowspan="5">3</td><td colspan="6">Program Learning Outcomes (PLO)</td></tr>
<tr><td colspan="6">PLO 2
Able to analyze regional and zoning characteristics (regionalization) in the context of resources and disasters based on the principles and approach of Geography to support sustainable development</td></tr>
<tr><td colspan="6">PLO 5
Able to demonstrate independent and collaborative performance that produces quality and measurable results</td></tr>
<tr><td colspan="6">PLO 8
Able to formulate, process, analyze data, and present geosphere information, both physical and human aspects by using geospatial technology for geography learning and research;</td></tr>
<tr><td colspan="6">PLO 11
demonstrate a responsible attitude towards work in their field of expertise independently</td></tr>
<tr><td></td><td colspan="6">Course Learning Outcome (CLO)
1. Able to analyze regional data needed in disaster mitigation and sustainable development.</td></tr>
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	2. Able to demonstrate independent and collaborative work in group discussion in a spatial data building. **3.** Able to formulate, process, analyze data, and present the spatial problem in learning and research to manage spatial data. **4.** Able to demonstrate a responsible attitude towards work in their field of expertise independently in own regency area related to disasters, erosion, and others
4	**Subject aims/Content** 1. Concepts of spatial data management 2. Preparation of data collection methods 3. Acquisition of primary and secondary sociobiophysical data of the region 4. Validation of geospatial data 5. Sampling and ground thurthing techniques 6. Spatial data format conversion 7. Database 8. Spatial and non-spatial data integration
5	**Teaching methods** Project Based Learning, Self Direction Learning, Small Group Discussion
6	**Assessment Methods** Portofolio, paper test, demonstration test
7	**This module/course is used in the following study programme/s as well** -
8	**Responsibility for module/course**
9	**Other information** 1. Alhasanat, M.B., Kabir, S., Hussin, W.M.A.W., Eddison, E., 2012. Spatial analysis of a historical phenomenon: using GIS to demonstrate the strategic placement of Umayyad desert palaces. GeoJournal. Vol. 77. Hal. 343–359. DOI 10.1007/s10708-010-9392-4 84 2. Alkobaisi, S., Bae, W.D., Vojtechovsky, P., Narayanappa, S., 2012. An interactive framework for spatial joins: a statistical approach to data analysis in GIS. Geoinformatica Vol. 16. Hal. 329–355. DOI 10.1007/s10707-011-0134-7 3. Ates, M., 2013. Geography Teachers' Perspectives towards Geography Education with Geographic Information Systems (GIS). International Journal of Innovative Research in Science, Engineering and Technology. Vol. 2, Issue 10. 4. Bednarz, S.W., 2004. Geographic information systems: A tool to support geography and environmental education?, GeoJournal. Vol. 60. Hal. 191– 199, 5. Cheremia, E., Tokareva, N., Rishe, N., 2012. Application of advance GIS technologies to environmental monitoring. NSF Supplement to IIP-0829576 for collaboration with I/UCRC-CAKE's Russian Site. State Research Center of the Russian Federation 6. Isman, A., 2011. Instructional Design In Education. The Turkish Online Journal of Educational Technology. Vol. 10, Issue I. Hal. 136 – 142. 7. Khan, M.N., Odman, M.T., Karimi, H., Goodchild, M., 2000. Developing and integrating advanced GIS Techniques in adaptive grid air quality model to reduce uncertainty. 4th International Conference on Integrating GIS and Environmental Modeling: Problems, Prospects and Research Needs. Alberta – Canada. 85

	8. Prince, M., dan Felder, R.M., 2006. Inductive Teaching And Learning Methods: Definitions, Comparisons, And Research Bases, J. Engr. Education, Vol. 95(2), hal. 123–138 9. Rao, S., dan Vinay, S., 2009. Choosing the right GIS framework for an informed Enterprise Web GIS Solution. CIESIN, Columbia University & NASA. New York, USA 10. Simsek. A., 2012. Locus of Instructional Control, Learner Control. Dalam: Seel, N., 2012. Encyclopedia of the Sciences of Learning. DOI 10.1007/978-1-4419-1428-6. 11. Singh, P.S., Chuti, D., Sudhakar, S., 2012. Development of a Web Based GIS Application for Spatial Natural Resources Information System Using Effective Open Source Software and Standards. Journal of Geographic Information System, Vol. 4, hal. 261-266.