

MODULE HANDBOOK

Module Name	Fieldwork II: Process Measurement and Process Result of Geosphere
Module level, if applicable	
Code, if applicable	GEL 2001
Semester(s) in which the module	Fourth (4 th) Semester
Person responsible for the module	Dr. Muhammad Anggri Setiawan, M. Sc.
Lecturer	Dr. Muhammad Anggri Setiawan, M. Sc. Dr. M. Widyastuti, MT. Dr. Abdur Rofi, S. Si., M. Si. Dr. Danang Sri Hadmoko, M.Sc Dr. Umi Listyaningsih, M.Si. Nugroho Christanto, S.Si., M.Sc Ahmad Cahyadi, S.Si., M.Sc.
Language	Indonesian
Relation to curriculum	Compulsory class to be taken.
Type of teaching, contact hours	STAR (<i>Student Teacher Aesthetic Role-Sharing</i>) is an optimal combination between SCL (<i>Student Centered Learning</i>) and TCL (<i>Teacher Centered Learning</i>). Lecture Fieldwork
Workload	Lecturer, including homework and discussion: 14 meetings x 100 minutes each (<i>bersifat tematik sesuai kebutuhan mahasiswa → tutorial</i>) Field work : 5 hari Mid Semester Examination: 100 minutes Final Semester Examination: 120 minutes Total workload = 1620 minutes
Credit points	2
Requirements according to the examination regulations	Must attend lecture for more than 70%
Recommended prerequisites	Fieldwork I
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. After attending lectures on the topic of Learning Natural Phenomena, students are able to explain the processes of measurement, process result of geosphere phenomenon, and explain the scopes of fieldwork II 2. After attending lectures on the topic of Measurement Process and Process Result of Geomorphological and Geological Factor, students are able to explain the limitations, geomorphological concepts, geomorphological processes, measurement of several geomorphological parameters, secondary data, and data analyze result 3. After attending lectures on the topic of Measurement Process and Result of Formation Process and Soil Characteristics, students are able to explain the limitations and soil concepts, processes of soil forming, measurement of several soil forming parameters, secondary data, and data analyze result 4. After attending lectures on the topic of Measurement

	<p>Process and Process Result of Hydrological Factor, students are able to explain the limitations and hydrological concepts, hydrological processes, measurement of several hydrological parameters, explain and analyze the results of data processing.</p> <p>5. After attending lectures on the topic of Measurement Process and Process Result of Social Economic Factor, students are able to explain the concepts and definitions of social economic, components in social economic, indicators used in social-economic observations, variables and relationship between social-economic variables, methods of social economic research, and analyze social economic data.</p> <p>6. After attending lectures on the topic of Spatial Analyze of Natural Phenomenon, students are able to explain the basic and analyze map creation.</p>
Content	<ol style="list-style-type: none"> 1. Learning Natural Phenomena (background and scope of the study, implementation process and teaching-learning method) 2. Measurement Process and Process Result of Geomorphological and Geological Factor (identification of landform unit and its characteristics, measurement technique, litological identification) 3. Measurement Process and Result of Formation Process and Soil Characteristics (Identification of soil morphology) 4. Measurement Process and Process Result of Hydrological Factor (hydrological aspect; example rain area measurement, discharge measurement, groundwater measurement) 5. Measurement Process and Process Result of Social Economic Factor (introduction, socio-culture components, population components, economic components, variables and relationship between socio-economic variables, scale of measurement, and research methods. 6. Spatial Analyze of Natural Phenomenon (basic map creation and analyze map creation).
Study and examination requirements and forms of examination	<p>Quiz (5 %), participation (5 %), individual assignment (20 %) group assignment presentation (10 %), mid-semester examination (30 %) dan final examination (30 %).</p> <p>Examination is formed in written test.</p>
Media employed	<ul style="list-style-type: none"> - Internet - Computers - LCD projector

Reading list	<p>Beers, J.W., 1976, <i>The Auger Hole Methods</i>, ILRI, Wageningen, The Netherlands.</p> <p>Bemmelen R.W. Van, 1949, <i>The Geology of Indonesia</i>, Vol II., Government Printing Office The Hague.</p> <p>Buol, S.W.F.D, Hole, R.J and Mac Gracen, 1980, <i>Soil Genesis and Classification</i>, The Iowa State Univ. Press Ams.</p> <p>Bruce J.P., and Clark R.H., 1963. <i>Introduction to Hydrometeorology</i>, Robert Macwell M.C.</p> <p>Chorley, R.J., 1967. <i>Introduction to Physical Hydrology</i>. Methuen, London.</p> <p>Cresweel, John W. 2010. Research <i>Design: Pendekatan Kualitatif, Kuantitatif, dan Mixed</i>. Yogyakarta: Pustaka Pelajar.</p> <p>Dames T.W.A. 1955, <i>The Soil of East Central Java</i>, Bogor, Contribution of The Agricultural Research Station.</p> <p>DPMA, 1983. <i>Petunjuk Klimatologi</i>. Dirjend. Pengairan, Departemen Pekerjaan Umum.</p> <p>Fairbridge R.W. 1975, <i>The Encyclopedia of Geomorphology</i> London, Reinhold Book Cooperation Vol III.</p> <p>Horst, L. 1972 <i>Hydrometry Lecture Note</i>, IHE Delft, The Netherlands.</p> <p>Keijne J.W., 1972. <i>Drainage Principles and Applications, Survey and Investigations, Determining Evapotranspiration</i>. Vol. III. Publication 16. ILRI. Wageningen The Netherlands.</p> <p>Kruseman G.P., and De Ridder, N.A. 1970. <i>Analysis and Evaluation of Pumping Test Data</i>, ILRI., Wageningen, The Netherlands.</p> <p>Linsley R.K. Kohler M.A. and J.L.H. Paulhus, 1949. <i>Applied Hydrology</i>. New York, Tata McGraw Hill.</p> <p>Pannekoek A.J. 1949. <i>Outline Of Geomorphology of Java</i> Tijdschrift Van Het Koninklijk Nederlandsch Aardrijkskundig, Genootschap, Vol LXVI, Part 3.</p> <p>Santosh Kumar Garg, 1982 <i>Water Resources and Hidrology</i>, Khanna Publishers, Delhi, India.</p> <p>Seyhan, Ersin, 1975. <i>Fundamental Hydrology</i>. Geografisch Institute der Rijks Universiteit. The Netherlands.</p> <p>-----, 1987 <i>Hydrological Process Study and Response Modelling Lecture Note on Hydrology Course</i>. ESP-Faculty of Geography, Gadjah Mada University, Yogyakarta.</p> <p>Sugiyono. 2008. <i>Metode Penelitian Kuantitatif, Kualitatif, dan R & D</i>. Bandung: Alfabeta.</p> <p>Suyono dan Kensaku T., 1977. <i>Hidrologi Untuk Pengairan</i>. Association for International Technical Promotion, Tokyo, Japan.</p>
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	<p>-----, 1997. <i>Materi Pelatihan NSAD</i>, Angkatan V. Fakultas Geografi UGM.</p> <p>Tika, M. P. 2005. <i>Metode Penelitian Geografi</i>. Jakarta: Bumi Aksara.</p> <p>Todd, D. 1959. <i>Groundwater Hydrology</i>. John Wiley and Sons Inc. Washington.</p> <p>UNESCO-WHO., 1976., <i>Hydrological Maps</i>, Unesco-WHO., Switzerland.</p> <p>U.S.D.A., 1989, <i>Soil Survey Mannual</i>, Bogor, Soil Date Base Management Project Center For Soil Research.</p> <p>Van Beers, W.F.J. 1976, <i>The Auger Method</i>, ILRI, Wageningen, The Netherlands.</p> <p>Verstappen H.Th, 1983., <i>Applied Geomorphology</i>, Geomorphological Survey for Environment, Amsterdam, Elsvier.</p> <p>Wiesner, C.J. 1970, <i>Hydrometeorology</i>. Chapment and Hall, London.</p> <p>Young Antony, 1976. <i>Tropical Soils and Soil Survey</i>, Cambridge University Press, Cambridge London.</p>
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