

Module Name	Analysis of Land and Water Resources
Module level, if applicable	Advance
Code, if applicable	GEL 3002
Subtitle, if applicable	
Courses, if applicable	
Semester(s) in which the module	6 th (Even Semester)
Person responsible for the module	
Lecturer	A. Sudibyakto, Prof., Dr., M.S. M. Pramono Hadi, Dr., M.Sc. M. Widyastuti, Dr., M.T. Danang Sri Hadmoko, Dr., M.Sc. Muhammad Anggri Setiawan, Dr., M.Si. Tommy Andryan Tivianto, , S.Si., M.Sc.
Language	Bahasa Indonesia
Relation to curriculum	<p>Analysis of Land and Water Resources is an obligation study for the Environmental Geography students. This study aims to provide understanding among students regarding stages of the assessment land and water resources. This study also includes concepts and studies about land capability and suitability, water availability, water needs, and water balance. Analysis of land and water resources studies about land and water resources, stages of analysis, and how to presents results and recommendations regarding land and water resources.</p> <p>The objectives of this study is to provide better understanding for students on analysis of land and water resources, students can give recommendations regarding sustainable and eco-friendly resources use.</p>
Type of teaching, contact hours	<p>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>).</p> <p>Lecture: 1400 minutes</p> <p>Mid Semester Examination: 100 minutes</p> <p>Final Semester Examination: 120 minutes</p>

Workload	<p>Lecturer, including homework and discussion : 23 meetings x 100 minutes each</p> <p>Tutorial:</p> <p>Final Examination: 100 minutes</p> <p>Studio:</p> <p>Total workload = 1620 minutes</p>
Credit points	3/2
Requirements according to the examination regulations	Minimum attendance requirement 70% from total lecture
Recommended prerequisites	Basic Hydrology; Soil Science; Water Quality; Hydrometeorology; Geohidrology; Soil Survey, Erosion, and Conservation Planning; River Hydrology; Lake Hydrology
Module objectives/intended learning outcomes	Students are expected to have ability to analysis land and water resources including collecting data, field survey, and reporting data. Students are expected to have ability on critical thinking and evaluating land and water resources in a certain area, also confidently presenting the results.
Content	<ol style="list-style-type: none"> 1. Land and water analysis scoping and concepts 2. Land analysis methods 3. Hydrometeorology: water availability 4. Water needs and quality 5. Studio case study
Study and examination requirements and forms of examination	<ol style="list-style-type: none"> 1. Individual assignment – written 2. Group assignment – written report and final presentation 3. Peer evaluation – written 4. Attendance – summary from presence list 5. Final exam – written and/or oral
Media employed	<ol style="list-style-type: none"> 1. Field work 2. Online sources 3. Computers 4. Interactive video 5. LCD projector

Reading list

1. Arsyad, S. 1989. *Konservasi Tanah dan Air*. IPB Press Bogor
2. FAO, 1976. *Framework of Land Evaluation*. FAO Soil
3. Fetter, C.W. 1988. *Applied Hydrogeology 2nd Edition*. Mexrill Publishing
4. Hem, J.D., 1985, *Study and Interpretation of The Chemical Characteristics of Natural Water*-3rd edition. USGS Water Supply Paper 2254.
5. Hockensmith, R. H. and J. G. Steele. 1943. *Classifying Land For Conservation Farming*. USDA. Farmer's Bull
6. ILRI. 1974. *Drainage Principles and Applications*, Volume III. ILRI, Wageningen The Netherlands
7. Jankowski, J., 2002. *Hydrogeocgemistry, Short Course Note*, School of Geology, University Of New South Wales, Sydney, Australia
8. Nagle G, and K.Spencer. 1997. *Advanced Geography*.Oxford University Press,New York.
9. Seyhan E. 1977. *Fundamental Hydrology*. Institut der Rijkuniversiteit Utrecht, Netherland.
10. Seyhan E. 1977. *Watershed as a Hydrological Unit*, Geografisch Institut der Rijkuniversiteit Utrecht, Netherland.
11. Thornth Waite C.W. and Mather J.R. 1957. *Instructions and Tables for Computing Potential Evapotranspiration and Water Balance*. Centerton, New Jersey.
12. Todd, D. 1959. *Groundwater Hydrology*. John Willey & Sons Inc.
13. Van Dam J.C., Raaf W.R. and Volker A. 1972. *Veldboek Volume D: Climatology*. ILRI: Wageningen, The Netherlands.