



## **MODULE HANDBOOK**

### **Remote Sensing for Water Resources**

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Undergraduate Study Program for Geography  
Faculty of Mathematics and Natural Sciences  
Universitas Indonesia

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## Remote Sensing for Water Resources

Module designation	Remote Sensing for Water Resources
Semester(s) in which the module is taught	Fifth (5th) Semester
Person responsible for the module	Dr. Supriatna, M.T.
Lecturer	1. Dr. Supriatna, M.T. 2. Tjong Giok Pin, S.Si, M.Si.
Language	Bahasa Indonesia
Relation to curriculum	Elective
Teaching methods	Student-centered Learning and combination with Cooperative Learning
Workload (incl. contact hours, self-study hours)	1. Lectures: 100 minutes per week per semester 2. Assignment: 120 minutes per week per semester 3. Independent study: 120 minutes per week per semester 4. Minutes x weeks x semester: $340 \times 14 \times 1 = 4760$ minutes per semester 5. Midterm Examination: 100 minutes per semester 6. Final Examination: 100 minutes per semester 7. Total workload per semester: 4950 minutes / 82 hours 40 minutes
Credit points	2 (Two)
Required and recommended pre-requisites for joining the module	1. Remote Sensing 2. Geographic Information System
Module objectives/intended learning outcomes	Able to provide review, analysis and modeling relating to surveys, mapping and remote sensing (PJ) for land and sea waters, coastal interpretation of the ocean, estuary, depth variations, and water quality. PJ modeling on the waters
Content	1. Introduction to remote sensing for water resources. 2. The concept of survey, mapping and remote sensing for groundwater. 3. The concept of survey, mapping and remote sensing for marine waters. 4. Concepts and precise interpretations and remote sensing analysis on the coast of the ocean. 5. Concept and precise interpretation and remote sensing analysis on estuary 6. Concepts and precise interpretations and remote sensing analysis in variations in the depth of the sea (baticetry) 7. Concepts and practices of interpretation and remote sensing analysis on water quality 8. The concept and practice of modeling remote sensing for water resources 9.
Examination forms	-
Study and examination requirements	1. Group and Presentation Score (40%) 2. Individual Score (30%) 3. Mid Examination (15%) 4. Final Examination (15%)

Reading list	<p>Charles W. Finkl Christopher Makowski (editors) (2014). Remote Sensing &amp; Modeling: Advances in Coastal and Marine Resources. Switzerland: Springer International Publishing.</p> <p>Aronof, Stand. 2005. Remote Sensing for GIS Managers. California: ESRI Press</p> <p>John R Jensen. 2005. Introductory Digital Image Processing A Remote Sensing Perspective. Pearson Prentice Hall. United States of America.</p> <p>Purwadhi, F. Sri. 2001. Interpretasi Citra Dijital. Jakarta : Grasindo</p> <p>John A. Richards. 1995. Remote Sensing Digital Image Analysis An Introduction. Australia : Campbell ACT 2600.</p>
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