



## **MODULE HANDBOOK**

### **Surveying and Mapping**

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

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## Surveying and Mapping

Module designation	Surveying and Mapping
Semester(s) in which the module is taught	Second (2nd) Semester
Person responsible for the module	Iqbal Putut A Shidiq, S.Si, M.Sc., Ph.D.
Lecturer	<ol style="list-style-type: none"> <li>1. Iqbal Putut A Shidiq, S.Si, M.Sc., Ph.D.</li> <li>2. Adi Wibowo, S.Si, M.Si, Ph.D.</li> <li>3. Revi Hernina, S.Si, M.T.</li> <li>4. Dr.Drs.Supriatna, M.T.</li> <li>5.</li> </ol>
Language	Bahasa Indonesia
Relation to curriculum	Compulsory
Teaching methods	Student-centered Learning and combination with Cooperative Learning
Workload (incl. contact hours, self-study hours)	<ol style="list-style-type: none"> <li>1. Lectures: 100 minutes per week per semester</li> <li>2. Assignment: 120 minutes per week per semester</li> <li>3. Independent study: 120 minutes per week per semester</li> <li>4. Minutes x weeks x semester: <math>340 \times 14 \times 1 = 4760</math> minutes per semester</li> <li>5. Midterm Examination: 100 minutes per semester</li> <li>6. Final Examination: 100 minutes per semester</li> <li>7. Total workload per semester: 4950 minutes / 82 hours 40 minutes</li> </ol>
Credit points	2 (Two)
Required and recommended pre-requisites for joining the module	<ol style="list-style-type: none"> <li>1. Cartography</li> <li>2. Cartography Lab</li> </ol>
Module objectives/intended learning outcomes	Able to provide emphasis, identify and review on the understanding of the types and sources of spatial data, datum, terrestrial surveys, Global Positioning System (GPS) data, remote sensing image data, air photo data, data presentation with map design in manual form and digital map
Content	<ol style="list-style-type: none"> <li>1. Introduction to Surveys and Mapping</li> <li>2. The concept of type and source of spatial data</li> <li>3. Concept of geospatial mapping types</li> <li>4. Concepts about datum in geospatial mapping</li> <li>5. Concept of Terrestrial Mapping (Polygon)</li> <li>6. Concept of Terrestrial Mapping (Levelling)</li> <li>7. Concept of Mapping with Global Positioning System (GPS) or GNSS (Global Navigation Satellite System)</li> <li>8. The concept of mapping through remote sensing data.</li> <li>9. Concepts about mapping through aerial photography data.</li> <li>10. Concept of presenting data with map design in manual form and digital map of mapping results</li> </ol>
Examination forms	-
Study and examination requirements	<ol style="list-style-type: none"> <li>1. Group and Presentation Score (40%)</li> <li>2. Individual Score (30%)</li> <li>3. Midterm Examination (15%)</li> <li>4. Final Examination (15%)</li> </ol>

Reading list	<p>Abidin, H.Z. (1995). Penentuan Posisi dengan GPS dan aplikasinya. Jakarta: Pradya Paramita.</p> <p>Suyono &amp; Takasaki (2005). Pengukuran Topografi dan Teknik Pemetaan. Jakarta:PT. Pradya Paramita.</p> <p>Purwadhi, FSH. (2001). Interpretasi Citra Digital. Jakarta: PT. Gramedia Widiasarana Indonesia.</p> <p>Abidin, H. Z. (1995). Survey dengan GPS. Jakarta: Pradya Paramita.</p> <p>Fahrurrazi, D. (2011). Sistem Acuan Geodetik: dari Bigbang sampai kerangka acuan terrestrial. Yogyakarta: Gadjah Mada University Press.</p> <p>Keats, D. (2001): Cartographic Desain and Production. London: John Wileys &amp; Sons.</p> <p>Philip C. &amp; M. Juliana (1992). Map Use: Reading, Analysis, Interpretation. Madison, Winconsin, USA: JP Publications.</p> <p>Supriatna (2018). Sistem Informasi Geografis: Analisis &amp; Aplikasi. Depok: Departemen Geografi FMIPA UI.</p> <p>Keats, D. (2001): Cartographic Desain and Production. London: John Wileys &amp; Sons.</p>
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