



USK
UNIVERSITAS
SYIAH KUALA

FACULTY OF AGRICULTURE
DEPARTMENT OF SOIL SCIENCE

UNDERGRADUATE PROGRAM

MODULE HANDBOOK

Module designation	Geodesy and Cartography (SSOL2030)
Semester(s) in which the module is taught	4 th Semester
Person responsible for the module	Prof. Ir. Sugianto, M.Sc, Ph.D
Language	Indonesian, English
Relation to curriculum	Compulsory module for Soil Science Department
Teaching methods	Lecture, small group discussion, interactive discussion
Workload (incl. contact hours, self-study hours)	<ul style="list-style-type: none">✓ 100 minutes lecture and discussion per week✓ 120 minutes structured tasks per week✓ 120 minutes learn to be independent per week
Credit points	2 SKS = 3.2 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ul style="list-style-type: none">✓ Students are able to understand the significance, benefits, and concepts of Geographic Information Systems (GIS), as well as spatial data communication and management.✓ Students can understand the application and operational principles of land surveying and cartography.✓ Students can utilize and develop GIS products integrated with land surveying and cartography disciplines
Content	This Geodesy and Cartography course equips students with knowledge of the fundamental principles and techniques of land measurement, including field measurements, data calculation, and result presentation. The course is integrated with essential concepts and techniques of cartography, particularly in the context of presenting spatial information through discussions and practical applications in each session. Additionally, the course emphasizes the effective understanding of cartographic principles and geovisualization techniques for geospatial information.
Exams and assessment formats	Assignment, Quiz, Case Method, Midterm exam, Final exam
Study and examination requirements	<ul style="list-style-type: none">✓ Quiz: 5%✓ Assignment: 5%✓ Case Method: 50%✓ Midterm exam: 15%✓ Final exam: 25%

Reading list	<ol style="list-style-type: none">1. Dent, B. D. (2020). Cartography: Thematic map design (3rd ed.). Brown Publisher.2. Li, Z. (2019). Topographic cartography 182. School of Surveying and Land Information, Curtin University.3. Elsevier. (n.d.). Applied Geography. https://www.journals.elsevier.com/applied-geography4. Karpik, A. P., & Lisitsky, D. V. (2020). Prospects for the development of geodesic and cartographic production and the new paradigm of geospatial activity. Вестник СГУГиТ, 25(2).5. Kainz, W. (2020). Cartography and the others—aspects of a complicated relationship. Geo-spatial Information Science, 23(1), 52-60.
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