COURSE OUTLINE

Department & Faculty: Department of Geoinformation Faculty of Geoinformation & Real Estate	Page : 1 of 4
Course Code: Spatial Data Infrastructure For Land Administration (MGHN 1014) **Total Contact Hours: 56 hours (4 hours per week)**	Semester: I Academic Session: 2021/2022

Lecturer	:	Sr Dr. Tan Liat Choon / Dr Abdul Halim Hamzah
Room No.	:	C03-312-01
Telephone No.	:	016-4975551
E-mail	:	tlchoon@utm.my
Synopsis	:	This course is designed to offer students to observe several criteria or principle of Spatial / Geo-Spatial Data Infrastructure such as policies, standards and practices in spatial information industry also land administration information management. The SDI concept continues to evolve as it becomes a core infrastructure supporting economic development, environmental management and social stability in land administration field and practices. At the same time, to explore the institutional and technical issues influencing the development of SDI. It concentrates on the contribution to the theory and practices of SDI, explores practical issues and solution of successful SDI implementation. The student will be equipped with fundamental of Spatial / Geo-Spatial Data Infrastructure land administration practices.

LEARNING OUTCOMES

By the end of the course, students should be able to:

No	Programme Outcome (CO)	
1.	Ability to integrate and extend in-depth knowledge in land administration related areas	PO 1
2.	Ability to critical thinking and scientific approach for land administration decisions	PO 3
3.	Ability to developing and enhancing critical thinking and problem solving skills in land administration practices	PO 5

No.	Taxonomies and Soft-Skills				Assessment Methods
1.	Ability to **identify and list** the principle of GIS and spatial analysis related to land administration information management practices	PO 1	CO 1	C 1	examination, test, presentations, individual & group reports
2.	Ability to **describe** and **apply** the principle of GIS and spatial analysis related to land administration information management practices	PO 1	CO 2	C 3	
3.	Ability to **evaluate** and **interpret** the GIS and spatial analysis, management and sharing practices in solve problems related to group assignments and discussions	PO 3	CO 3	C 6	examination, quiz, presentations, individual & group reports
4.	Ability to analyse and categorise the data gathering in land administration information management practices	PO 5	CO 4	C 4	Data gathering, group assignments & discussions
5.	Ability to constructs the group assignments in land administration information management and sharing practices	PO 5	CO 5	P 7	

Prepared by: Course Coordinator Name: Sr Dr. Tan Liat Choon Signature: Date: 17 October 2021	Certified by: Name: Signature: Date:

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STUDENT LEARNING TIME (SLT)

Teaching and Learning Activities	Student Learning Time (hours)
1. Face-to-Face Learning	
a. Lecturer-Cantered Learning	
i. Lecture	56
b. Student-Cantered Learning (SCL)	
i. Laboratory/Tutorial	0
ii. Student-centred learning activities – Active Learning, Project Based Learning	30
2. Self-Directed Learning	
a. Non-face-to-face learning or student-centred learning (SCL) such as manual, assignment, module, etc.	20
b. NALI/MOOCs/e-Learning	10
c. Revision	30
d. Assessment Preparations	8
3. Formal Assessment	
a. Continuous Assessment	3
b. Final Exam	3
Total (SLT)	**160**

TEACHING METHODOLOGY

Lecture and Discussion, NALI : Project Based Learning, Cooperative Learning, Independent Study, Lab Work, Presentation, Computers Oriented, Group Discussion (Think Pair Share)

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WEEKLY SCHEDULE

Week 1
(20/10/2021) : Class Preparation

Week 2
(27/10/2021) : **Building Geospatial Data & Spatial Data Infrastructure**
■ Related on the 'triple bottom line'; evolving SDI concept; SDI and government & private; challenges facing SDI development; strengthening institutional arrangements; capacity; and research & development.

Week 3
(03/11/2021) : **Building Geospatial Data & Spatial Data Infrastructure**
■ Related on the challenge and motivation; land information management; what is geospatial data and SDI; shaping the inevitable commercial development; effects on society; & funding.

Week 4
(10/11/2021) : **Building Geospatial Data & Spatial Data Infrastructure**
■ Related on concept, nature and SDI hierachy; sharing spatial data; spatial data and decision support systems; and applying theory to SDI.

Week 5
(17/11/2021) : **SDI and Technical Dimension**
■ Related on administrative boundary; spatial hierarchy problem, location based wireless applications; positional framework; and spatial data referencing.

Week 6
(24/11/2021) : **SDI Technology and Legal Perspective**
■ Related on why need SDI; integrating information and making ICT choices; land administration & cadastral data modelling; maintaining momentum & SDI toolbox.

Week 7
(01/12/2021) : **SDI Technology and Legal Perspective**
■ Related on commercialization of public sector information; protection of investments in geospatial databases; privacy and protection of personal data; & liability of intermediaries.

Week 7
(24/03/2020) : **Presentation & Test**

Week 8 : Semester Break

Week 9 - 15 : **Class will be conducted by Dr Abdul Halim Hamzah**

Week 16 : Revision

Week 17 - 19 : Final Examination

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REFERENCES :

1. Barry, C.; Conboy, K.; Lang, M.; Wojtkowski, G.; Wojtkowski, W. (Eds.). (2009). *Information Systems Development : Challenges In Practice, Theory, And Education*. ISBN 978-0-387-30403-8.
2. Brown, P.M. and D.D. Moyer (1990-1996) *Multipurpose land information systems: The guidebook*. Federal Geodetic Control Committee. (NOAA).
3. Ian Masser. (2004). *Governments and Geographic Information*. Taylor & Francis Ltd. ISBN 0-203-27006-1 (Adobe eReader Format).
4. Dale, P., & McLaughlin, J. (1988). *Land Information Management - An Introduction With Special Reference To Cadastral Problems In Third World Countries*. New York: Oxford University Press Inc. ISBN 0-19-858404-0
5. Paul A. Longley, Michael F. Goodchild, David J. Maguire & David W. Rhind. (2004). *Geographical Information Systems and Science (2nd Edition)*. John Wiley & Sons Inc. ISBN 0-470-87000-1 (HB), 0-470-87001-X (PB)
6. Peter Folger. (2009). *Geospatial Information and Geographic Information Systems (GIS) - Current Issues and Future Challenges*. Congressional Research Service (www.crs.gov).
7. Richard Groot & John McLaughlin. (2000). *Geospatial Data Infrastructure: Concepts, Cases, and Good Practices*. Oxford University Press. ISBN 0-19-823381-7
8. The UN-FIG Bathurst Declaration on Land Administration for Sustainable Development (1999)

GRADING:

Assessment will be done through the following schema. A student must obtain at least 65% marks to pass this subject. **Attendants are compulsory**.

	Assessment Name	Number	% Each	% Total	Date
1	Lab/Field/Assignment	2	15 (PO7)	15	Week 4
2	Presentation	1	5 (PO1, PO3)	5	Week 7
3	Test	1	10 (PO1)	10	Week 7
4	Final Exam	1	20 (PO1)	20	Week 16-17
	Overall Total			**50**	

ATTENDANCE:

The student should adhere to the rules of attendance as stated in the University Academic Regulation:-

1. Student must attend not less than 80% of lecture hours as required for the subject.

2. The student will be prohibited from attending any lecture and assessment activities upon failure to comply the above requirement. Zero mark will be given to the subject.