

Department of Land Surveying and Geo-Informatics

LSGI522 Spatial Data Acquisition

Course : LSGI522 Spatial Data Acquisition
Lecturer : Sr Dr Lawrence Lau; email: lsgi-lawrence.lau@polyu.edu.hk

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Room : Lecture: TU101 (Mon) and Y302 (Tue); Practicum: ZN603a/Z 6/F Garden
Time : Monday and Tuesday, 18:30-21:20
Session : 2024-2025 Semester One

Class Schedule

Week	Date	Lecture	Remarks
1			
1	3 September	Introduction, Geo-Reference Systems	
2	9 September	Conventional Surveying	
2	10 September	Map Projection	
3	16 September	Practicum 1 – Conventional Surveying	Z 6/F Garden
3	17 September	Photogrammetry and Remote Sensing	
4	23 September	Practicum 2 – Photogrammetry	ZN603a
4	24 September	Laser Scanning	
5	30 September	Practicum 3 – Laser Scanning	Z 6/F Garden
5	1 October	Public Holiday	
6	7 October	GNSS positioning	
6	8 October	Lecture/Tutorial/Revision	
7	14 October	Practicum 4 – GPS	Z 6/F Garden
7	15 October	Mid-term Test	
		Exam	

Assessment

30% - Practical session
30% - Mid-term Test
40% - Final Exam

Students **do not** require to pass both Continuous Assessment and Examination.

Reference books:

Chen, Y.Q. and Y.C. Lee, 2001. Geographical data acquisition. Springer.
Gomarasca, M.A., 2009. Basics of geomatics. SpringerLink e-book.
Grafarend, E.W. & F.W. Krumm, 2006. Map projections. Cartographic information systems. SpringerLink e-book.
Hofmann-Wellenhof, B., H. Lichtenegger, E. Waskle, 2008. GNSS - global navigation satellite systems GPS, GLONASS, Galileo, and more. SpringerLink e-book.
Iliffe, J., Lott, R., 2008. Datums and Map Projections: For Remote Sensing, GIS and Surveying, Second Edition, Whittles Publishing.
Kavanagh, B.F., 2006. Surveying: Principles and applications. 7th ed. Pearson/Prentice Hall.
Konecny, G., 2003. Geoinformation remote sensing, photogrammetry and geographic information systems. Taylor & Francis e-book.
Leick, A., 2004. GPS Satellite Surveying, John Wiley & Sons.
Vosselman, G., & Maas, H. G. 2010. Airborne and terrestrial laser scanning. CRC press.
Maling, D.H. (1992). Coordinate Systems and Map Projections. 2nd ed. Pergamon Press.
Mikhail, E.M., J.S. Bethel and J.C. McGlone (2001). Introduction to Modern Photogrammetry. John Wiley & Sons, New York.
Schofield, W., 2007. Engineering surveying. 6th ed. Butterworth Heinemann.
Uren, J., 2010. Surveying for engineers. 5th ed. Palgrave Macmillan.
Wolf, P.R., Dewitt, B.A., 2013. Elements of Photogrammetry with Applications in GIS, McGraw-Hill Education