

Subject Description Form

Subject Code	LSGI552
Subject Title	Project
Credit Value	6
Level	5
Pre-requisite/ Co-requisite/ Exclusion	The knowledge acquired from all core and non-core subjects of the program. Students must complete at least two core subjects, either for GIS or Surveying stream students, before taking this subject.
Objectives	This subject aims to provide the participating students with the knowledge and methods for conducting a project in the area of Geomatics, covering both geographic information systems and land surveying. This will be realized first by a review of the research and development frontiers in Geomatics, then identifying a topic as for the proposal and carrying out the project, and finally presenting the outcomes in both oral and written forms.
Intended Learning Outcomes	Upon completion of the project, students will be able to: <ul style="list-style-type: none"> a. demonstrate his/her understanding of the project area; b. carry out independent research using all the necessary tools ; c. write an appropriate report; d. present the result in an appropriate way and defend the result.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • How to conduct a research project. • Review the current status of research in Geomatics. • Identify a research topic or an application problem that may be from the student's working environment for which Geomatics technologies provide a solution. • Develop research objectives and methodologies for the study. • Produce a prototype or a demonstration system from the project. • Analyze the results by applying the developed algorithms or the systems. • Derive the conclusions from the study. • Provide a written report for the study. • Present the research result via an oral presentation.
Teaching/Learning Methodology	Student-lead project with regular meeting with a supervisor, who is an academic staff of the LSGI Department. Lectures on research methods are first given, these are followed by seminars on current status of research development in GIS and land surveying. Each student needs to identify a topic, to write a research proposal and to submit to a supervisor. The project will be carried out under the supervision of the supervisor.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)			
			a.	b.	c.	d.
	Research proposal	15%	✓	✓		
	Written report	60%	✓	✓	✓	
	Oral presentation	25%				✓
	Total	100%				
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>In proposal, the student needs to know why to do the project, what to do with the project and how to do the project.</p> <p>In the written report, the student needs to report the work and results in an appropriate way.</p> <p>The oral presentation is to check the presentation skill and oral defense skill.</p> <p>Generative AI can only serve as a tool for assisting initial idea development and proofreading for project presentation and report, and any involvement of generative AI tools must be clearly acknowledged and referenced. Students are required to make close link between the subject contents and the proposed case-specific scenario to encourage critical thinking.</p>						
Student Study Effort Expected	Class contact:					
	▪ Classes		10 Hrs.			
	Other student study effort:					
	▪ Conduct the project		120 Hrs.			
	▪ Oral exam preparation		10 Hrs.			
	Total student study effort:		140 Hrs.			
Reading List and References	<p><u>Books</u> Campbell, J.B., Wynne, R.H., 2011. <i>Introduction to Remote Sensing</i>, Guilford Press Dale, P., McLaughlin, J., 1999. <i>Land Administration</i>, Oxford University Press Hawkins, C.F., Sorgi, M., 1985. <i>Research: How to Plan, Speak and Write About It</i>, Springer-Verlag Leick, A., 2004. <i>GPS Satellite Surveying</i>, John Wiley & Sons</p>					

<p>Longley, P.L., Goodchild, M., Maguire, D.J., Rhind, D.W., 2010, <i>Geographical Information Systems and Science</i>. John Wiley & Sons, Inc.</p> <p>Schofield, W., Breach M., 2007. <i>Engineering Surveying</i>, Elsevier</p> <p>Seeber, G., 2003, <i>Satellite Geodesy</i>, Water de Gruyter</p> <p>Wolf, P.R., Dewitt, B.A., 2013. <i>Elements of Photogrammetry with Applications in GIS</i>, McGraw-Hill Education</p> <p><u>International journals</u></p> <p>International Journal of Geographic Information Science</p> <p>International Journal of Remote Sensing</p> <p>Journal of Geodesy</p> <p>Photogrammetric engineering and remote sensing</p>
