Satellite Navigation 衛星導航

Serial Number	30011
Course Code	SDA027-*
Instructor	Wu, Joz 吳究
Course Name(Chinese)	衛星導航
Course Name(English)	Satellite Navigation
Credit	3
Teaching goal	Global navigation satellite systems are treated, referring to satellite configuration, least-squares adjustment of observables, GPS ephemerides, atmospheric effects, and positioning applications, like tracking of vehicular movement.
Teaching content	1 Introduction 1.1 Navigation system with time and ranging 1.2 Space resection 1.3 Pseudo-random noise code 1.4 GPS signal and time 2 Navigation satellite positioning 2.1 Pseudorange 2.2 Carrier phase 2.3 Source of errors 2.4 Data processing 3 System of coordinates 3.1 Right ascension coordinate system 3.2 Conventional terrestrial coordinate system 3.3 Broadcast ephemeris 4 Atmospheric 4.1 Tropospheric path delay 4.2 Ionospheric path delay 5 Applications References
Textbooks/References	Lecture Notes (PDF)

Way of Instruction	Lecture
Grading	Mid-Exam(40%), Final-Exam(30%), Oral-Test(30%)
Office Hour	TBA

Core Competencies of Department	Rating	Corresponding Assessments
Global vision	(5) Very High	Attendance/Performance
Environmental sustainability	(2) Low	Portfolios Assessment
Professional knowledge	(5) Very High	Presentation/Oral Exam
Expressiveness & teamwork	(3) Medium	Self Assessment/ Peer Assessment