

FOURTH YEAR

Global Positioning Systems	COE407
Prerequisite: COE405	(2-2-0-0)

Introduction to Navigation Systems and Coordinate and time systems. Satellite orbital motions. GPS observables: Pseudo ranges, Carrier phases, SA/AS, Format of data (RINEX). Estimation procedures: Stochastic and mathematical models, Propagation of covariance matrices, Sequential estimation, Kalman filtering, Statistics in least-squares estimation. Propagation medium: Troposphere, Ionosphere, Multipath. Mathematical model of GPS observables. Methods of processing GPS data. Applications: Applications and examples of GPS data analysis along with other space geodetic data.