CE/BOS/OE405 /0210

K L UNIVERSITY

BASICS OF GLOBAL POSITIONING SYSTEM (09-OE405)

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SYLLABUS

Unit-1

Introduction of Global Positioning System, Satellite constellation, GPS signals and data, Geo-positioning-Basic Concepts. NAVSTAR, GLONASS

Unit-2

Basic geodesy, Geoid /datum/ Ellipsoid,- definition and basic concepts, Coordinate Systems, Special Referencing system, Map Scale, Scale factors, Indian geodetic System

Unit-3

Control Segment, Space Segments, User Segment, GPS Positioning Types- Absolute Positioning, Differential positioning

Unit-4

Methods-Static & Rapid static, Kinematic-Real time kinematic Survey- DGPS-GPS data processing and Accuracy.

Unit-5

Selection of Reference Station, Reference Station Equipment: GPS receiver, GPS antenna. Radio and its types, Radio Antenna, GPS Application in Surveying and Mapping, Navigation Military, Location Based Services, Vehicle tracking.

TEXT BOOK

1. Leicka. A.: GPS Satellite Surveying, John Wiley & Sons, use. New York
2. Sathish Gopi, GPS and Surveying using GPS, Tata McGraw-Hill Education, 2005

REFERENCE BOOKS

1. Satellite Geodesy by GUNTER SEEBER, 2001 Edition Published by WALTER DE GRUYTER 1993.
2. Global Positioning System – Theory and Practice – Hofmann W.B, Lichtenegger. H, Collins. J – Springer Verlag Wein, New York
3. Terry-Karen Steede, 2002, Integrating GIS and the Global Positioning System, ESRI Press
4. N.K.Agrawal Essentials of GPS, Spatial Network Pvt Ltd 2004