

NWFP University of Engineering & Technology Peshawar

Document Type: **Course Outline**

Department: **Civil Engineering**

Course No.: **CE-304**

Serial No.: _____

Course Title: **Surveying-II**

Type: **Theory**

Credit Hours: **03**

Approved Under Reference: _____

Verified By: _____

Signature: _____

Date: _____

Effective From: _____

Effective For Session: _____

Effective To: _____

THEODOLITE TRAVERSING

Method of Running Traverses with Theodolite
Traverse computations
Transformation of Co-ordinates
Omitted Measurements

SETTING OUT WORKS

Computations and setting out Method for:
Simple Circular Curves
Compound Curves
Reverse curves
Transition curves
Vertical curves

GEODETIC SURVEYING_

(a) Triangulation
Classification of triangulation systems
Indivisibility of triangulation systems
Base Line Measurement
Correction to Measured length
Measurement of Horizontal Angle
Satellite Stations

(b) Precise Traversing
Methods of Running Traverses

TRIGNOMETRIC LEVELING_

Theory and Object of Trigonometric Leveling
Computations

CONTOURING

Method of contouring

Characteristics of Contour lines
Interpolation
Plotting of Contour Maps

HYDROGRAPHICAL SURVEYING_

Object of hydrographical surveying
Horizontal & Vertical Control
Shore line Surveys
Sounding
Methods of Sounding

TUNNELING

Surface Alignment
Setting out from Ends
Transferring Alignment Under ground
Transferring levels under ground
Under Ground Bench Marks

PHOTOGRAMMETRY

Elements and uses of terrestrial Photogrametry

ASTRONOMY

Definition of various Astronomical Terms
Co-ordinate Systems
Local and standard time
Methods of Determining Azimuth
Longitude and Latitude by solar observations

Books Recommended

- Kavanash,B. Surveying principles and Application, Prentice Hall
- Irvine, W. Surveying for Construction, McGraw Hill.
- Davis, R.E. Surveying Theory and Practice, McGraw Hill.

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- Study and Use of advanced surveying equipment
- Trigonometrical Leveling
- Contouring
- Simple Curve
- Compound Curve
- Transition Curve