**B. Civil Design   - 7 Hrs.**

**1.       Using Alignment and Setting**

* + Defining alignment form Object
  + Defining alignment form Polyline
  + Station Display Format
  + Creating Offset of the alignment
  + Station Label setting
  + Creating Station Label
  + Station Offset Label
  + Creating  Points along an Alignment
  + Working With more alignments

**2.       Line/Curves for Civil Design from L.D**.

* Curve between two lines
* Curve on two lines
* Curve Through a Point

**3.       Creating Profile From Surface and File data**

* + Profile Sample Setting
  + Profile Station Increments
  + Sampling Profile Form Surface
  + Sampling Profile From File
  + Setting Horizontal and Vertical Scale
  + Creating Full Profile
  + Finding Elevation/Offset in Plotted Profile
  + Working with more Profiles

**4.       Creating Cross-Section From Surface & file data**

* + Sampling Cross-Section Form Surface
  + Sampling Cross-Section From File
  + Setting Horizontal and Vertical Scale
  + Section Plot Layout Setting
  + Section Page Layout Setting
  + Plotting Cross-Section in Pages

**5.       Designing Finish Ground Profile Level**

* + Setting the current working Profile
  + Creating Design level centerline
  + Defining Created Design level centerline
  + Applying the Designed level elevation and slope (%) on the working Profile

**6.       Designing Cross-Section and Importing**

* + Drawing the Cross-Section as per design
  + Defining Cross-Section Template Drawing
  + Importing The defined  Template in to the required Cross-Section
  + Plotting Cross-Section with Cross-Section Template in Pages
  + Calculating Total Section Volume
  + Section Volume output in Drawing and file
  + Creating Mass Haul Diagram

**7.       Plotting**

* + Plotting Introduction
  + Plot scale
  + Plotting in required scale