Bharati Vidyapeeth (Deemed to be University)
College of Engineering, Pune.
Department of Civil Engineering

Computer Laboratory
Infrastructure Details

S.No	Item	Qty
1	Builtup Area	76 m^2
2	Computer- Lenova M7110 Monitor-19” CPU-Think system TS150 Processor-XeonE3 3.3GHz RAM-8GB, HDD-1TB Keyboard + Mouse	24
3	LCD Projector + Screen	01
4	Wireless Keyboard + Mouse	01
5	Webcam	01
6	Centralized Annual Maintenance Contract (AMC)	01

Size – 2 X 2

Computer Laboratory
Software Details

S. No.	Software	Category	No of Licenses
1	STAAD Pro V8i Select Series	Struct Analysis + Design	15
2	ETABS Ultimate 2015 Education Software	Struct Analysis + Design	15
3	Learning Software 2014 (Engg. Mechanics)	Learning System	Unlimited
4	Auto Scan & Auto Steel	Bill of Quantities	08
5	IonCUDOS	Academic	10
6	HIT Office	Const Mgt	Unlimited
7	Arc GIS	Geographic information system	25
8	Auto CAD - Student Version	Computer Aided Drawing	Freeware
9	HEC-RAS	Open Channel Flow Simulation	Freeware
10	EPANET	Water Distribution System Modeling	Freeware
11	Python	Programming	Freeware
12	Turbo-C	Programming	Freeware
13	MS-Office (Educational)	Office	Unlimited

Size – 2 X 3

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LIST OF PRACTICALS

Sr. No.	Name of Practical
Course: Skill Based Course-I –Computer Aided Drawing	
1.	Auto CAD Drawing of small objects using different commands.
2.	Auto CAD Drawing using Geometric shapes.
3.	AutoCAD Drawing of plan, elevation, and section of small building.
4.	Preparationof3D modelsfrom2Dprofiles
5.	AutoCAD 3D Drawing of a plan, elevation, and section of small building.
6.	Preparation of AutoCAD 3D views of small building.
7.	Use of different Materials for Items.
8.	3D Model rendering & Scale Printing of models.
Course: Vocational Course-I- (Auto CAD 3D)	
1.	Preparation of 3D solid Primitives & Mesh Primitives
2.	Preparation of 3D models from 2D profiles
3.	AutoCAD 3D Drawing of a plan, elevation, and section of small building.
4.	Preparation of AutoCAD 3D views of small building.
5.	Use of different Materials for Items.
6.	3D Model rendering & Scale Printing of models
Course: Data Analytics Using Python	
1.	Write a program to perform basic operations using Python Functions.
2.	Write a program to perform to read, write and modify text file data using OO Python.
3.	Exercise different functionalities of Matplotlib package.

4.	Write a program to measure central tendency and dispersion of given data.
5.	Write a program to measure of variability for given sample and population.
6.	Write a program to implement Bayes Theorem.
7.	Write a program to visualize different types of distributions.
8.	Write a program to develop linear and multiple regression model.
9.	Write a program to perform Analysis of variance.
10.	Write a program to develop non-linear regression model.
Course: Civil Engineering Software-II (STAAD.Pro)	
1.	FEM Model of beams.
2.	FEM Model of plane and space frame.
3.	FEM Model of plane truss and space truss.
4.	Analysis of FEM Model of beams.
5.	Analysis of FEM Model of plane and space frame.
6.	Analysis of FEM Model of plane truss and space truss.
7.	Design of beams.
8.	Design of plane and space frame.
9.	Design of plane truss and space truss.
Course: Civil Engineering Software-III (Auto Scan- Auto Steel)	
1.	Assignment on different toolbars and menu bars used in Auto Scan
2.	Assignment on flowchart of steps for working process of Auto Scan
3.	Practice problems on Auto Scan
4.	Assignment on different toolbars and menu bars used in Auto Steel
5.	Assignment on flowchart of steps for working process of Auto Steel
6.	Practice problems on Auto Steel
Course: Civil Engineering Software-IV (ETABS)	

1.	Assignment on different toolbars and menu bars used in ETABS
2.	Assignment on flowchart of steps for design of structure using ETABS
3.	Modelling of structure using ETABS including support, constraints, and releases at joints.
4.	Analysis and Design of Plane Frame using ETABS and validation of results
5.	Analysis and Design of Space Frame using ETABS.
6.	Analysis and Design of Truss using ETABS.