

## Schedule for Winter Training Program 2 (WTP 2)

Day	Contents
Day 1	<p><b>Introduction:</b> About civil engineering; role of structural engineering; structure; analysis, shear force, bending moment, deflection, displacement, stress; design philosophies; theoretical approach to design of structures. Behavior of various structural component: Beam, Column, Slab, Walls, Foundation, Arch, Truss etc.</p>
Day 2	<p><b>ETABS:</b> Introduction to CAD Program/ETABS, Structure Geometry with grid systems: Model generation, method of creating the model using drawing tools like beam, column, secondary members, bracing, floors/walls. Drawing editing tools: replicate, mirror, rotation etc.</p>
Day 3	<p><b>ETABS:</b> Specification and Property: Member property, support specification, material specification, material property, group specification.</p>
Day 4	<p><b>ETABS:</b> Loads and Load Combinations: Type of loads, calculation of live load, dead load, wind load, seismic load according to relevant IS code, how to implement them in structure, generate load combinations.</p>
Day 5	<p><b>ETABS:</b> Analysis: Analysis the structure, viewing the output (shear forces, support reactions, bending moment, stress distribution, animated shape etc.) Design: General guideline for design, R.C.C. design as per IS 456. (Beams, columns and slabs), steel design as per IS 800, staircase design, slab design.</p>
Day 6	<p><b>ETABS:</b> Report Setup and Detailed Engineering Drawing: Viewing the output files of design, print specifications, preparing structural drawings, Detailed working drawings.</p>
Day 7	<p><b>AutoCAD:</b> Planning in AutoCAD, Drawing Commands in AutoCAD, All Editing Commands in AutoCAD, general arrangement drawing of real life ongoing project at TeXeL Consulting Engineers</p>
Day 8	<p><b>AutoCAD:</b> Creating elevations, isometric views using 3D drawing commands, 3D editing commands., structural detailed drawing for RCC and Steel design projects.</p>
Day 9	<p><b>SAFE:</b> Design philosophies for foundation, behavior and importance of different type of foundation, model generation for footings in SAFE, assigning boundary conditions.</p>
Day 10	<p><b>SAFE:</b> Implementing load on footing, importing forces from different program, analysis and design of foundation, comparison of results between manual and program based calculation. Design of MAT foundation for ongoing project.</p>

Day 11	<b>Case Study of Live load test for bridges:</b> Importance of live load test, How it perform, calculation of forces ass per IRC codes, A case study for live load test on HFL Bridge, jaipur
Day 12	<b>Design of RCC structure project (ongoing or completed real project):</b> Steel Vs Concrete, Comparison of behavior, Design of RCC structure using limit state & working stress method, Design of multistory RCC structure.
Day 13	<b>Site Visit:</b> Introduction: understanding of site; site conditions; construction equipment; construction materials; challenges for civil engineers; best practices. General aspects: labor management; safety aspect; role and responsibilities of various people at site; description of levelling, alignment, shuttering, formwork, joggling, clear cover, concrete placing.
Day 14	<b>Site Visit:</b> Understanding of drawing: drawing readings; bar bending schedule; bill of quantity; construction procedure; Quality control: quality control in construction.
Day 15	<b>Project Report:</b> Final Training Report submission and discussion, Questionnaire sessions, power point presentations, feedbacks, certificate distribution.

#### **Batch Details:**

December 06 <sup>th</sup> , 2017 – December 20 <sup>th</sup> , 2017	-	Batch 1 <sup>st</sup>
December 11 <sup>th</sup> , 2017 – December 25 <sup>th</sup> , 2017	-	Batch 2 <sup>nd</sup>
December 16 <sup>th</sup> , 2017 – December 30 <sup>th</sup> , 2017	-	Batch 3 <sup>rd</sup>

#### **General Instructions:**

- Any student can join more than one program at a time.
- Schedule for other program (WTP2 & WTP3) is given in separate documents.
- Company will also arrange accommodation for those who required, however charges for same will be paid by applicant.
- Registration fee, course fee and accommodation expenses is given at website.
- For above schedule a 2 hours regular teaching class will be delivered every day. Apart from that students may practice at company as much as they wish.

#### **Training Centers:**

CivilShala, TeXeL Group, P No: 20, Rishi Colony, Near Gandhi Nagar Railway Station (Gate No: 2), Tonk Road, Jaipur-302015.

#### **Further Information Required:**

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