



Programme: PTCE/2020

Professional PVI (Project-value-interactive) based learning programme for Civil engineering students.

Professional Training Programme for IInd/IIIrd and IVth Year Civil Engineering Students (B.Tech)	
Scope & Objectives	<p>The learning programme aims at</p> <ul style="list-style-type: none"> ✓ To provide industrial/professional training in practical structural engineering. ✓ The programme encompasses industrial design exposure, industry required software design-skill building, sector-specific training, allied and group activities, regular assessments, construction site training, live (real) structural design training. ✓ To provide project and application-based realistic learning. <p>To ensure value building and inclusive growth of students.</p>
Background	<p>K-Structura is a civil and structural engineering consultancy firm based in Dehradun and Jaipur. We are a team of experts, chartered structural engineers, PhD, i.e., academia and industry to provide best learning and knowledge to the students.</p>
Target Beneficiaries	
Eligibility Criteria	✓ B.Tech (Civil Engineering)
Duration of Project	✓ Training duration: 144 hours
Programme start date	✓ 22nd of March 2020 (orientation)
Fees	✓ INR 13,500 for programme A, Batch strength: max 25-30 students
Enrolment	✓ First-come, first-served basis- contact via phone or email
Training Venue	✓ Will be announced later
Offered Programmes	
Programme A (ITCE/2020/A)	Programme B (ITCE/2020/B)
<p>Programme “A” comprised of</p> <ul style="list-style-type: none"> - training in technical competence in the areas of structural analysis and design to equip students for the necessary technical background required for industrial design. - In the next part, student will get training in practical structural design and by working on realistic projects. 	<p>Programme “B” comprised of</p> <ul style="list-style-type: none"> - In programme “B”, student will get training in practical structural design and by working on realistic projects. We expect student will have necessary technical competence.

K-Structura Consultants

Flat no. 301, 13A Balbir Road, The Courtyard Residency
Dalanwala, Dehradun, Uttarakhand 248001, India

Ph: +91-7060089444, +91-8527199149, Email: k_structura@rediffmail.com

Website: www.k-structura.com

<ul style="list-style-type: none"> - Most suitable for students who need to enhance their basic technical knowledge along with practical structural engineering. 	
---	--

Table 1: Programme A (ITCE/2020/A), General Structure

General Programme Structure	<p>The diagram illustrates the general structure of Programme A as a sequence of three parts, each represented by a blue arrow pointing to the right. Part A is the longest arrow and contains the text 'Technical Competence: Structural analysis, design, strength of materials'. Part B is shorter than Part A and contains 'Practical Industrial Design (Live-projects): analysis and design of RC and steel structures, software training'. Part C is the shortest arrow and contains 'Site Training (visit): ongoing projects'.</p>	
Activity Module	ACTIVITY	STUDENT RESPONSIBILITIES
	Introduction to structures, type of problems, basic structural understanding, programme overview, getting to know each other, faculty introduction, aptitude test, evaluation and feedback	Q/A
	Fundamentals of structural analysis: basics, structural analysis from designer's perspective	
	Introduction to Design of Structures, primary structural components, load transfer mechanism, concept building, typical components beam, slab, column, automation in design, basic design software skills.	Reading assignment on Indian Standard Code for Concrete
	Introduction to design software, model generation and editing, Introduction to loading, automatic load-generation and application (wind, moving, floor, earthquake, etc.), pre-analysis, post-analysis, analysis of a 2D and 3D frame RCC beam, column, and slab design, drawing preparation, frame analysis, Session on AutoCAD	
	RCC structure analysis and design, modeling, geometry, loads, load combinations, safety, optimization, drawing preparation, Interpretation of software results, reinforcement detailing, report making	Optimize a given structure
	Seismic design and modeling, introduction, standards, seismic loads and their effects on buildings, analysis and design, response spectrum method, time history analysis	Drawing assignment
	Interpretation of software results, reinforcement detailing, report making,	
	Introduction to steel structures, Introduction to Pre-Engineered Buildings composite structures, standards,	Understanding structural elements Drawings

	scope, opportunities, loads, IS codes, Session on steel structure components, design considerations	
	Session on steel structure components, design considerations, use of design software, Industry requirements, optimization, design workflow	Reading assignment
	Substructure concepts: introduction, industrial perspective, requirements, tricks	Drawing Assignment
	Design of foundations, concepts, considerations, forces and stresses, design of footings, drawing considerations, preparation	Drawing assignment
	Design of isolated and combined footings, geometry, modeling, analysis and design, optimization, automated design, site considerations, practical problems	
	Mat foundation, modeling and, analysis, drawing preparation, interpret results, discussion	
	Live-Industrial Project work:	Design, drawing assignment
	Live-Industrial Project work	Design, drawing assignment
	Site visit	Site-related activities
	Report Making	

*in programme B, there will not be any sessions on technical competence, and students will directly start working on live-projects (after basic training). It is expected that students who will enrol in programme B will have necessary theoretical background.

Structural Design focus	<ul style="list-style-type: none"> - Steel Design (PEB, industrial structures) - Reinforced concrete design (residential, commercial) - Software and manual design, Structural Drawings and Detailing
Software's Included	<ul style="list-style-type: none"> - Industrial StaadPro - AutoCAD

Details of the Organization

Name of the Organization	K-Structura Consultants
Address for correspondence	Flat no. 301, The Courtyard Residency, Balbir Road, Dalanwala, Dehradun 248001 Uttarakhand
Website	www.k-structura.com

Contact	
Name	Dr. Arun Kaintura
Designation	Director
E-mail	k_structura@rediffmail.com
Telephone number	+91-7060089444

Project Team Overview

At K-Structura, our project team consists of PhD's and highly experienced professionals, chartered engineers. K-Structura brings years of academic and industrial experience to provide best education and training to our students. We are a team of experienced professionals who focus on, high quality, efficiency, sustainability, and building values. The core members of the team are



Dr. Arun Kaintura has done B.Tech in Civil Engineering from G. B. Pant University, Pantnagar, Uttarakhand and MS degree in Structural Engineering from Technical University of Dresden, Germany (sponsored by German government and Eurovia GmbH). He holds a PhD degree from Ghent University, Belgium (funded by the Ghent University). Arun has strong core academic, technical skills and ethics at par with global standards. He has published various technical papers and is strongly connected to academics as well. Arun started his career in the industry as a bridge design engineer and has worked on infrastructure/industrial projects such as composite bridges, steel structures.



Er. Pankaj Bansal is an IES qualified (AIR-94) in ESE-2009 during his B.Tech education. He has done B.Tech from G. B. Pant University, Pantnagar, Uttarakhand. He established his own consultancy firm (Bansal & Associates) in Jaipur in the year 2009 and since then completed/ongoing more than 1,000 projects in residential, commercial, industrial, pre-engineered buildings, etc. in India & abroad. He is a well-known designer for structural consultancy services in Jaipur. He has over 10 years of experience in structural analysis, design, execution and management. He is well known for providing unique solutions for rehabilitation/strengthening of existing structures. In his spare time, he provides technical training to IES aspirants. He is actively associated with prestigious Institutes of structures in India.



Er. Mohit Benjwal started his career as a project appraisal engineer in central hydro PSU and has more than 8 years' experience in power plant development. During his tenure in central hydro PSU, he was fully responsible for the preparation of DPR/Feasibility of large dam projects and its approval from various agencies including Prime Minister Office (PMO). Mohit has strong core aptitude, technical background that helped him to qualify central hydro PSU, RITES (air-13), SAIL (Air-4) and Coal India Limited. He also appeared for union civil services (UPSC) interview twice with civil engineering as a subject for mains. Mohit has great interpersonal and managerial skills.



Er. Sameer Rawat is a licensed (chartered) structural engineer who has over 5 years of experience in the planning, design, and execution of civil engineering projects. He independently completed various industrial, residential, commercial, PEB and infra projects in India and abroad. Sameer brings him a wide range of knowledge and experience in the infrastructure industry. He is a quick learner, initiative taker and always ready for new challenges. He is a member of the institution of engineers and IAStructE.