

Ref. No. IKYPTU/CE/BOS/001.

Dated 28-06-19.

**Board of Studies (Civil Engineering)**  
**MINTUES OF METING**

A meeting of Board of study Civil Engg. was held on June 28,2019 at 10:00 am in office of HOD Civil Department CB-II Ground Floor, I.K. Gujral Punjab Technical University Jalandhar, Main Campus.

**The following members were present:**

Dr. Rajiv Chauhan, HOD, Civil Engineering, IKGPTU, Kapurthala  
Dr. Geeta Arora, PEC, Chandigarh  
Dr. Maninder Singh, Punjabi University, Patiala  
Dr. Rinku Walia, IKGPTU, Hoshiarpur Campus  
Dy. Director/Assistant Director CR&A  
Ar.Md. Fuzail Jawaid, IKGPTU, Main Campus  
Mr. Simarjit Singh, Student Representative, IKGPTU Main Campus

**The following members could not attend the meeting:**

Dr.A.P. Singh, NIT, Jalandhar  
Dr. Sanjay Kumar Singh, PEC University, Chandigarh  
Dr. Jaspal Singh, PAU, Ludhiana  
Dr. Vijay Shankar Dogra, NIT, Hamirpur  
Dr. Kamal Kumar, PEC, Chandigarh  
Dr.R.K. Sharma, NIT Hamirpur  
Dr. Rafat Siddique, Thapar University, Patiala  
Dr. Dwarka, Thapar University, Patiala

The Board discussed the agenda and the following decisions were made.

- The vision, Mission statement, COs, POs, PEOs and PSOs of the Department of Civil Engineering, IKGPTU Main Campus has been discussed and approved. (Annexure – A)
- For batches of B. Tech 2016-20 and 2017-21 already approved Scheme & Syllabus of 2011 of IKGPTU shall be adopted for Main and Constituent Campuses.
- For batches of B. Tech 2018-22 and 2019-23 already approved Scheme & Syllabus of 2018 of IKGPTU shall be adopted for Main and Constituent Campuses.

*"Propelling Punjab to a Prosperous Knowledge Society"*

**I. K. Gujral Punjab Technical University Main Campus**

Jalandhar-Kapurthala Highway, Kapurthala-144 603

Mob.: 94658-84852 Mail : ptu.headcivil@gmail.com Website : www.ptu.ac.in





ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ

ਆਈ. ਕੇ. ਗੁਜਰਾਲ. ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ  
I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR  
Department of Civil Engineering

Ref. No. IKGPTU/CE/BOS/002.

Dated 28-06-19.

- The list of subjects for Program Core & Programme Elective Course the for Minor Degree in Civil Engineering batch 2018-22 onwards has been finalized. List attached at 'Annexure – B'.
- The already approved scheme and syllabus of M. Tech Civil Engineering with pspecialization in Structural Engineering for batch 2018-20 of IKGPTU shall be adopted for M. Tech Civil Engineering batch 2019-21 for Main and Constituent Campuses.
- To undertake an Honors degree, the students have to earn 20 credits from SWAYAM/MOOCs.
- The members of BOS (CE) authorized the Chairman BOS (Main & Constituent Campus) and Dr Rinku Walia to suggest a list of subjects from Swayam /MOOCs for semester July-Nov. 2019 for batch 2018-22 in line with BoS of Affiliated colleges.
- It was recommended that the number of credits for SWAYAM/MOOCs would be assigned on the basis of the duration. The criteria for credit calculation will be:

<u>Weeks</u>	<u>Credits</u>
3-5 weeks	1
6-9 weeks	2
10-13 weeks	3
14-16 weeks	4

The meeting ended with vote of thanks.

**Dr. Geeta Arora**

**Dr. Maninder Singh**

**Dr. Rinku Walia**

**Dy. Director CR&A**

**Mr. Simarjit Singh**

**Ar.Md. Fuzail Jawaid**

**(Coordinator)**

**Dr. Rajiv Chauhan**

**(Chairman)**

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Annexure - A

Vision, Mission of Civil Engineering Department, IKG PTU Main Campus:

	Vision	Mission
<b>University Main Campus</b>	To be an institution of excellence in the domain of higher technical education that serves as the fountainhead for nurturing future leaders of technology and techno-innovation responsible for the techno-economic, social, cultural and environmental prosperity of the people of Punjab, the Nation and the World.	To provide seamless education through pioneering use of technology, in partnership with industry and society with a view to promote research, discovery and entrepreneurship and to prepare its students to be responsible citizens of the world and the leaders of technology and techno-innovation of the 21 <sup>st</sup> Century by developing in them desirable knowledge, skill and attitudes base for the world of work by instilling in them a culture for seamlessness in all facets of life.
<b>Department</b>	To be a Department of excellence producing civil engineers having professional and leadership qualities with technical competence to promotes inter-disciplinary research and Innovation for Sustainable society.	<ul style="list-style-type: none"><li>• To aspire for the advancement of Technical Education in Civil Engineering and allied fields by relevant research and innovation.</li><li>• To impart and enhance knowledge for empowerment of socially, economically marginalized sections of society.</li><li>• To produce Ethical Civil Engineers and entrepreneurs to meet National and Global demands.</li></ul>



## Programme Outcomes (PO's)

S. No.	Programme Outcomes	Description
1	Engineering Knowledge	Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2	Problem Analysis	Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
3	Design/ Development of Solutions	Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.
4	Conduct	Investigations of complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.
5	Modern Tool Usage	Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6	The Engineer and Society	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
7	Environment and Sustainability	Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
8	Ethics	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
9	Individual and Team Work	Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
10	Communication	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.
11	Project Management and Finance	Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12	Life-long Learning	Recognize the need for and have the preparation and ability to Engage in independent and life- long learning in the broadest context of technological Change.

## Programme Educational Objectives (PEOs):

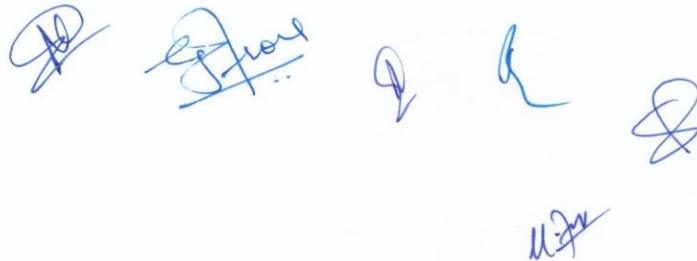
The graduates of Civil Engineering will be able to:

1. Determine and resolve complex civil engineering problems of the region with the help of modern engineering tools by application of technical knowledge and skills.
2. Promote smart, sustainable and cost-effective solutions in coherence with societal issues by abiding professionalism.
3. Become successful entrepreneur or acquire employment in Public/Private sector or pursue higher studies for research and development.
4. Inculcate professional ethics, management and leadership qualities.
5. Work in teams comprising of multidisciplinary professionals.

## Programme Specific Outcomes (PSOs)

Students of Civil Engineering Program will have:

1. **Analytical and Design skill:** The ability to design buildings and infrastructure to mitigate the effects of disasters and natural catastrophes like floods, earthquakes and landslides etc.
2. **Research and Innovation:** The ability to create innovative designs with new and smart materials of minimum carbon footprints.
3. **Sustainable outlook:** The skill to recognize the need for improvement in the areas of housing, water and waste management, etc. for a sustainable society.

A collection of handwritten signatures in blue ink, including a large stylized signature on the left, a signature that appears to be 'S. J. ...', and several other smaller, less legible signatures scattered below.



Bachelor of Technology in **Civil Engineering**  
Teaching Scheme for Undergraduate Degree Programme  
**Annexure - B**

**Annexure Professional Core & Elective Courses for Minor Degree in B.Tech. Civil Engineering**

List of Professional Core Courses										
Sem	Category	Course Code	Course Title	Hours per week			Marks			Credits
				L	T	P	Internal	External	Total	
Odd	Professional Core courses	BTCE-301-18	Surveying & Geomatics	3	1	0	40	60	100	4
Even	Professional Core courses	BTCE-401-18	Concrete Technology	3	0	0	40	60	100	3
Odd	Professional Core courses	BTCE-503-18	Construction Engineering & Management	3	0	0	40	60	100	3
Odd	Professional Core courses	BTCE-504-18	Environmental Engineering	4	0	0	40	60	100	4
Even	Professional Core courses	BTCE-601-18	Estimation & Costing and Professional Practice	3	1	0	40	60	100	4

**Professional Elective (PE) Course**

Sr.No	Semester	Programme Elective	Course Code	Course Title	Hrs/Week			Credits
					L	T	P	
1	VI (Even)	PE-1	BTCE-XXX	Elective - I	3	1	0	4
2	VI (Even))	PE-2	PECE-XXX	Elective -II	3	1	0	4
3	VII (Odd)	PE-3	PECE-XXX	Elective - III	3	1	0	4
4	VII (Odd)	PE-4	PECE-XXX	Elective - IV	3	1	0	4
5	VIII (Even)	PE-5	PECE-XXX	Elective - V	3	1	0	4
6	VIII (Even)	PE-6	PECE-XXX	Elective - VI	3	1	0	4



Bachelor of Technology in **Civil Engineering**  
Teaching Scheme for Undergraduate Degree Programme

**List of Professional Elective Courses for Minor Degree in B. Tech Civil Engineering**

**Track 1**

Subject Code	Geotechnical Engineering
PECE-109	Ground Improvement Techniques

**Track 2**

Subject Code	Transportation Engineering
PECE-130	Transportation Economics

**Track 3**

Subject Code	Structural Engineering
PECE-155	Sustainable Construction Methods

**Track 4**

Subject Code	Environmental Engineering
PECE-164	Environmental Laws and Policy
PECE-169	Solid and Hazardous Waste Management

**Note: (wide Ref. No. : IKGPTU/Reg/NF/ 2056 Dated: 17.05.2019)**

1. The student will have to earn at least (20) credits/5 subjects (whichever is higher) for award of the minor degree from the other branch/discipline. The candidate will have to clear at least 5 courses from the list approved by concerned BoS. out of the 5 courses (core + departmental elective) at least he/she has to choose 2 or more core subject and rest may be chosen from elective courses.
2. The students may be allowed to take maximum two (2) subjects per semester pertaining to their minor degree.









**List of Online courses for Session July-November 2019 from SWAYAM Portal for Minor and Honors Degree in Civil Engineering**

Strength of Materials	Prof. Sriman Kumar	IITKGP	12 Weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019	Core	UG
Foundation Engineering	Prof. Kousik Deb	IITKGP	12 Weeks	Rerun	29-Jul-19	18-Oct-19	16 November 2019	Core	UG
Concrete Technology	Prof. B Bhattacharjee	IITD	12 Weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019	Elective	UG
Design of Masonry Structures	Prof. Arun Menon	IITM	12 weeks	New	29-Jul-19	18-Oct-19	16 November 2019	Core	Both
Design of Reinforced Concrete	Prof. Nirjhar Dhang	IITKGP	12 Weeks	Rerun	29-Jul-19	18-Oct-19	16 November 2019	Core	PG
Reinforced Concrete Road Bridges	Prof. Nirjhar Dhang	IITKGP	4 Weeks	Rerun	26-Aug-19	20-Sep-19	16 November 2019	Elective	UG
Scheduling Techniques in Projects	Prof. J. Uma Maheswari	IITD	4 Weeks	New	26-Aug-19	20-Sep-19	16 November 2019	Elective	UG
Design of steel structures	Prof. Damodar Maiti	IITKGP	12 weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019		
Structural analysis-I	Prof. Amit Shaw	IITKGP	12 weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019		
Structural Dynamics for Civil	Prof. Riya Catherine George	IITK	4 weeks	New	26-Aug-19	20-Sep-19	17 November 2019	Elective	Both
Fluid Mechanics	Prof. Subashisa Dutta	IITG	8 weeks	New	26-Aug-19	18-Oct-19	16 November 2019	Core	UG
Principles of Construction	Prof. Sudhir Misra	IITK	8 weeks	Rerun	29-Jul-19	20-Sep-19	29 September 2019	Elective	UG
Project Planning & Control	Prof. Koshy Varghese	IITM	8 weeks	Rerun	29-Jul-19	20-Sep-19	29 September 2019	Elective	UG
Integrated Waste Management	Prof. Brajesh Kumar Dubey	IITKGP	12 Weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019	Core	PG
Wastewater Treatment and	Prof. Manoj Kumar Tiwari	IITKGP	12 Weeks	Rerun	29-Jul-19	18-Oct-19	16 November 2019	Core/Elective	Both
Matrix Method of Structural Analysis	Prof. Amit Shaw & Prof Biswanath Banerjee	IITKGP	8 weeks	Rerun	29-Jul-19	20-Sep-19	29 September 2019	Core	UG
Photogeology in Terrain	Prof. Javed N. Malik	IITK	8 weeks	Rerun	26-Aug-19	18-Oct-19	17 November 2019	Elective	Both
Geosynthetics Testing	Prof. J. N. Mandal	IITB	4 Weeks	Rerun	29-Jul-19	23-Aug-19	29 September 2019	Elective	Both
Geotechnical Engineering	Prof. J. N. Mandal	IITB	4 weeks	Rerun	29-Jul-19	23-Aug-19	29 September 2019	Core	Both
Environmental Geotechnics	Prof. D. N. Singh	IITB	12 Weeks	New	29-Jul-19	18-Oct-19	16 November 2019	Core/Elective	UG
Remote Sensing and Digital Image Processing of Satellite Data	Prof. Arun K. Saraf	IITR	8 weeks	Rerun	26-Aug-19	18-Oct-19	16 November 2019	Elective	UG
GPS Surveying	Prof. Jayanta Kumar Ghosh	IITR	4 Weeks	Rerun	29-Jul-19	23-Aug-19	29 September 2019		
Sustainable Materials and Green	Prof. B Bhattacharjee	IITD	12 Weeks	New	29-Jul-19	18-Oct-19	16 November 2019	Elective	Both
Remote Sensing and GIS	Prof. Rishikesh Bharti	IITG	8 weeks	New	26-Aug-19	18-Oct-19	17 November 2019	Core	Both
Glass In Buildings : Design And Applications	Prof. K N Satyanarayana & Prof. E Rajasekar	IITM & Glass	12 Weeks	Rerun	29-Jul-19	18-Oct-19	16 November 2019	Elective	UG
Glass Processing Technology	Prof. K N Satyanarayana & Prof. E Rajasekar	IITM & Glass	12 Weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019	Elective	Both
Advanced Concrete Technology	Prof. Manu Santhanam	IITM	12 Weeks	Rerun	29-Jul-19	18-Oct-19	17 November 2019	Elective	PG