

## Department of Civil Engineering

The Department offers Graduate, Post Graduate\* and Research program in Civil Engineering. The B. Tech, M. Tech\* courses in Civil Engineering emphasises various aspects of construction, design and development of buildings, highways, Metro and Smart cities. Interactive teaching with on-site exposure is provided in order to enable the students to apply their knowledge learnt in the classroom to construction projects. Department regularly organizes guest lectures by experts from industry, academic & research institutions. Department encourages students to work for sustainable as well as development of society and nation.

### Programme Offered

Programme	Intake	Duration
B. Tech	60	4 years
Ph. D	As per UGC Norms	

### Research Areas

- Structures- To make “waste to energy”, beam-column joint, earthquake resistant structure, cement free concrete, basalt Crete, lufacretecomposits and applications.
- Geotech- Ground Improvement, Soil liquefaction, Use of GIS in Soil Identification, Geo-Environment& Engineering.
- Transportation- Use of Geosynthetics, Utilisation of Waste Materials in Highway Subgrade, Surface Layers.

### Infrastructure/Labs

The Department has established State of art, Survey Lab with Digital Total Station and Digital Theodolite and well established Structural Analysis Lab. The Latest equipment such as Digital Compression Testing Machine (CTM) of 2000kN capacity, Non Destructive Testing, Digital Triaxial Testing for soil are in purchase process.

### Faculty

Name	Designation	Specialisation	Experience
Dr. Rajiv Chauhan	Associate Professor and Head Civil	Geotechnical Engineering	14 Years and 3 years Research Experience at IIT roorkee.
Dr. T Palanisamy	Associate Professor	Structural Engineering	16 Years

### Events Organised

- **Concrete Day:** One day Seminar on **Advancement of Concrete Technology-2017** (27<sup>th</sup> Sept. 2017)
- **Civil Engineering Association:** Inaugurated **Society of Civil Engineers** (27<sup>th</sup> Sept. 2017)
- **Engineer’s Day:** Celebrated Engineer’s day (15<sup>th</sup> Sept. 2017)

- **Workshop:** The faculty members and students of Civil Engineering attend the workshop on **Popularization of Remote Sensing based maps and spatial information available with ISRO Bhuvan Portal** at Guru Nanak Bhavan, Ludhiana (11<sup>th</sup> Aug. 2017)

### **Faculty Participation/Paper Presentation in Conferences:**

- Chauhan, Rajiv (2016), “**Influence on Compressive Strength of HPC with Use of Slag Aggregate**” conference on *Structural Engineering & Mechanical computations (SEMC)*, held at Cape town, South Africa, proceedings published by Taylor & Francis.
- Chauhan, Rajiv (2016), “**Shake Table Tests on Sand Reinforced with Geocell for Liquefaction Mitigation**” presented at Amity University, Noida.
- Singh, A., Chauhan, R. and Gill, K S (2017) “**Sub grade Improvement of Soil with Use of Bio-Enzyme**”, *International Conference on Recent Advancement in Civil Engineering* in May, 2017 at M.M University, Mullana, Haryana, India.
- Palanisamy, T (2017), “**Structural Behaviour of Beam – Column joint with Basalt Fibre Reinforced Concrete**”, Organized by *Canadian Arena of Applied Scientific Research*, Canada, held at Dubai, UAE.
- Palanisamy, T (2017), “**Corrosion study on Fly Ash based Geopolymer Concrete with Partial Replacement of Fly Ash by Paper Sludge Using Impressed Voltage Method**” Organized by *Canadian Arena of Applied Scientific Research*, Canada, held at Dubai, UAE.
- Palanisamy, T (2016), “**Study on Behaviour of Geopolymer Beam – Column Joint**” Organized by *CAASR Publishers* held at UnivetsitiKebansaan Malaysia, Kuala Lumpur, Malaysia.

### **Faculty Publications:**

- Chauhan, Rajiv Co- Authored Book on “**Estimating and Costing**” for Civil Engineering students.
- Chauhan, R. and Singh, H. (2017) “**Disasters – Special Focus on Earthquake Induced Soil Liquefaction**”, *Indian Journal of Science and Technology*, Vol 10(35) pp. 1-6, (SCI)
- HarAmrit, Chauhan, Rajiv, Gyandera and Sisiodia, M.S. (2016) “**Identification of Black Spot on NH with Use of Kernel Theory**”, *Journal of the Indian Society of Remote Sensing*, Vol. 44, pp 457-646, Springer Publication Impact factor 0.5
- Senthamilselvi P and Palanisamy T. (2018) “**Experimental and Analytical Study on Flexural Behaviour of Fly Ash and Paper Sludge Ash Based Geopolymer Concrete**”, *International Journal of Computer & Concrete*, Vol. 21, No. 2 pp 157-166
- Senthamilselvi P and Palanisamy T. (2018) “**Effect of Incinerated Paper Sludge Ash on Fly – Ash Based Geopolymer Concrete**” *International Journal of Croation Association of Civil Engineers* Vol. 69, No. 9, pp.851-859
- Sudharsan N. Palanisamy T. and Subhash C. Yaragal (2018) “**Environmental Sustainability of Waste Glass as A Valuable Construction Material – A Critical Review**”, Vol.24., pp. 351-355
- Sudharsan N.and Palanisamy T (2018) “**A Comprehensive Study on Potential Use of Waste Materials in Brick for Sustainable Development**”. *Ecology, Environment and Conservation* Vol.24. pp. 351-355
- Palanisamy T. Vidhya K. Thamariselvan R. (2017) “**An Experimental Study on Behaviour of Steel Reinforced Concrete Beams**” *International Journal of Research Methodology in Engineering and Technology*, Vol. 1, No. 2, pp.178-183

## Workshops/FDP/Summer Scholl/Winter School/Refresher Course attended:

- Dr. Rajiv Chauhan delivered **FDP Lecture** at Amritsar College of Engineering and Technology, Amritsar on **Earthquake Resistant Buildings** (26<sup>th</sup> Dec. 2017)
- Dr. T Palanisamy delivered **FDP Lecture** at Global College of Technology, Amritsar on **Beam – Colum Joint** (21<sup>th</sup> Dec. 2017)

## Patents Granted

Title of Invention	Patent Number/ Application No.	Inventor
Clay Crete Panel (CCP), (2016)	E-2/2822/2016-CHE	Sudha P.,Palanisamy T.,
Claycrete Composite Materials (CCM), (2016)	E-2/2823/2016-CHE	Sudha P.,Palanisamy T.,Selvaraj R
PVA Concrete Composite Panel, (2016)	CBR No. 30480 / 201641038577	Palanisamy T., Prasanthini P
Incinerator – Ash Paving Blocks ( IAPB), (2016)	CBR No. 30480 / 201641038578	Palanisamy T., Vidhya K ,
Light Weight Concrete Using Fly Ash and Bagasse Ash, (2016)	CBR No. 30480 / 201641038579	Palanisamy T., Gunasekaran M
Fly Ash Artificial Aggregate ( FACA), (2016)	CBR No. 30480 / 201641038580	Palanisamy T., AjmalMuhammed M

## Academic Achievements and Awards Won by Faculty:

- Dr. Rajiv Chauhan worked on Consultancy work: The Third party auditor for Rs-250 Crore for village development under **Mukhya Mantri Gramin Vikas Yojjna** by PIDB in 2016.
- Dr. Rajiv Chauhan Developed Geotech lab under **RUSA (Rashtriya Uchcharar Shiksha Abhiyan)** grant worth 18 lakhs in 2014.
- Dr. T Palanisamy was awarded **Shri P K Das memorial Best Faculty Award” in Civil Engineering** by Nehru Group of Institutions, Tamilnadu& Kerala2016
- Dr. T Palanisamy was awarded **Outstanding Young Concrete Engineer** award in the files of Concrete technology Indian Concrete Institute, India & Ultra Tech Cements 2016,

Dr. T Palanisamy was awarded **10<sup>th</sup> CIDC Viswakarma Award 2018** by Planning Commission of India and Construction Industry Development Council at Indian Habitat Centre New Delhi 2018.











