

# BEACON

<http://mcet.in/?civil=newsletter-magazine>

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## Vision of the Institute

We develop a globally competitive workforce and entrepreneurs.

## Mission of the Institute

Dr. Mahalingam College of Engineering and Technology, Pollachi endeavors to impart high quality, competency based technical education in Engineering and Technology to the younger generation with the required skills and abilities to face the challenging needs of the industry around the globe. This institution is also striving hard to attain a unique status in the international level by means of





## About the Department:

The department of Civil Engineering has been in existence since 2007 and has grown into a fully fledged department offering courses leading to B.E degree (4 years) in Civil Engineering and M.E (2 years) in Structural Engineering. The department has well qualified faculty and supporting staff in areas such as Structures, Geotech, Construction & Management, Environmental and Transportation Engineering.

The department places special emphasis on engineering automation. The students will be exposed to advanced computing techniques used for analysis and design. In this regard, the department provides opportunities for students to acquire knowledge in the latest softwares such as, STAADPRO, STRUDS, GIS, AUTOCAD, MS Project and ANSYS. Expertise gained in these automation tools will enhance the competitive edge of our graduates in the ever tighter job market.

The Department actively promotes curriculum development activity by updating existing courses, developing new courses and preparing resource material for teaching. It undertakes industrial consultancy works as a part of its interaction with industry and also organizes seminars/symposia for professional interaction. The Department contributes to the interdisciplinary academic and research activity of the Institute.

The Department of Civil Engineering can provide you with outstanding preparation for a career in government service, private consulting, industrial research, or academia. We invite you to call or visit our department to learn more about our programs and specific areas of study.

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### Vision of the Department

*To develop competent Civil Engineers to meet the infrastructure challenges of India and the world*

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### Mission of the Department

- *To become one of the reputed departments offering Civil Engineering Program in the country.*
  - *To produce excellent engineers to cope up with the changes through dynamic, innovative and flexible curriculum.*
  - *To provide a conducive environment for teaching & learning and to develop leaders with effective communication skills.*
  - *To conduct quality research driven by industry & societal needs and provide affordable engineering solutions.*
- 

## Programme Educational Objectives (PEOs)

The Programme Educational Objectives (PEOs) of our department are,

The Graduate will

- PEO 1    **Technical Expertise:** Have successful professional careers dealing with analysis, design and management of construction projects globally.
- PEO 2    **Lifelong learning:** Exhibit attitude, professionalism, ability to communicate with team members and adapt to the latest trends by engaging themselves in continuous learning.
- PEO 3    **Ethics:** Ethically apply their engineering knowledge and skills considering, societal, economic and environmental factors.

## Programme Outcomes (POs)

The graduates of Civil Engineering Programme will be able to:

- PO1.    **Engineering knowledge:** Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization in the field of Civil Engineering.
- PO2.    **Problem analysis:** Identify, formulate, analyse and solve complex problems in construction industries using principles of mathematics, natural sciences and engineering sciences.
- PO3.    **Design/development of solutions:** Design a solution for complex civil engineering problems and design system processes to meet specific needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
- PO4.    **Conduct investigations of complex problems:** Conduct investigations of complex problems including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusion.

## Programme Outcomes (POs) – Continued

PO5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. **Environment and sustainability:** Understanding the impact of engineering solutions in social environment and demonstrate the knowledge for sustainable expansion.

PO8. **Ethics:** Apply ethical principles and commit to professional ethics and the norms of engineering practices.

PO9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.

PO10. **Communication:** Communicate with engineers and society to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions related to civil engineering professionals.

PO11. **Project management and finance:** Demonstrate and apply the knowledge of engineering and management principles to one's own work, as a team leader or a member to manage project in multidisciplinary environments.

PO12. **Life-long learning:** Recognize the need for, and have the ability to engage in independent and life-long learning in the context of technological change.

## Programme Specific Outcomes (PSOs)

PSO1. **Design process:** Design the fundamental elements of civil engineering systems, system components and processes considering safety, quality and cost consideration.

PSO2. **Quality and standards:** Able to plan and prepare design and construction documents such as specifications, contracts, engineering drawings and construction schedules

### Programmes offered

Programme Offered	B.E., Civil Engineering	M.E., Structural Engineering
Sanctioned Intake	60	18
Course Duration	4 Years	2 years

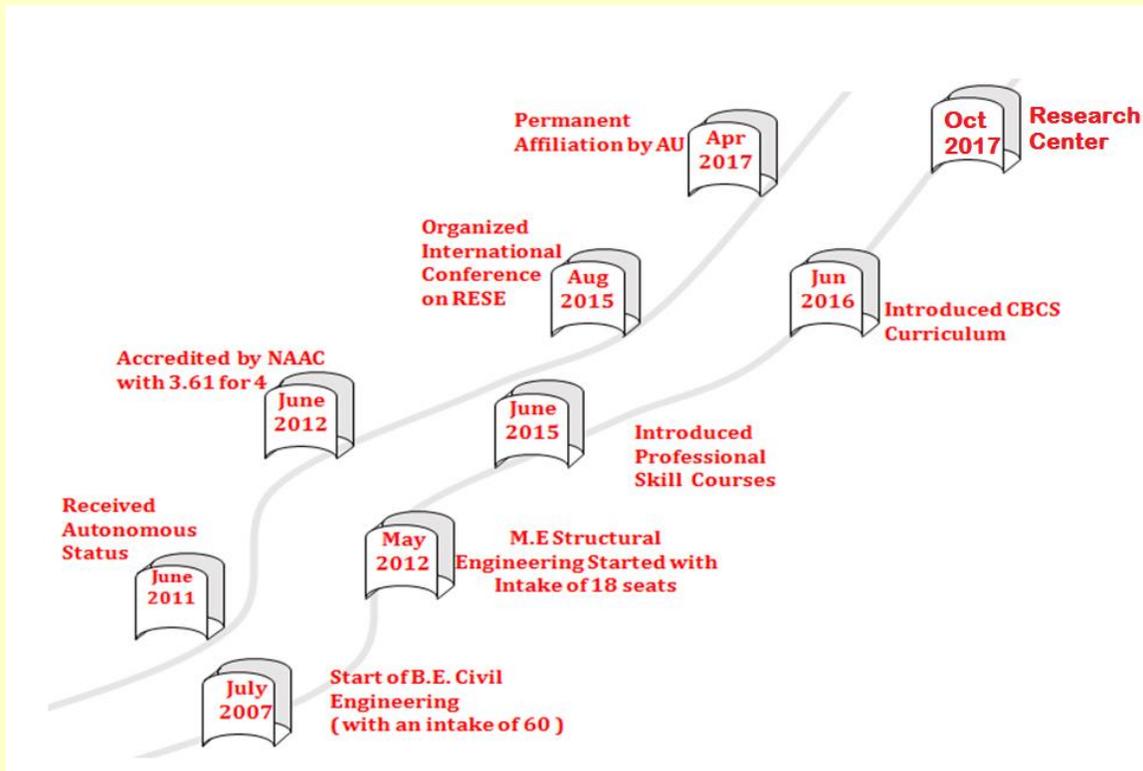
### Students strength

Strength	I year	II year	III year	IV year	Total
UG	51	69	66	69	255

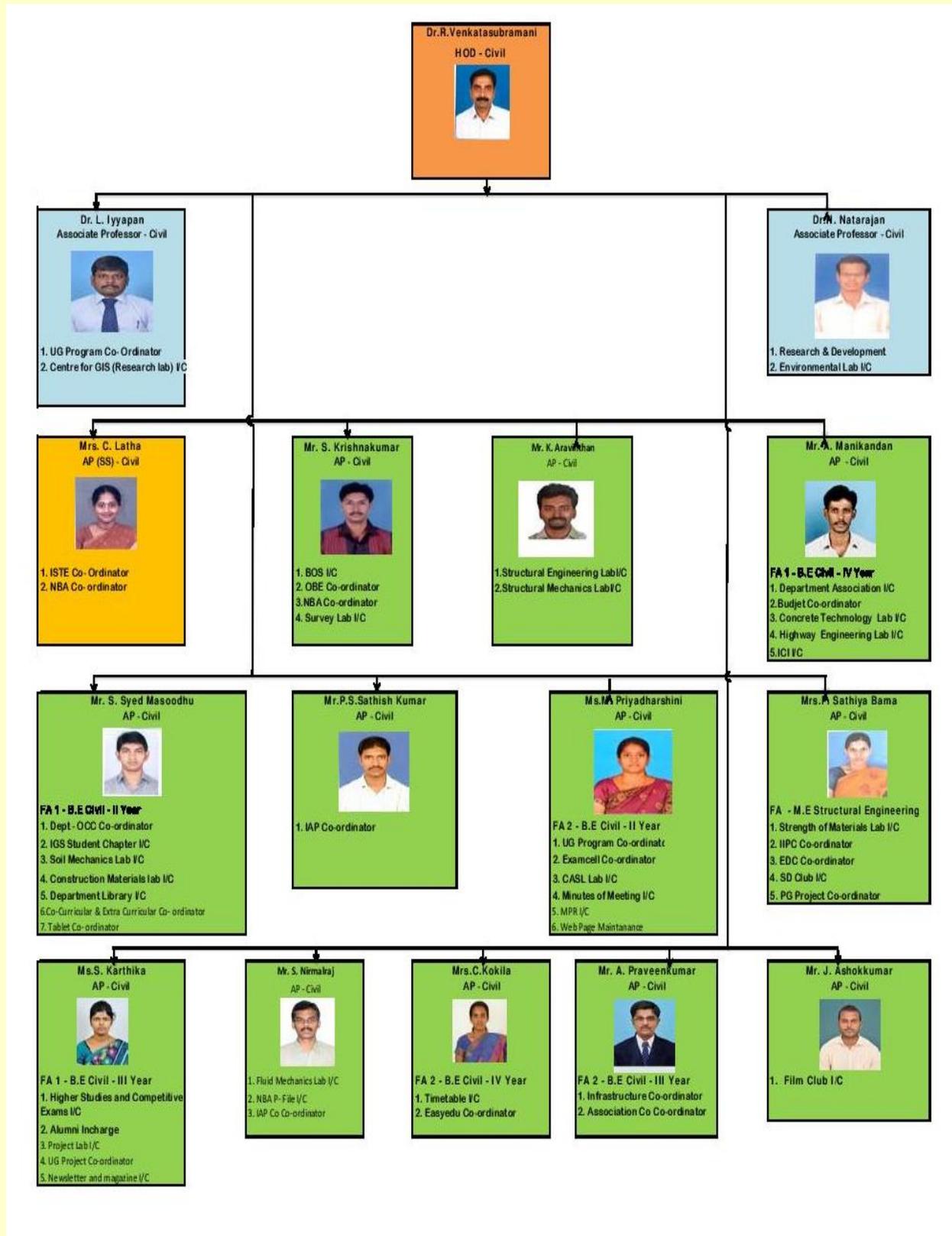
### Department Overview

- Established in the Year 2007 with B.E. Civil (Intake of 60)
- Autonomy status from 2011 onwards
- M.E. Structural Engineering started in the year 2012
- Accredited by NAAC with 'A' Grade in the year 2012
- Permanent Affiliation by Anna University, Chennai in the year 2017
- Accredited by NBA under Tier 1 in the year 2017
- Recognized as "Research centre" by Anna University in the year 2017

### Department Milestones



## Department Profile



## Laboratory Details

S.No	Name of the Laboratory	Total Equipment Cost	Room No	Laboratory Size
1	Surveying Practices Lab	19.1 Lakhs	E109	68 Sqm
2	Geotechnical Engineering Lab	12.1 Lakhs	E110	68 Sqm
3	Construction Materials Lab	3.3 Lakhs	E110	68 Sqm
4	Concrete Technology Lab	5.9 Lakhs	E102	68 Sqm
5	Environmental Engineering Lab	13.8 Lakhs	E214	102 Sqm
6	Strength of Materials Lab	12.7 Lakhs	D107	116 Sqm
7	Fluid Mechanics Lab	11.2 Lakhs	D107	154 Sqm
8	Computer Aided Structures Lab	11.5 Lakhs	E213	102 Sqm
9	Highway Engineering Lab	2.2 Lakhs	E102	68 Sqm
10	Structural Mechanics Lab	5.4 Lakhs	E201	68 Sqm
11	Structural Engineering Lab	15.8 Lakhs	E101	68 Sqm
12	Research Lab	11.9 Lakhs	E204	68 Sqm



Laboratories facilities in the department

## List of Major Equipments

- Atomic Absorption Spectrophotometer
- Impact Echo Apparatus
- Concrete Permeability Apparatus
- Loading Frame- 50 ton – Beam testing of 10' length, DAQ, LVDT, Strain Transducers, Accelerometer, Pressure transducer, thermocouple
- Horizontal Shake table- Eccentric Cam
- Flexure testing Machine- 10 ton
- FFT analyzer
- Total Station

## Higher Studies Details of Previous Batch (2013 – 2017)

S.NO	NAME OF THE STUDENT	COLLEGE	COURSE
1	Sai Elakkiya .V	Indian Institute of Technology, Madras (through GATE score)	M.Tech Applied Mechanics
2	K .Sandhiya	SSN College of Engineering	M.E. Construction management
3	ShunmugaPriya	College of Engineering, Guindy	M.B.A. Construction Management
4	Anbuselvan C	Sona College of Technology, Salem	M.E. Industrial Safety
5	Sudhakar S	Builders Engineering college, Erode	M.E. Structural Engineering
6	Sankar V	Kongu Engineering College	M.E. Construction management
7	Ranjitha P	Dr. Mahalingam College of Engineering and Technology.	M.E. Structural Engineering
8	Anbarasan A	College of Engineering, Guindy	M.B.A. Construction Management
9	Seshan T.G.	College of Engineering, Guindy	M.B.A. Construction Management
10	MadhanPrasath .M	College of Engineering, Guindy	M.B.A. Construction Management
11	Vishnu S	Sri Ramakrishna Engineering College	M.E. Construction Engineering
12	Sabadhini K.R.	Sona College of Technology, Salem	M.E. Construction Management

## Industry Linkages

- **Larsen & Toubro Ltd., Chennai**
- **Appaswamy Real Estates Limited, Chennai**
- **ArunExcello Construction LLP, Chennai**
- **CCCL, Chennai**
- **Petrofac Engineering Services (I) Pvt. Ltd. , Chennai**
- **Eversendai Construction Pvt. Ltd. , Chennai**
- **Coromandel Engineering Company Ltd. , Chennai**
- **Mantri Developers Pvt. Ltd. , Chennai**
- **Utracon Structural Systems Pvt. Ltd. , Chennai**
- **Ceebros Property Development Pvt. Ltd. , Chennai**
- **RCI Digital Solutions Pvt. Ltd. , Chennai**
- **Dimensions, Coimbatore**
- **Pyramid Designs India Pvt. Ltd., Coimbatore**
- **Srinivasan Associates Pvt. Ltd., Coimbatore**
- **GK Consultants, Coimbatore**
- **ACCE(I), Coimbatore**
- **INSWAREB, Visakhapatnam**
- **URC Construction (P) Ltd., Erode**
- **Association of Civil Engineers, Pollachi**

## Placement Statistics with pay package

S.No	Name of the Company	No. of students placed	Package Rs. (PA)
1	PHY Market Research & Technologies Pvt. Ltd., Chennai	12	1,20,000
2	Arun Excello Construction LLP, Chennai	2	1,20,000
3	RCI Digital Solutions Pvt. Ltd., Chennai	1	2,10,000
4	Emerald Haven Realty Ltd., Chennai (TVS)	1	1,44,000
5	CADD Centre, Chennai	1	1,80,588
6	URC Construction Pvt. Ltd., Erode	1	1,80,000
7	Amazon, Hyderabad	1	1,87,000
8	Tech Mahindra Ltd., Chennai	1	3,01,500
9	Infosys, Bangalore	1	3,25,008
10	Sutherland Global Services, Chennai	4	1,56,750
11	IDBI Federal Life Insurance Co. Ltd., Coimbatore	1	3,07,580

## Internship projection – Batch 2014 – 2018 List of Industries confirmed

S.No	Name of Company & Location	No of Students	Duration(weeks)
1	Appaswamy Real Estates Ltd., Chennai	4	12
2	Arun Excello Construction LLP, Chennai	5	12
3	Jayam Consultants Pvt. Ltd., Chennai	2	12
4	Larsen & Toubro Limited, Chennai	5	12
5	Mantri Developers Pvt. Ltd., Chennai	4	12
6	Rajparis Civil Construction, Chennai	4	12
7	RCI Digital Solutions Pvt. Ltd., Chennai	2	12
8	Shree Mahalaxmi Enterprises., Chennai	4	12
9	Utracon Structural Systems Pvt. Ltd., Chennai	2	12

## Professional Society Activities in the Department

Students are provided opportunities to join as members in the professional societies mentioned below:

- **International Society for Technology in Education (ISTE)**
- **American Concrete Institute (ACI)**
- **Indian Concrete Institute (ICI)**
- **American Society of Civil Engineers (ASCE)**
- **Indian Geotechnical Society (IGS)**



One Day workshop on  
"Recent Advances in Geotechnical Engineering"

## Details of funded projects

- Grant of Rs. 30,00,000 from Science and Engineering Research Board – Department of Science and Technology for the project titled “Reducing Concrete Damages in Vertical Slip-form Structures” and it was completed successfully.
- Grant of Rs.3,00,000 received from the Management for the project titled “Sea Water Purification by Hybrid Solar Energy Resources” and it was completed successfully.



Slip form work assembly

## Major Research Areas

- Remote Structural Health Monitoring using Impact Echo Method
- Study of Structural Behaviour of Composite beams
- 3D stress analysis of anchorage zone
- Investigation on static behaviour of shear connectors
- Studies on cold formed steel
- Landslide prediction & forecasting using GIS & Remote sensing
- Surface & Subsurface water quality analysis & monitoring

## Industrial Visit details

S.No	Academic Year	Date of Visit	Place of visit	Batch	Course & Year
1	2017-2018	07.07.2017	KNR Construction, Kinathukadavu (NHA)	2014	B.E Civil/IV (43)
2	2017-2018	08.09.2017	Parambikulam dam, Parambikulam	2016	B.E Civil/II (70)
3	2017-2018	09.09.2017	Cochin port Trust, Cochin	2015	B.E Civil/III (62)
4	2017-2018	25.09.2017	Teemage Builders Precast Pvt Ltd, Kangayam	2016 & 2017	M.E Structural Engineering / I & II (15 & 8)



B.E., Civil (II year) - 2016 Batch - Visit to Parambikulam dam



M.E., Structural Engineering (I and II year) - 2015 & 2016 Batch - Visit to Teemage Builders Precast Pvt Ltd, Kangayam



B.E., Civil (IV year) - 2014 Batch - Visit to KNR Construction, Kinathukadavu (NHA)



B.E., Civil (IV year) - 2014 Batch - Visit to KNR Construction, Kinathukadavu (NHA)

## Beavers – Department Association

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### Office bearers for Academic year 2017 -2018

**President:**

*Dr. R. Venkatasubramani,  
Professor and Head,  
Department of Civil Engineering.*

**Vice President:**

*Mr. A. Manikandan,  
Assistant Professor,  
Department of Civil Engineering.*

**Secretary:**

*Selvan R. Logeshwarmanibalaji*

**Joint Secretary:**

*Selvan N.R. Monish Vyas Vikram*

**Chief Executives:**

*Selvan K. Manoj  
Selvi K. Kousika*

**Event Co-ordinators:**

*Selvi K. Sangeetha  
Selvan B. Bharanidharan*

**Executive Members:**

*Selvan M. Ravi  
Selvan K. Pandiaraj  
Selvan J. Bevin Lijo  
Selvi S. Monalisha  
Selvi N. R. Ashika Priyadharshini  
Selvan P. Ragul  
Selvan V. Vivek Velusamy  
Selvi M. Saranya Sree  
Selvi S. Priyadharshini*

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Beavers Association was formed with the primary objective of exposing budding civilians of MCET to the challenges of profession. The Association promotes the talents of students in co-curricular and extracurricular activities and keeps students and staff aware of the modern trends and to function as productive members of the profession and society with an understanding of global ramifications of work. The Students of Civil Engineering Department constitute its members. The Members of the association is divided into 15 (A to O) teams and provided the B-Numbers to conduct technical events which would develop the team spirit and have an interaction that promotes innovative ideas, technical tools and thus to spread the benefits of Civil Engineering education.

The association organizes various activities and events to unfold the prospects of Civil Engineering in the present day world. The association provides ample opportunity for the students to improve their presentation skills, organizational skills and leadership qualities, thus gives an opportunity for the overall personality development of students. Our Association conduct beneficial seminars, guest lectures, paper presentations, workshops, technical events and cultural activities that will advocate and promote creative thinking, leadership skills, artistic talents, cooperation and coordination and thus enable the members to function on multi-disciplinary team.

## Details of Programmes organized

S.No	Details of Program	Resources persons	Date
1	One day Seminar on “Advances in Seismic Design Concepts & Practices of IS 1893-2016”	<b>Dr. K. Muthumani</b> Prof, VIT University, Vellore <b>Dr. D. S. Jagannathan</b> Tirupur Plaza Hotel Pvt. Ltd., <b>Dr. M. P. Muthuraj</b> CIT, Coimbatore	11.08.2017
2	One Day workshop on “Recent Advances in Geotechnical Engineering”	<b>Dr. G. Ramasamy</b> (Retired Professor from IIT, Roorke) Distinguished Professor, Department of Civil Engineering, Builders Engineering College, Tiruppur <b>Dr. G. Dodagoudar</b> Professor/Civil, Indian Institute of Technology, Chennai. <b>Dr. P. D. Arumairaj</b> Professor and Head / Civil, Karunya University. Chairman, IGS-Coimbatore Chapter	24.08.2017
3	Recent Advances in Environmental Engineering	<b>Dr. R. N. Uma</b> Professor and Head, Sri Ramakrishna Institute of Technology, Coimbatore <b>Dr. M. Devasena</b> Associate Professor, Sri Krishna college of Technology, Coimbatore <b>Dr. K. Murali</b> Professor, Sri Ramakrishna Institute of Technology, Coimbatore <b>Mr. Ganesh Karthick</b> Meiporul, Coimbatore.	31.08.2017 & 01.09.2017
4	Two days Hands-on training on Geographical Information System for Municipality Engineers and Town planners	<b>Dr. L. Iyyapan</b> Professor, Department of Civil Engineering, Dr. Mahalingam College of Engineering and Technology, Pollachi.	24.11.2017 & 25.11.2017

## Events gallery:



Recent Advances in Environmental Engineering – 31.08.2017 & 01.09.2017



Recent Advances in Environmental Engineering – 31.08.2017 & 01.09.2017

## Events gallery:

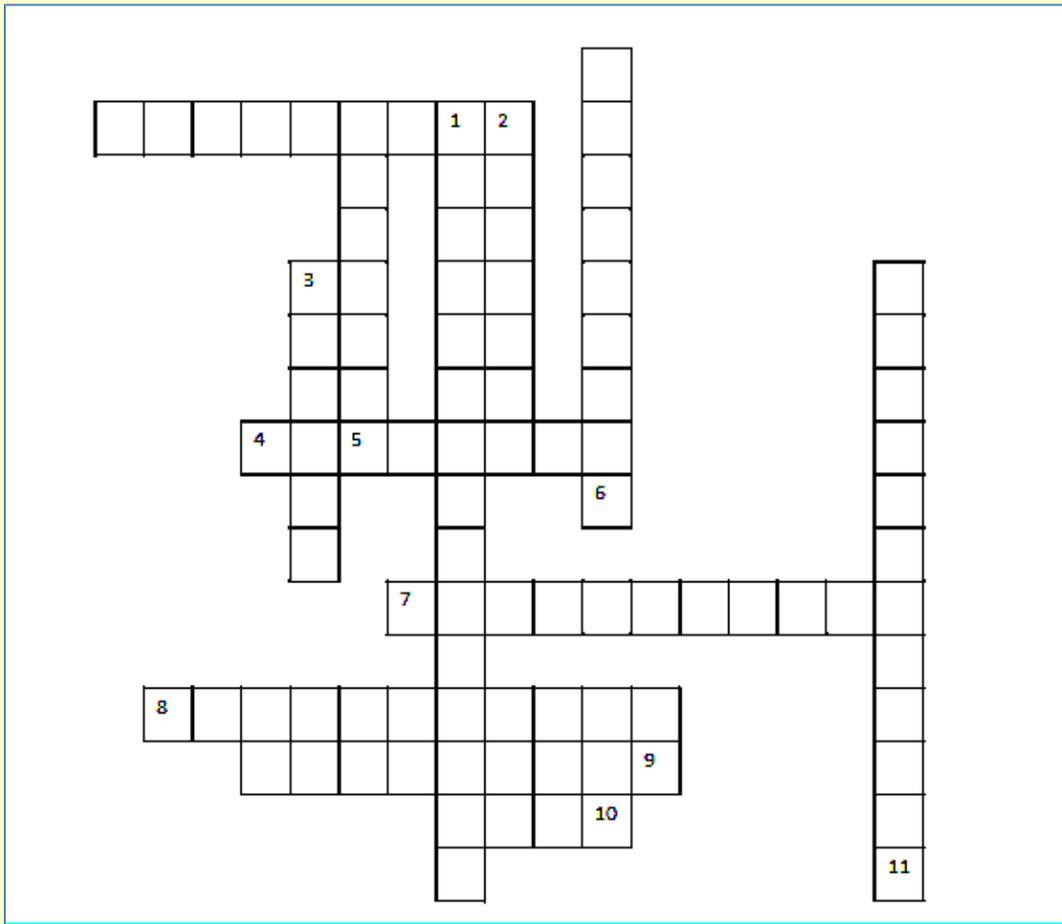


Recent Advances in Environmental Engineering – 31.08.2017 & 01.09.2017



Recent Advances in Environmental Engineering – 31.08.2017 & 01.09.2017

## PUZZLE CORNER:



### TOP TO DOWN

1. Historic temple located in Triruvananthapuram, Kerala.
2. The highest and heaviest outdoor elevator in the world.it is also known as hundred dragons elevator.
3. Binding material in mortar.

### LEFT TO RIGHT

4. Father of soil mechanics.
7. It is an edifice of spiritual significance for those who practice internal yoga or Kriya.
8. India's largest over Water Bridge.

### DOWN TO TOP

- 5 .It is the symbol of the Nations integrity and prestige.
6. Longest railway tunnel that exist in India and second largest in all of Asia.
11. It is the biggest stone observatory of the world.this monument is listed among the UNESCO world heritage sites in India.

### RIGHT TO LEFT

1. The tallest twin towers in the world. Located in Kuala Lumpur.
9. It is known as the all India war memorial.
10. The world's biggest artificial islands in Dubai.

Created by,  
Devika (14BCE034), IV year Civil Engineering

For answers,  
Refer pg. no.

## Empowering Women

What comes into your mind when you picture a Civil Engineer??

Surely you weren't envisioning a woman wearing a hard hat, steel toed shoes, holding a rolled up sheet containing the design and plan of the building that she is going to be executing on site.

Try googling "Female Engineer". You can definitely notice a serious lack of sensible photos compared to the images depicting male engineers. The stock photos of women engineers depicts them looking both confused and ridiculous.

This accentuates an ongoing problem. Women are often under-represented in engineering. It is a fact that Engineering has always been an area of male dominance. Women are still considered as a "fragile gender" by many people. They just doesn't seem to fit in. While it is important to point out that we have already proven to be capable of doing much more than they expected.

Overall, about 30% of undergraduate engineering degrees are awarded to women. But only 13% of engineering workforce is female. My sister's friend who happens to be a Civil engineer, revealed that while there was a substantial number of women in her engineering class, the scenario changed drastically when it came to working after completing the degree. Numerous explanations have been offered for this discrepancy, including a lack of mentorship for women in the field; a variety of factors that produce less confidence for female engineers; and the demands for women of maintaining a balance between work and family life. In comparison to men, women have the additional hurdle of safety issues to counter. Recent surveys have also revealed that the common perception that technology and engineering fields are for boys also keeps more girls from engaging in these programmes.

## Empowering Women

This gender gap and the attitude towards women in engineering aren't going to change by themselves. We need to work together to demonstrate to young girls from an early age that the idea of them being an engineer isn't a joke and their desire to be one won't be considered an attempt at being "one of the boys".

This definitely involves a push from both their parents and education establishments. Once the mind-set of the surrounding society is changed, women can be faster paced in doing what the world needs. Often it is the fear of rejection that curbs the growth of the women. Giving them the assurance they need and the piercing through this so called male dominated society will be helpful for empowering women.

Women need to realize that they have a wealth of skills and knowledge to offer. The myths may have real world repercussions, but they can be overcome.

Remember "When women move forward the family moves, the village moves and the nation moves".

- NEETHU MURALI NAIR (14BCE011)  
- IV year Civil Engineering

## Events gallery:



Recent



Recent

Events gallery:



One Day workshop on  
“Recent Advances in Geotechnical Engineering”



One Day workshop on  
“Recent Advances in Geotechnical Engineering”

## Events gallery:



One day Seminar on “Advances in Seismic Design Concepts & Practices of IS 1893-2016”



One day Seminar on “Advances in Seismic Design Concepts & Practices of IS 1893-2016”



## ***BEACON - Editorial Team***

### **Staff In charge:**

Mr. S.Dineshkumar  
AP/Civil

### **Student:**

Selvan Ragul  
III- year B.E Civil