

VASAVI COLLEGE OF ENGINEERING

THE NEWSLETTER

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NIRMAAN

DEPARTMENT OF
CIVIL ENGINEERING

College Vision

“Striving for a symbiosis of technological excellence and human values”

College Mission

“Striving for a symbiosis of technological excellence and human values”

Department Vision

“To strive for excellence in order to make the students better citizens with technical knowledge and social awareness”

Department Mission

“To impart knowledge in the latest technologies to the students of civil engineering to fulfill the growing needs of the society.”

Program Outcomes (POs):

Engineering Graduates will be able to:

- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- **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.

- **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.
- **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **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.
- **Project management and finance:** Demonstrate knowledge and understanding of the 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.
- **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.

Program Educational Objectives (PEOs):

- **To provide a better understanding of basic sciences and fundamentals of civil engineering.**
- **To develop competence in latest technologies to serve the industry or pursue higher studies.**
- **To inculcate professionalism with effective communication skills and ethical values.**

Program Specific Outcomes (PSOs):

- **Understand various concepts of basic engineering sciences and mathematics to learn advanced concepts of Civil Engineering and apply them to practical problems.**
- **Apply principles of various specializations of Civil engineering including structural engineering, transportation engineering, environmental engineering, water resources engineering and Geotechnical engineering to tackle engineering problems.**
- **Acquire knowledge of ethical practices, communication skills, technical report writing skills and collaborative effort leading to lifelong learning**

Editorial Board

Dr. B. Sridhar
(Professor & HOD)

Dr. M. V. Rama Rao
(Professor)

Dr. K. Jayasree
(Associate Professor)

Ms. R. Sowmya
(Assistant Professor)

Chinmayi Nalajala
(B.E. Civil)

Koushik Aitha
(B.E. Civil)

Teja Rishith
(B.E. Civil)

Tunvi Dasari
(B.E. Civil)

Alumni Visit

Our department is home to various individuals who are doing marvels in their respective fields. Many of them have visited the campus to take a trip down memory lane and to guide our students on what to do. Few such alumni are:

- **K. Sudheer Kumar**, a student of the graduating class of 2012, visited us on July 22nd, 2022. He is a Site Engineer at Reddy Aluminum, Hyderabad.
- **Bejjanki Shravani**, a student of the graduating class of 2014, visited us on September 6th, 2022. She is a Sr. QS Engineer at KPC Projects, Hyderabad.
- **K. Vasanthi**, a student of the graduating class of 2016, visited us on October 13th, 2022. She is an Assistant Manager at Broadway Infra, Hyderabad.
- **Kura Bharadwaj**, a student of the graduating class of 2020, visited us on July 18th, 2022. He is a Development Analyst at Deloitte, Hyderabad.

Guest Lectures conducted by eminent people:

- Dr. M. Srinivas, retired associate professor, delivered lectures on Structural Geology in August targeted towards II semester students.
- M/s. Ultra Tech Cement Ltd, Hyderabad conducted a one day workshop on “Concrete Mix Design (CMD-2022)” in association with IEI as a part of Industry Institute Interaction on 12th September, 2022 targeted towards 2nd, 3rd, and 4th year students.
- Ms. Anagha Mahankali, 2021 passed out working in Aarvee Associates, Hyderabad conducted an interaction session on “Opportunities in Civil Engineering” on 16th September, 2022 targeted towards 4th year students.
- Dr. Venkata Ramana, Director at BIM grafx, & Rohini Kumar conducted a guest lecture on “Technical Skills” on 9th November, 2022 targeted towards V semester students.
- Dr. M.A.Prasad, Professor (Retd.), Osmania University, Hyderabad conducted a guest lecture on “Applications of EPANET and Soft Computing Techniques” on 22nd November, 2022 targeted towards VII semester students.
- Mr. Major Shiva Kiran, Managing Director of Geomap Solutions, Hyderabad, conducted a guest lecture on “Application of geomatics in Civil Engineering” on 25th November, 2022 targeted towards VII semester students.

- **B.V.S. Viswanadham, Former Dean Department of Civil Engineering, IIT Bombay, conducted a guest lecture on “Reinforced Concrete Piled Wall Retention Systems for Deep Excavations In Urban Areas”.**
- **Dr. V.Vinayaka Ram, Professor, BITS, Hyderabad, conducted an interaction session on “Importance of Transportation Engineering in Civil Engineering”.**
- **P. Ramesh, ACE Engineering academy, Hyderabad, conducted an interaction session on “Career Guidance”.**
- **Dr. B.L.P. Swami, Former Professor, JNTU, Hyderabad, conducted a guest lecture on “The application of pre-stressed concrete”.**
- **J. Sai Keerthana, 2017 passed out, conducted an interaction session on “Career plan and higher studies”.**
- **Mohammed Rahamthuallah, Consulting Engineer at PEBS Pennar, Hyderabad, conducted a guest lecture on “Pre-engineered buildings”.**
- **Er.Surya Prakash (Adjunct Faculty), Satya Vani, Projects and Consultants, conducted lectures on “Water Resource Engineering – Irrigation Structures”, “Structural Analysis – Indeterminate Structures”, “Pre Stressed Concrete Roofs and Slabs”, "High Rise Buildings”, “Civil Engineering Challenging Profession”, “Design of Concrete Structure”, “Contract Administration”, “Student Presentations”, and “Waste Management, Solid Waste”.**

Staff Participation

- Dr. B. Sridhar, Dr. M.V. Rama Rao, Sri. M. Bhasker, Dr. T. Srinivas, Dr. C. Mohanlal, Dr. S. Vijaya Kumar, Dr. K. Pavan Kumar, Dr. K. Jayasree, Mrs. P. Dhatri, Mr. S. Kesav Kumar, Mr. J. Chaitanya, and Ms. Krati Sharma attended the "AICTE-MIC-KAPILA-IPR Awareness Programme" at QEEE Hall, J.C. Bose Block, VCE on 29th July, 2022.
- Dr. M.V. Rama Rao, Professor, attended as a speaker in a seminar on "Smart Engineer for a Better World in Connection with 55th Engineers Day" organized by Institute of Engineers India (IEI), Hyderabad on 15th September 2022.

Staff Achievement

- Dr. M.V. Rama Rao, Professor, Department of Civil Engineering was selected for the Best Engineer Teacher award by the Institution of Engineers, Telangana state center, Hyderabad. He will be receiving the award on the occasion of Teachers' day on 5th September, 2022.
- Dr. B. Sridhar, Professor, selected as a resource person and a Guest Panelist on the 15th September 2022. Organized by The Westin, Hyderabad Mindspace, Hitec City.
- Dr. S. Vijaya Kumar, Associate Professor, of Vasavi College of Engineering, Hyderabad presented a paper titled "Experimental Studies on Acid Resistance of steel Fiber Reinforced Self Compacting Concrete (SCC)" at the Recent Advances in Structural Engineering and Construction Management, Lecture Notes in Civil Engineering, on 28th September 2022.
- Sri. S. Kesav Kumar, Assistant Professor, completed NPTEL course on "Learning Analytics Tools" from July – October 2022 and secured 81%

- **Dr. M.V.S.S.Sastri, Associate Professor, Department of Civil engineering, published a paper titled “Studies on the effect of Recycled Concrete Aggregates on Concrete with Mixed Fibre and Pozzolans”, in Two day International conference held during 24-25 August 2022, organized by the Department of Civil Engineering, Sreenidhi Institute of Science and Technology, Hyderabad, and the paper is adjudged as best paper in the conference and the paper is published by IOP Conference series Earth and Environmental Science, Volume 1086 (2022)012010, DOI 10.1088/1755-1315/1086/1/012010, in Scopus Indexed.**
- **Dr. S.Vijaya Kumar, Associate Professor, completed Faculty Development Programme under NPTEL-AICTE on "Bridge Engineering" from July – October 2022 and marks secured of score of 87%.**
- **Dr. M.V.S.S.Sastri, Associate Professor, completed Faculty Development Programme under NPTEL-AICTE on "Development and Applications of Special Concretes" from January – March 2022 and marks secured of score of 57%.**
- **Dr. M.V.S.S.Sastri, Associate Professor, completed Faculty Development Programme under NPTEL-AICTE on "Bridge Engineering" from July – October 2022 and marks secured of score of 73%**
- **Dr. K. Jayasree, Assistant Professor, completed NPTEL course on " Pavement Materials " from July –October 2022 and secured 59%**

Students' Achievements:

- **“Aksharamaala” program is invited by Dr.K.V.S.Murthygaruretired scientist from NASA. In this program, engineering graduate and students pursuing engineering are allowed to teach government school students as a part of their SSC exam preparation. Bathula Srija, Roll No 1602-19-732-056 from Civil Engineering department of VCE volunteered in this program for 3 months and taught the students Mathematics and Physics. We volunteers were invited to IIT, Hyderabad, to receive volunteer participation certificate and also our college was invited to receive a certificate and Memento for supporting us to take part in this program. This program was held at IIT Hyderabad on 22.09.2022.**
- **Ms. J. Sai Keerthana, bearing roll no 1602-13-732-032 was selected as a Junior Engineer in Waltair Division in Level-6 of RRB. The student passed out in 2016-17 batch.**
- **In addition to this, our students went to various companies like M/s. Geomap Solutions Pvt Ltd, M/s. Satyavani Projects and Consultants, M/s. Metey Engineering and Consultancy, M/s. Ayyanna Infra Pvt. Ltd, Lakshmi Cadillac Pvt. Ltd., and M/s. Vertex Corporate Elite Construction Pvt. Ltd as a part of Professional Practice School in the month of August. This helped them get practical world exposure.**

Other important events:

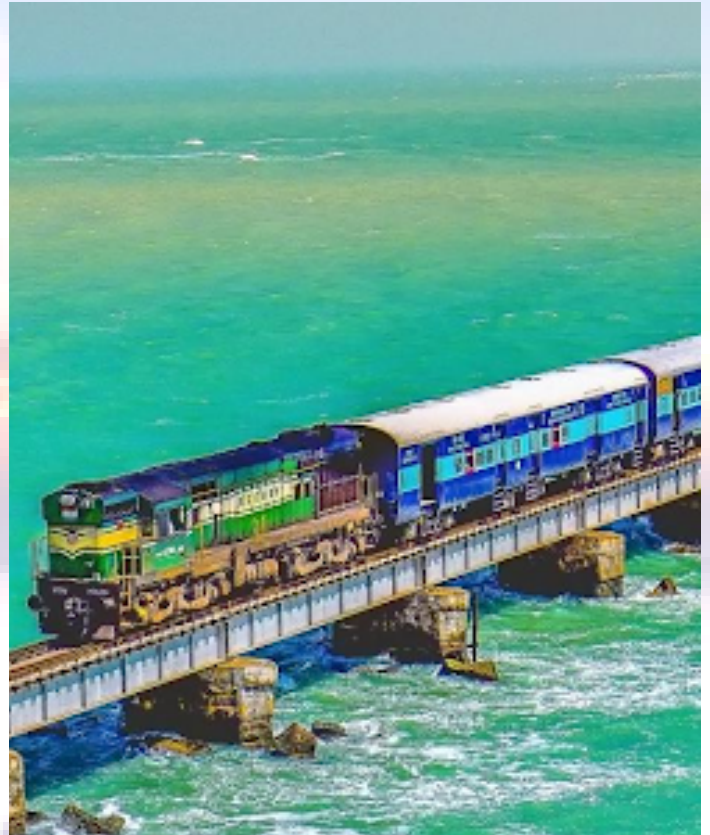
- **Dr. P. Raja Sekhar, (Alumni) Professor & Head, Department of Civil Engineering OU college of Engineering selected as the Best Engineer Teacher award by the Institution of Engineers, Telangana state center, Hyderabad. He will be receiving the award on the occasion of Teachers' day on 5th September, 2022.**
- **Department of Civil Engineering organized outreach program for “Diploma students of Civil Engineering” Government polytechnic college, Masab Tank, Hyderabad on 24.09.2022.**
- **Dr. S. Vijaya Kumar, Associate Professor, given live demonstration for the new staircase combined footing for VI Semesters students regarding pumping concrete to water tank reinforcement and showing the demonstration of Curtailment of reinforcement inside walls of submerged rectangular water tank on 24.09.2022.**
- **Department of Civil Engineering organized outreach program for “Diploma students of Civil Engineering” Government polytechnic college, Masab Tank, Hyderabad on 15.10.2022.**
- **Department of Civil Engineering organized outreach program for “Diploma students of Civil Engineering” Government polytechnic college, Masab Tank, Hyderabad on 22.10.2022.**
- **Mr. Vik Torpunuri, Alumni of 1986 batch provided an amount of Rs. 1,01,000/- for Financial Assistance of BE Civil Engineering students and distributed to students.**

- **Dr. R. Pradeep Kumar, Professor, Alumni of Department of Civil Engineering , Vasavi College of Engineering was selected as a Director of Central Building Research Institute (CSIR), Roorkee, Uttarakhand, India on 21.10.2022.**
- **Dr. S. Vijaya Kumar, Associate Professor, Department of Civil Engineering was given a Demonstration on U T M for BE VII-Semester 44 civil engineering students on 12.12.2022.**
- **Department of Civil Engineering proposes to conduct rising of funding project review on 21.12.2022 by Dr. V.Vinayaka Ram, Professor, BITS, Hyderabad.**
- **Dr. M. V.S.S.Sastri, Associate Professor, Department of Civil Engineering, as a Session Chair at the International Conference on Advances in Civil Engineering 2022 (ICACE 2022) on 20.12.2022 to 22.12.2022 organized by Technology Research and Innovation Centre, India and hosted by the LSKBJ College of Engineering, Chandwad, Nashik, India.**
- **The Department of Civil Engineering organized Alumni meet on 24.12.2022 (Saturday) in Computer Centre of the Department. A total of 18 Alumni have attended the meet.**

Pamban Bridge

DESIGN:

The railway bridge is placed 12.5 metres (41 ft) above sea level and is 6,776 ft (2,065 m) long. The bridge comprises of 143 piers and has a double-leaf bascule section with a Scherzer rolling type lift span that can be raised to let ships pass. Each half of the lifting span weighs 415 tonnes (457 tons).



PLANNING AND CONSTRUCTION:

Architectural and structural ideas for a bridge to connect to mainland was put forward in 1870 as the British Administration sought ways to increment trade with Ceylon. The construction began in August 1911 and was opened on 24 February 1914. The adjacent road bridge was opened in 1988. As of 5 December 2018, the bridge was closed due to a crack in the bridge and the maintenance work is going on. The Indian Railway Minister Piyush Goyal declared a new railway bridge will be constructed near the old Pamban Bridge at a cost of ₹250 crores. The new dual track bridge is planned to be constructed in automotive mode, allowing two ships to pass this bridge correspondingly.

MAINTAINENCE:

The bridge was blemished during the 1964 Rameshwaram cyclone and called for repair work. Strengthening work was carried out on the bridge under the supervision of E. Sreedharan in 2009 to enable it to carry goods trains. On 13 January 2013, the bridge required repair work to the piers after suffering minor damage from a naval barge. In 2016, the Ministry of Railways sanctioned ₹25 crore (US\$3.1 million) to replace the existing 65.23 metres (214.0 ft) long rolling type span with a 66 metres (217 ft) long single truss span which could be opened automatically. All train movement was detained from 5 December 2018 when a fissure was noticed on 4 December 2018.

RAILWAY:

The railway bridge controlled metre gauge trains connecting Mandapam on mainland India to Pamban. Railway of India enhanced bridge to bear broad gauge trains and the work was completed on 12 August 2007. From Pamban, the railway line bifurcated, one line towards Rameshwaram about 6.25 miles (10.06 km) up and another branch line of 15 miles (24 km) terminating at Dhanushkodi. The Boat mail express runs from Chennai Egmore to Rameswaram. The train ran up to Dhanushkodi until 1964. In December, during the 1964 Dhanushkodi cyclone, the Pamban-Dhanushkodi passenger train, which was approaching the Dhanushkodi Railway station was swept away, killing all 200 on board