

Father of Civil Engineering

John Smeaton FRS (8 June 1724 – 28 October 1792) was a British civil engineer responsible for the design of bridges, canals, harbours and lighthouses. He was also a capable mechanical engineer and an eminent physicist. Smeaton was the first self-proclaimed "civil engineer", and is often regarded as the "father of civil engineering". He pioneered the use of hydraulic lime in concrete, using pebbles and powdered brick as aggregate. Smeaton was associated with the Lunar Society. Smeaton is important in the history, rediscovery of, and development of modern cement, identifying the compositional requirements needed to obtain "hydraulicity" in lime; work which led ultimately to the invention of Portland cement. Portland cement led to the re-emergence of concrete as a modern building material, largely due to Smeaton's influence.



Program Outcomes and Program Specific Outcomes

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|---|--------------------------------------|---|
| Po1: Engineering Knowledge | Po7: Environment and Sustainability | PSO1: Problem Analysis : Able to arrive solutions to real time problems related to various domains of civil engineering through problem solving skills. |
| Po2: Problem Analysis | Po8: Ethics | |
| Po3: Design / Development of Solutions | Po9: Individual and Team work | PSO2: Design & Management : Able to design systems, components and processes considering safety, quality and cost consideration and able to prepare project documents, engineering drawings and construction schedules |
| Po4: Conduct Investigations of Complex problems | Po10: Communication | |
| Po5: Modern Tool Usage | Po11: Project Management and Finance | |
| Po6: The Engineers and Society | Po12: Life-long learning | |

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Dr. Mahalingam College of Engineering and Technology
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Accredited by NBA - Tier I (Auto, Civil, CSE, EEE, ECE, ME & IT)
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About MCET

Dr. Mahalingam College of Engineering and Technology (MCET) was established in the year 1998 by Dr. M. Manickam with a view to commemorate the 75th birthday of his beloved father Arutchelvar Dr. N. Mahalingam with a mission to impart high quality competency based education in Engineering & Technology to the younger generation to acquire the required skills and abilities to face the challenging needs of the industry around the globe. MCET is a self-financing, co-educational Autonomous Engineering College and it is approved by All India Council for Technical Education (AICTE), New Delhi & affiliated to Anna University, Chennai. The Institution has been accredited by NAAC with A++ grade and all eligible UG Programmes are accredited by NBA. MCET currently offers 10 UG 6 PG and 5 doctoral Programmes in Engineering, Technology and Science.

About the Department

Civil Engineering is the oldest engineering discipline that deals with the planning, design, construction and maintenance of the physical and natural built environment, including works like buildings, bridges, canals, dams and roads. The department of Civil Engineering at MCET was started in the year 2007 with B.E. - Civil Engineering Program and extended in 2012 for Post Graduate program in M.E. - Structural Engineering. The Department of Civil Engineering at MCET has highly qualified and experienced faculty in diversified domains which helps to enlighten the young minds of students in the theoretical and experimental aspects. Department has state-of-art infrastructural facilities which provide expertise and facility to work on emerging technologies. In a nut shell the department is well nurtured to cater the needs of education through industry oriented curriculum, research, consultancy, co-curricular and extra-curricular programs for the career enhancement of the students.

Department Vision

To develop Competent Civil Engineers to meet the infrastructure challenges of India and the world.

Department Mission

- 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

- PEO1:** Graduates who effectively demonstrate engineering knowledge, problem solving skill, design capabilities and entrepreneurial skills by providing practical solutions.
- PEO2:** Graduates who effectively demonstrate professionalism in multi-disciplinary engineering environment, leadership quality, teamwork and engage in life-long learning.
- PEO3:** Graduates who demonstrate an ethical commitment to the community and the profession through involvement with professional societies.
- PEO4:** Graduates who make contributions to knowledge and establish best engineering practice through research and development.

Meenakshi Amman Temple



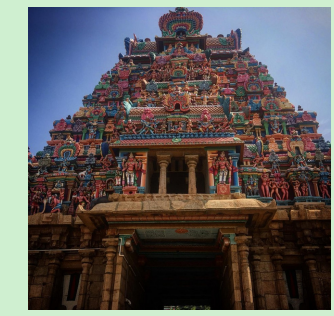
The Meenakshi Amman Temple is one of the largest and most magnificent temples in India. It has twelve giant Gopurams (gates), with its highest gates on the outer side. The temple complex houses the well-known Hall of Thousand Pillars- a paradise on earth, with such extraordinary sculpting, impossible to recreate. An overwhelming fact about this classic construction is that one just needs to climb up the south tower of this temple to get a bird's eye view of the entire city of Madurai.

The ultimate goal of civil engineering is to make life better for people. We are not just interested in creating beautiful buildings or perfect roads; we want to make sure people can get around easily, enjoy their surroundings, and lead productive lives.

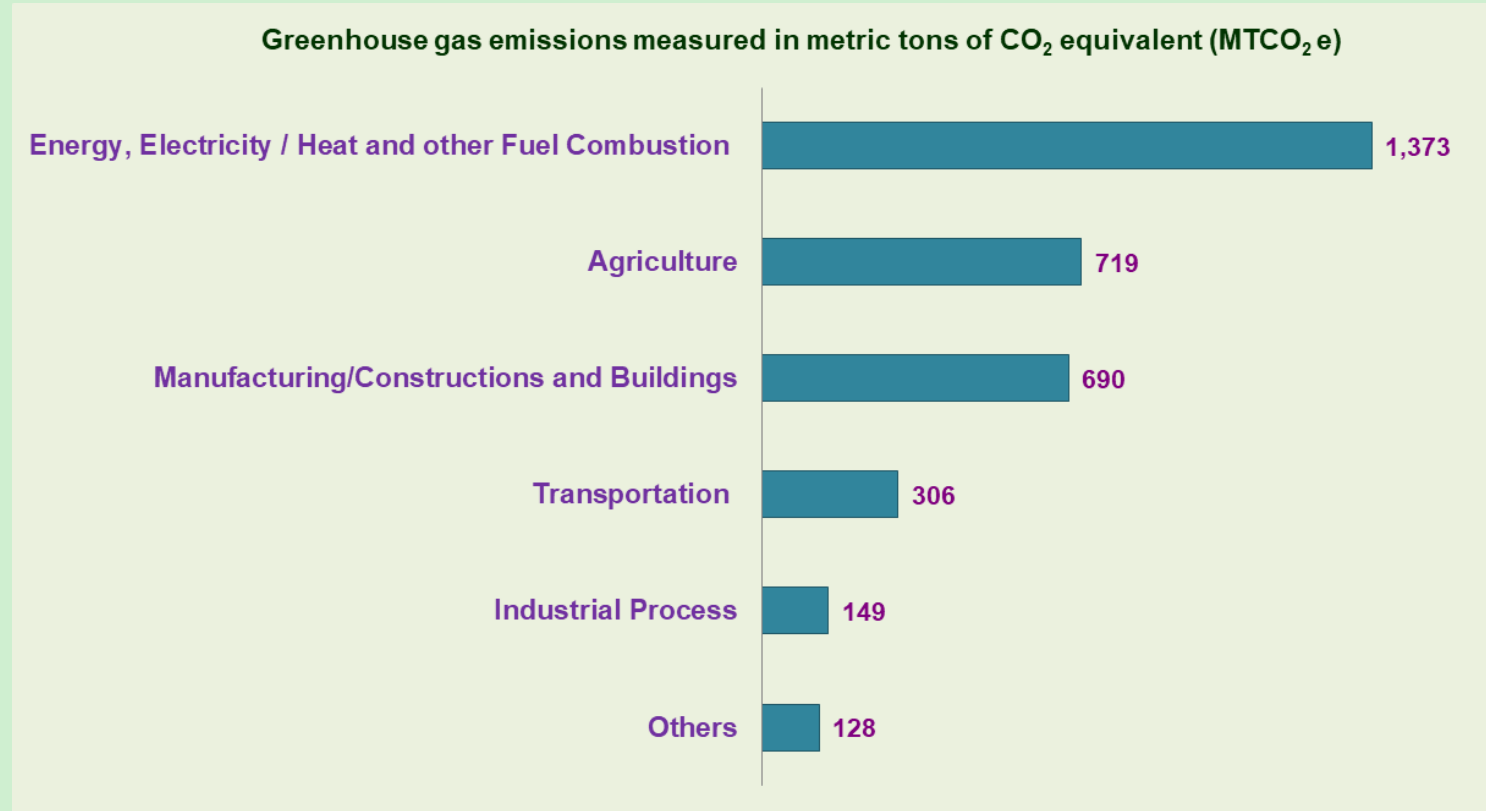


Architects and engineers are among the most fortunate of men since they build their own monuments with public consent, public approval, and often public money/

-John Prebble



India's Green House Gas Footprint



Source: World Resources Institute CAIT Climate Data Explorer

Amazing Architecture of Tamil Nadu

Chola architecture

The Cholas have built over 2300 temples in Tamil Nadu, with Tiruchy-Thanjavur itself having more than 1500 temples. The marvelous Shiva temple of Thanjavur, the Brihadeshwara temple, the Airavateshwara temple, and the Kamapahareshwarar Shiva temple, were all built during this time, among which the Brihadeshwara temple, Airavateshwara temple, and the Kampahareshwarar temple are listed as the Great Living Chola Temples among the UNESCO World Heritage Sites.



Mission 2070: A Green New Deal for Net Zero India

Low-Carbon Energy

Accelerated adoption of renewable/green energy / H2 across India

1

Green Mobility

Adoption of electric, hydrogen, LPG/LNG, and other alternative green technology-based mobility platforms

2

Decarbonization of Energy-Intensive Industries

Modernizing and decarbonizing energy-intensive industries through the adoption of green technologies and standards

3

Green Buildings, Infrastructure and Cities

Promoting green cities, energy efficient buildings, and green construction technologies in future infrastructure projects

4

Sustainable Agriculture

Transitioning to sustainable methods of farming

5

Amazing Engineering Marvels in India

The 9.02-kilometre Atal Tunnel connects Manali to Lahaul-Spiti Valley in Himachal Pradesh, reducing the travel distance by 46 kilometres and time by 4-5 hours. Completed in 2020, it is named after former Prime Minister Atal Bihari Vajpayee and is a significant engineering achievement.



The Chenab Bridge, expected to be completed soon, is being built by the Indian Railways. It will be the world's highest upon completion and will connect two regions in Jammu and Kashmir. Built in a challenging terrain and weather conditions, it will be a 1.315-kilometer-long steel arch structure supported by piers