



Jyothi Engineering College

NAAC Accredited College with NBA Accredited Programmes*

Approved by AICTE & affiliated to APJ Abdul Kalam Technological University

A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR

JYOTHI HILLS, VETTIKATTIRI P.O., CHERUTHURUTHY, TRISSUR, PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777

NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.



CIVIL NEWS

Volume : 07

Issue : 02

July - Dec 2021

CIVIL ENGINEERING DEPARTMENT

COLLEGE VISION

Creating eminent and ethical leaders through quality professional education with emphasis on holistic excellence.

COLLEGE MISSION

- To emerge as an institution par excellence of global standards by imparting quality engineering and other professional programmes with state-of-the-art facilities.
- To equip the students with appropriate skills for a meaningful career in the global scenario.
- To inculcate ethical values among students and ignite their passion for holistic excellence through social initiatives.
- To participate in the development of society through technology incubation, entrepreneurship and industry interaction.

DEPARTMENT VISION

To emerge as a Centre of Excellence in Civil Engineering through quality professional education and to create eminent leaders with values committed to the profession and society.

DEPARTMENT MISSION

- To impart state of the art education and to provide industry exposure to students
- To create civil engineers who successfully adapt and innovate solutions for the built environment
- To inspire and transform the students to hard core professionals and academicians with ethical values.

The Department of Civil Engineering organized a One Week International Online

Faculty Development Programme on "CHALLENGES AND INNOVATIVE

TECHNIQUES IN CONCRETE STRUCTURES" from 25th-29th Oct 2021. Experts in the

subject will give their valuable insight, and attendees will have the opportunity to

connect with veterans of the field from various institutes across the country.

TARGET AUDIENCE

The programme is open to all Faculty members, Research scholars from Engineering colleges all over. Participants from industries are also welcome. The total number of participants is limited to 75 on a first come, first served basis. Certificates will be awarded to all the active participants.

To apply, visit <http://www.jecc.ac.in>

Free Registration

Organizing Committee

Chief Patron:
Msgr. Thomas Kakkasserry, Manager
Patrons:
Rev. Fr. Roy Joseph Vaidikkannal, Secretary & Campus Head
Rev. Dr. Jose Kammampuzha, Director of Academics

Organizing Chairman:
Dr. Sunny Joseph Kalayathankal, Principal
Convener:
• Dr. Jacob Chandapillai, HOD, CE

Executive Committee:

• Ms. Cyrius M. G. • Ms. Vinay Varghese • Dr. Agnes Anto C.
• Ms. Jisha Akkara • Ms. Archana S.

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International Online Faculty Development Programme on "CHALLENGES AND INNOVATIVE TECHNIQUES IN CONCRETE STRUCTURES"



25th to 29th
OCTOBER
2021

Organized by
Department of Civil Engineering, JEC

ABOUT THE INSTITUTION



Jyothi Engineering College (JEC) set up in 2002, under the aegis of Trichur Educational Trust, founded by the Catholic Archdiocese of Trichur, is a leading Engineering College in Kerala. The Archdiocese of Trichur has an illustrious track record of a century and a quarter in the education sector. We at Jyothi Engineering College are aware that our stakeholders, including students and recruiters, look for reliable information on quality education offered. Jyothi Engineering College is NAAC accredited. The NAAC instrument is developed to objectively assess and grade institutions of higher education. Five of the undergraduate programs offered by Jyothi Engineering College have NBA accreditation, which indicates that we are well recognized for the quality of education we offer. We are periodically evaluated for this stringent NBA accreditation criteria to ensure we sustain the mandated quality levels.

The worlds of study and work have changed dramatically. Students of today require different sets of skills than those of previous generations. We are in the midst of the fourth industrial revolution and the predictions are that 85% of the jobs that will exist in 2030 have not been invented yet. JYOTHI hence prepares students to become T-shaped professionals, i.e., professionals who have in-depth expertise in their discipline as well as a breadth of competencies required in the twenty-first century. Industry seeks engineers with these skills. In order to train our students to become "T" shaped professionals, so that they are "future ready", we have set up an incubation centre, Integrated Industrial Incubation Centre (IIIC), in association with TATA Technologies. In order to help students become "job creators" rather than "job seekers", Jyothi Engineering College has also set up a Technology Business Incubator, JEC-TBI, to create technology based new enterprises, foster an entrepreneurial spirit among students and commercialize R&D output. Additionally, Jyothi Engineering College offers a vibrant, beautiful, and green environmentally friendly campus, and excellent infrastructure for students, to aid the teaching and learning process.

DEPARTMENT OF CIVIL ENGINEERING

The Civil Engineering Department was established in 2012. The department offers UG and PG programmes. The faculty is a rich blend of experienced professionals from academia and the industry. The department is equipped with laboratories engaged in Research and Consultancy apart from regular academics. Industry specific training programmes, invited talks, workshops and industrial visits are organized by the department for overall development of the students. The Department has a Center for Water Research and Education (CWRE), Environmental Engineering Laboratory under this is accredited by the Kerala State Pollution Control Board. The center imparts training on water quality management and sanitation to the community on a regular basis apart from testing of water samples at concessional rates.

VISION OF THE DEPARTMENT

To emerge as a Centre of Excellence in Civil Engineering through quality professional education

MISSION OF THE DEPARTMENT

- To impart state of the art education and to provide industry exposure to students
- To create civil engineers who successfully adapt and innovate solutions for the built environment
- To inspire and transform the students to hard core professionals and academicians with ethical values.

ABOUT THE PROGRAM

The program's overall goal is to expose the difficulties that can arise during the construction and maintenance of concrete structures. This course will also explore a variety of cutting-edge techniques that are used to solve concrete structure problems and make constructions more sustainable and environmentally friendly. Experts in the subject will give their valuable insight, and attendees will have the opportunity to connect with veterans of the field from various institutes across the country. It would help participants improve their knowledge and create a conducive environment for research and academic excellence. The programme aims to bridge the gap between academics, research and industry.

TOPICS COVERED • Smart materials • Sustainable techniques in concrete technology
• Non Destructive Tests • Retrofit and rehabilitation methods • Soil structure interaction

RESOURCE PERSONS

- Dr. Vistasp M. Karbhari, Professor, Department of Civil Engineering, University of Texas at Arlington
- Ms. Ayesha Siddika, PhD Candidate, School of Civil and Environmental Engineering, UNSW Sydney
- Dr. J. S. Sudarsan, Assistant Professor, NICMAR, Pune
- Dr. Sudhir Mishra, Professor, IIT Kanpur
- Dr. Ganeshi Kumar Sahu, Senior Principal Scientist Bridge Engineering and Structures Div. CSIR-Central Road Research Institute, New Delhi
- Dr. B. G. Vishnuram, Professor & Principal, PSR College, Sivakasi
- Dr. Rama Mohan Rao P., Associate Professor (Sr.), VIT, Chennai, Centre for Disaster Mitigation & Management (CDMM)
- Dr. Bijily Balakrishnan, Assistant Professor, IIT Tirupati
- Dr. Sreevidhya, Professor at Sri Krishna College of Technology, Coimbatore
- Dr. Daniel C., SRF, IIT Delhi
- Dr. Jayachandran K., Assistant Professor, NIT Calicut
- Dr. Balakumar Venkatrama, Senior Consultant at Simplex Infrastructures Limited, Chennai
- Dr. P. M. Shanmugavadivu, Professor and HoD, Civil Dept., Gopalan College of Engineering and Management, Bengaluru
- Ms. Anju M. J., Assistant Professor, Jyothi Engineering College
- Ms. Neeraja P. G., Assistant Professor, Jyothi Engineering College
- Mr. Parthiban P., Assistant Professor, Jyothi Engineering College

PROGRAMME EDUCATIONAL OBJECTIVES

The program educational objectives of B.Tech in Civil Engineering are:

1. Graduates will have concrete knowledge in the application of necessary mathematical tools, scientific theories and modern developments in civil engineering.
2. Graduates will understand the societal needs and will be committed in developing optimal solutions.
3. Graduates will pursue higher education, research or entrepreneurship apart from being employable.
4. Graduates will be competent to face challenges in civil engineering through lifelong learning process and will have high ethical values, honesty and a sense of responsibility.

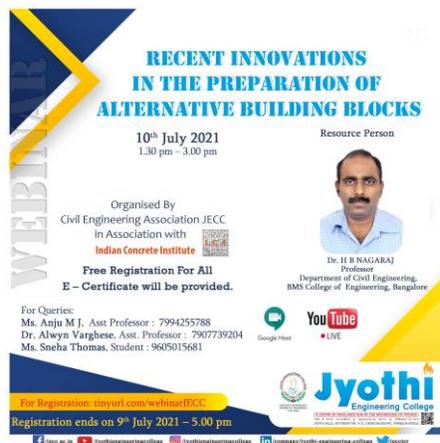
PROGRAMME OUTCOMES

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **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.

DEPARTMENT ACTIVITIES

Conducted a webinar on “Recent innovations in the preparation of alternative building blocks” with association of CEA and ICI on 10th July 2021.



Conducted a webinar on “Smart Cities” with the association of Department of civil engineering and IST student chapter on 22nd July 2021.



Department of Civil Engineering JECC in association with ISTE students’ chapter, is conducted Online Workshop on "Concrete Mix design – Theory to Practice on by Dr Jagadish Vengala, (Head, EDC & Innovation Centre Associate Professor, Department of Civil

Engineering on October 2021.



On the occasion of World Habitat Day, Department of Civil Engineering, Jyothi Engineering College, Thrissur and Institute of Engineers (India) organized a Webinar on "Climate Change: An Environmental Quagmire!" on 04/10/2021 at 2:00 pm

Resource Person:

Dr. S. Sandeep, Senior Scientist, Dept. Of Soil Science, Sustainable Forest Management Division, KSCSTE-KFRI



ISTE (student Chapter), conducted an expert talk on "Advanced techniques in surveying " on December 9th, 2021, Thursday (1.30pm-4 pm). The resource person was Dr. Anitha Jacob, Govt. Polytechnic College, Chelakkara.



STUDENT ACHIEVEMENTS

Students our pride! University Result Toppers

The APJ Abdul Kalam Technological University declared the rank list for M.Tech in Transportation Engineering for 2019-2021 batch. Our students Ms. Athira C (CGPA 9.73), Mahima Mary Thomas (CGPA 9.64) and Mrs. Neelu Mammen (CGPA 8.96) secured the 1st, 2nd and 3rd rank, respectively



SHABLA K, SNEHA THOMAS and ARJUN P of S8 Civil (2018-22) secured the first, second and third positions in the eight -semester. As per the results published by APJ Abdul Kalam Technological University, they scored CGPA of 10, 10 and 9.87, respectively



FACULTY ACHIEVEMENT

Dr. Alwyn Varghese felicitated an international online lecture series conducted by the department of geology, Sahrdaya college of advanced studies.

Ms. Carol Varghese Published "Mode Choice Analysis: Conventional and Advanced approaches" in International Research Journal of Engineering and Technology", Vol. 8, Issue 7, July 2021

Ms. Soorya M Nair successfully participated in an online International Faculty Development Programme (FDP) on The Art of

Doing Research jointly organized by Jyothi Engineering College, Thrissur, India, CHRIST (Deemed to be University), Bangalore, India and Pelita Bangsa University, Indonesia in association with Internal Quality Assurance Cell (IQAC), Jyothi Engineering College, Thrissur, India during 12-22 July, 2021.

Ms. Soorya M Nair actively participated in an online attending an International Symposium on "Green Concrete Aggregate and Cementitious Materials" on 24 July 2021 conducted by Pillai HOC College of Engineering and Technology, Rasayni

Ms. Soorya M Nair actively participated in an online ATAL FDP on "Emerging Topics in Civil Engineering" from 27/07/2021 to 31/07/2021 at IET Lucknow.

Ms. Neeraja P G successfully participated in an online International Faculty Development Programme (FDP) on The Art of Doing Research jointly organized by Jyothi Engineering College, Thrissur, India, CHRIST (Deemed to be University), Bangalore, India and Pelita Bangsa University, Indonesia in association with Internal Quality Assurance Cell (IQAC), Jyothi Engineering College, Thrissur, India during 12-22 July, 2021

Dr. Alwyn Varghese felicitated an international online lecture series conducted by the department of geology, Sahrdaya college of advanced studies.

3. **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.
4. **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.
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 the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for

9. Individual and team work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary 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 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.

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 SPECIFIC OUTCOMES

1. Acquire applied knowledge in Environmental Engineering, Geotechnical Engineering, Structural Engineering and Transportation Engineering.

2. Utilise theoretical concepts and technical skills in developing appropriate solutions for water quality management, sanitation, pavement design, traffic engineering and transportation

Dr. Alwyn Varghese successfully completed a course titled Building Resilience with certification from Linked in LEARNING.

Dr. Alwyn Varghese successfully completed a course titled Embracing Unexpected Change with certification from Linked in LEARNING.

Ms. Soorya M Nair joined for Doctor of Philosophy in the stream of Civil Engineering in Karunya Institute of Technology and Sciences

Dr. Alwyn Varghese completed the review of a paper in the journal of "Journal of Industrial Textiles" (SCI indexed

Dr. Alwyn Varghese participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on " Modern Trends in Civil Engineering & Construction Industry" from 02/08/2021 to 06/08/2021 at College of Engineering Kidangoor.

Ms. Neeraja P G successfully participated in a Faculty Development Programme on The Art Gallery of Engineering Graphics from 2nd August to 6th August 2021, organised by the Department of Mechanical Engineering, Sree Chitra Thirunal College of Engineering, Pappanamcode, Thiruvananthapuram.

Ms. Soorya M Nair participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Structural Dynamics and Earthquake Resistant Design of

Structures"" from 24/08/2021 to 28/08/2021 at Government College of Engineering, Salem

Ms. Soorya.M.Nair has successfully completed one month online internship programme on "RESEARCH TRAINING "from 05.07.2021 to 5.08.2021 by MSME-Technology Development Center (PPDC), approved by GOI

Mr. Parthiban P participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on " Modern Trends in Civil Engineering & Construction Industry" from 02/08/2021 to 06/08/2021 at College of Engineering Kidangoor.

Mr. Parthiban P and Ms. Anju M J both has presented a paper in the Second National Virtual Conference on RECENT ADVANCES IN TECHNOLOGY & ENGINEERING (CRATE-2021) on 13-14, August 2021 at VEMU Institute of Technology, Chittoor, Andhra Pradesh

Mr. Parthiban P has presented a paper in the conference 3rd Symposium On Industrial Science And Technology (SISTEC'21) with the title "A Review on Environmental Impact Assessment of Limestone Mining Operations" on 25 – 26 August 2021 by Faculty of Industrial Sciences and Technology in collaboration with Universitas Lambung Mangkurat (ULM) and Japan Advanced Institute of Science and Technology (JAIST).

Jisha Akkara presented the paper entitled Effect of Non-urban Two Lane Highway Geometry on Car

and Bus Drivers – A Physiological Study at the 24th Euro Working Group on Transportation Meeting (EWGT2021). This virtual event was organized by the University of Aveiro from 8th to 10th of September 2021.

Ms. Soorya M Nair ,Mr. Parthiban P and Ms. Anju M J presented a paper in the First International Conference on Recent Advancements in Civil Engineering (ICRACE) 2021 held during 17th to 19th September 2021 in NIT Silchar Paper entitled is:UHPC Steel Composite Girder: Numerical Studies on Flexural Behaviour in Negative Moment Region

Ms. Soorya M Nair (First Author) Published "Efficiency of vetiver filter in defluoridation of water" in AIP Conference Proceedings, Vol. 2396, Issue 1, September 2021

Dr. Alwyn Varghese presenting the research paper entitled "Effect of Cover on the Performance of Self-Compacting Concrete under Elevated Temperature" in the Second International Conference on Advances in Physical Sciences and Materials (ICAPSM 2021) held at Coimbatore, Tamil Nadu, India (Scopus indexed).

Dr. Alwyn varghese (First author) published a titled "Investigation of the Post-Fire Performance and Flexural Behaviour Modeling of FRC Exposed to a Standard Fire" in the journal "Structural Engineering International" (SCI indexed)

Mr. Cyriac M G, Ms. Vincy Verghese and Dr. Agnes Anto C received certificate of appreciation from

Water Resource Department, Govt. of Kerala for their contribution to the preparation of DPR for abatement of pollution and rejuvenation of 21 rivers in Kerala.

Dr. Jacob Chandapillai reviewed a paper titled "Discharge redistribution as a key process for heuristic optimization of energy production with pumps as turbines in a water distribution network" for the international journal "Water Resources Management"

Ms. Soorya M Nair , Parthiban P and Anju M J presented a paper titled " Use of Tamarind Seeds to remove Fluoride from Water" in 2nd International Conference on Instigating research in Materials, Energy and Environment (ICIRMEE) organized by Easwari Engineering College, on 06th & 07th October, 2021

Ms Neeraja P G delivered a talk about overview of green concrete in One Week international Online Faculty Development Programme on "CHALLENGES AND INNOVATIVE TECHNIQUES IN CONCRETE STRUCTURES"

Dr. Alwyn Varghese successfully participated in the Panel discussion on precast execution challenges - Erection planning, machinery and methods organized by UltraTech cement

