



Sep-Oct  
2023

# BUILDERS TRENDS



## Highlights

- Funded Project
- Journal Publications
- Participations
- Organized events
- Consultancy

Department of Civil Engineering

GMR Institute of Technology  
An Autonomous Institute Affiliated to JNTU-GV



## **THE VISION OF GMRIT**

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- ❖ To be among the most preferred institutions for engineering and technological education in the country.
- ❖ An institution that will bring out the best from its students, faculty, and staff – to learn, to achieve, to compete and to grow – among the very best.
- ❖ An institution where ethics, excellence and excitement will be the work religion, while research, innovation and impact, the work culture.

## **THE MISSION OF GMRIT**

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- ❖ To turnout disciplined and competent engineers with sound work and life ethics.
- ❖ To implement outcome-based education in an IT-enabled environment.
- ❖ To encourage all-round rigor and instill a spirit of enquiry and critical thinking among students, faculty, and staff.
- ❖ To develop teaching, research, and consulting environment in collaboration with industry and other institutions.

## **DEPARTMENT VISION**

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- ❖ To be a preferred department of learning for students and teachers alike, with dual commitment to Academic and Research, and serving students in an atmosphere of innovation and critical thinking.

## **DEPARTMENT MISSION**

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- ❖ To provide adoptable education for the graduates in preparing them for a rewarding career to develop academic and research in collaboration with industry and other institutions in the field of Civil Engineering. (M1)
- ❖ To prepare the students as thinking professionals and good citizens who will be able to apply their knowledge critically and innovatively in solving contemporary professional and social problems.(M2)

## **PROGRAM EDUCATIONAL OBJECTIVES (PEOS)**

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PEO 1: Graduates with ability to solve core engineering problems through continuous self-paced learning in tune with changing technologies.

PEO 2: Reinforce engineering skills, critical thinking and problem-solving skills in professional engineering practices and deal with socio-economical, technical and business challenges.

PEO 3: Nurture professionalism with soft skills, managerial & leadership skills and ethical values.

## **PROGRAM OUTCOMES (POS):**

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Engineering graduate will be able to:

PO 1: Apply the knowledge of basic sciences and fundamental engineering concepts in solving civil engineering problems **(Engineering knowledge)**

PO 2: Identify and define civil engineering problems and investigate to analyze and interpret data to arrive at substantial conclusions. **(Problem analysis)**

PO 3: Propose appropriate solutions for engineering problems complying with functional constraints such as economic, environmental, societal, ethical, safety and sustainability in accordance with Indian standard codes of practices. **(Design/development of solutions)**

PO 4: Perform investigations, design and conduct experiments, analyze and interpret the results to provide valid conclusions. **(Conduct investigations of complex problems)**

PO 5: Select/develop and apply appropriate techniques and IT tools to analyze, design and scheduling of activities with an understanding of the limitations and successfully implement and adopt to technological changes in civil engineering with intervention of IT industries **(Modern tool usage)**

PO 6: Give reasoning and assess societal, health, legal and cultural issues with competency in professional engineering practice. **(The engineer and society)**

- PO 7: Demonstrate professional skills and contextual reasoning to assess environmental/societal issues for sustainable development. **(Environment and sustainability)**
- PO 8: Demonstrate knowledge of professional and ethical practices. **(Ethics)**
- PO 9: Function effectively as an individual, and as a member or leader in diverse teams, and in multi- disciplinary situations. **(Individual and team work)**
- PO 10: Communicate effectively with respect to oral, written and graphical communication **(Communication)**
- PO 11: Demonstrate and apply engineering & management principles in their own / team projects in multidisciplinary environment. **(Project management and finance)**
- PO 12: Recognize the need for, and have the ability to engage in independent and lifelong learning. **(Life-long learning)**

## **PROGRAM SPECIFIC OUTCOMES (PSOS):**

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Engineering graduate will be able to:

- PSO 1: Demonstrate the quality and suitability of construction materials **(Program Specific)**
- PSO 2: Ability to apply the practical aspect of analysis, design and safe construction practices **(Program Specific)**

## **OVERVIEW**

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The Department of Civil Engineering was established in 2002. It offers students a solid grounding in better utilization of resources and greater standardization of construction processes required by the construction industry. Students are taught how to use and employ innovative design methods and techniques. Exposure to contemporary facets planning, construction design and project management are key aspects of the course. Annual intake of this Department is 120 students.

## CONSULTANCY

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Being facilitated with well-equipped equipment and laboratories the Department of Civil Engineering always contributes a major role in the consultancy works offered to the government and private organizations around the districts and so on.

As a part of Consultancy an amount of 44,700/- rupees worth core related works were carried out by the faculty with respect to various specializations.

## RECEIVED FUNDED PROJECT

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- ❖ Penki Ramu (PI), BAV Ram Kumar (CO-PI), CH Nikhil (CO-PI), M. Srinivasa Rao (Spoke Coordinator) have received funded project worth of Rs. 7,20,000, for the Project titled “Internet of Things (IoT) based identification of soil water plant relationships for better irrigation” from the sponsoring agency ‘Divyasampark iHUB for Devices Materials and Technology Foundation’ on 26<sup>th</sup> September 2023.

## NATIONAL & INTERNATIONAL JOURNALS

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- ❖ Dash, B. et.al., "Simultaneous influence of processed cellulose acetate fiber reinforcement and recycled aggregate replacement on mechanical and durability performances of concrete" Construction and Building Materials, Vol 401,2023. *(Impact Factor: 7.4, SCI and Scopus Indexed, SJR:Q1)*
- ❖ Madhava Krishna Reddy.G. et.al., “Impact of climate change and anthropogenic activities on aquatic ecosystem–A review” Environmental Research, p.117233. *(Impact Factor: 8.3, SCI and Scopus Indexed, SJR:Q1)*
- ❖ Penki, R., et.al., “Application of geographical information system-based analytical hierarchy process modeling for flood susceptibility mapping of Krishna District in Andhra Pradesh”, Environmental Science and Pollution Research, pp.1-14. *(Impact Factor: 5.8, SCI and Scopus Indexed, SJR:Q1)*

- ❖ Priya, V., et.al., “Assessment of inundation risk at Bhavani River (stretch from Sathyamangalam to Velliyampalayam) using HEC-RAS” Disaster advances, Vol.16, issue 10, pp.24-29. (*Scopus Indexed, SJR:Q4*)

## **FACULTY PARTICIPATION**

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- ❖ Dr. Siva Rama Krishna attended a 5 days online FDP (21.09.23-26.09.23) on “Building the future: Industry 4.0 Applications in Civil Engineering” Conducted by B V RAJU Institute of Technology, Hyderabad.

## **STUDENT PUBLICATIONS**

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- ❖ D.Vishwak Sena, K.Bhanu Prakash, K.Lahari, L.Madhuri Veni, D.Shyamala, “Energy analysis and optimization of a commercial building located in vizianagaram district, Andhra Pradesh using BIM”, International Journal of Research Publication and Reviews, IJRPR-54556.
- ❖ K.Harshavardhan, Ch.Veera Naga Babu, K.Sharmila RanI, G.Satyanarayana, “Prediction of California bearing ratio using mission learning for stabilized soil subgrade”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 621-630 October 2023.
- ❖ Ch. Raghuram, K. Vidya Sagar, B. Anusha, K. Krupa Percy, H. Murali Krishna, “Optimisation Of Zeolite And Recycled Concrete Aggregate In Green Concrete Pavements”, International Research Journal of Modernization in Engineering Technology and Science [IRJMETS], Volume:05/Issue:10/October-2023.
- ❖ K. Bharathi, D. Gopi, A. Puranachandra Rao, A. Vidya Sagar, “A Review on Literatures of Different Design Experiments in Transportation Pavements”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 714-717 October 2023.

- ❖ B. Vinay Kowshik, G. Mohana Rao, L. N. Shriya, D. Sravanthi, Ch. Jaya Prakash Naidu, “A Review on the Building Energy Modelling and Orientation using BIM”, International Journal of Research Publication and Reviews, Vol 4, no 7, pp 3084-3087 July 2023.
- ❖ E.Karthik, G. Hemalatha, G.G.Mahalakshmi, B.Murali, G. Sasi Kumar, “Finite Element Modeling Of Concrete Pavements - A State Of Art Review”, International Journal of Research Publication and Reviews, Vol 4, no 9, pp 3439-3446 September 2023.
- ❖ D.Hema Vardhan, K.Bharath Kumar, L.Meghana, B.Raju, K.Monesh Kumar, “Literature on Energy Analysis Using Green Building Studio and Insight 360”, International journal of Research Publication and Reviews, Vol 4,no 10,pp 1-4 October 2023.
- ❖ A. Tejaswini Reddy, K.Manoj, D.Manasa, K.Manikanta, G.Appalanaidu, “A Comparative Study on Supplementary Cementitious Materials based Pervious Concrete Using Life Cycle Assessment”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 2522-2526 October 2023.
- ❖ G.Mamatha, B.Kusuma Kumari, G.Gayatri, A.Akhila, “An Interpretable Ensemble Learning Method To Predict The Strength Capacity of CFST Bridge Piers Subjected To Eccentric Loading”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 2551-2556 October 2023.
- ❖ K.Balaji, B.Amar Santhosh, G . Sathish, K . Hemanth Kumar Naidu, “Performance Assessment of Bamboo Fiber Low Volume Cement Concrete Pavement with Inclusion of Marble Powder”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 2710-2713 October 2023.
- ❖ Landa. Chaitanya, Annepu. Santhosh Kumar, Dunna. Teja, Boddepalli. Vinay Kumar, “Life Cycle Cost Analysis and Life Cycle Analysis of Roller Compacted Concrete Pavements”, International Journal of Research Publication and Reviews (IJRPR), Vol. 4, Issue 10.

- ❖ K.V. Bhavya Sree, I. Jagan, M. Devananda, G. Sandeep, G. Gowtham, “Parametric Analysis of Building Materials by Life Cycle Assessment Using BIM”, International Journal of Research Publication and Reviews, Vol 4, No 10, pp 2457-2470 October 2023.
- ❖ K.Sai Kumar, B.vamsi, K.yoshita, G.sarath, “Stabilization of sub grade soil by using recycled glass powder based geopolymers”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 2507-2511 October 2023.
- ❖ G.Ramya, CH. Srinivas, A.Ashok Kumar, K.jyothi krishna, “Utilizing Response Surface Methodology for strength prediction of cementitious green hybrid concrete for low volume roads”, International Journal of Research Publication and Reviews, Vol 4, Issue 10.
- ❖ Chavala Nikhil, Kutcharlapati Maniraj, Kondala Divakar, Killi Mohan Krishna, Karri Kavitha, “Integration of Augmented Reality (AR) to BIM Construction Model”, International Journal of Research Publication and Reviews, Vol 4, no 10, pp 2571-2576 October 2023.

## **STUDENT’S PARTICIPATION**

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- ❖ 46 students attended a technical event “Talentia” on 12-9-2023, conducted by GMR Institute of Technology in association with the Indian Society for Technical Education (ISTE).
- ❖ 49 students attended a technical event “GMRIT G20 Summit” on 13-9-2023, conducted by GMR Institute of Technology in association with the Indian Society for Technical Education (ISTE).
- ❖ 28 students attended a technical event “Art Expo” on 15-9-2023, conducted by GMR Institute of Technology in association with the Indian Society for Technical Education (ISTE).
- ❖ 37 students attended a technical event “Decision Dynamo” on 17-10-2023, conducted by GMR Institute of Technology in association with the Indian Society for Technical Education (ISTE).



## **STUDENT EVENTS**

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- ❖ SECTOR Club of Department of Civil Engineering conducted 03 Events / Activities titled “Workshop on MS Word, Build a Tower and Village Socioeconomic and Development Assessment Survey” with all department students participation 129, 38 and 11 respectively.
- ❖ Green Eco Club of Department of Civil Engineering conducted 02 Events / Activities titled “Poster Expo on account of Engineer’s Day and Vishwamukha on account of Ganesh Chaturthi” with all department students participation 8 and 40 respectively.

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