

Civil Connect

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Department of Civil Engineering



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It is a privilege to present the current issue of the Bi-Annual Newsletter of the Department of Civil Engineering. This publication highlights the key academic, technical, and co-curricular activities undertaken during the past six months.

The newsletter captures departmental events such as workshops, seminars, expert lectures, industrial visits, student projects, faculty achievements, and outreach activities. These initiatives reflect our commitment to providing quality technical education and practical exposure to our students. Such contributions not only enhance communication skills but also foster confidence, creativity, and professional growth.

I sincerely thank all students, faculty members, and the editorial team for their valuable contributions and continuous support in bringing out this issue successfully. Their dedication and teamwork strengthen the academic culture of the department.

Let this newsletter inspire us to pursue excellence, innovation, and responsibility in shaping the built environment for a better tomorrow.

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Department of Civil Engineering

Gandhi Institute of Advanced Computer and Research, Rayagada

Message from the Principal



It is truly heartening to witness the Civil Engineering Department of our college publishing its bi-annual newsletter, a testament to the department's vibrant academic culture and forward-thinking initiatives. The branch of Civil Engineering continues to make noteworthy contributions to emerging domains such as autonomous civil vehicles, renewable energy systems, and sustainable infrastructure development.

The evolving landscape of science and technology underscores the pivotal role of Civil engineers in shaping a resilient and innovative future. In response to these dynamic challenges, the department has proactively introduced a range of measures aimed at equipping students with the skills and mindset needed to thrive in this transformative era.

This bi-annual newsletter serves as a reflection of the department's commitment to excellence, showcasing key activities, achievements, and initiatives that foster academic growth, technological advancement, and societal impact.

Message from the Head



Greetings!

I am delighted to witness the launch of the Department of Civil Engineering's newsletter—a vibrant platform that fosters connection among students, faculty, and stakeholders by showcasing the department's dynamic activities and achievements.

This edition proudly highlights the Project Expo and the ongoing Research and Development initiatives, reflecting the innovative spirit and academic rigor of our department. It also features the commendable contributions of our faculty members and the best practices that continue to elevate the standards of Civil Engineering education.

I extend my heartfelt congratulations to all the students and faculty of the Civil Engineering Department for their dedication and collaborative effort in bringing out this newsletter. May it continue to inspire excellence and strengthen our academic community.

Vision and Mission of the Institution

Vision

To become a globally recognized, value-driven educational institution committed to excellence in delivering quality education, nurturing students' inherent talents, and developing innovative professionals in technical and managerial fields, thereby equipping them to meet the future challenges of the global economy.

Mission

M₁: To deliver quality education through effective teaching–learning processes that foster academic excellence in technical and managerial disciplines.

M₂: To nurture students' inherent talents by encouraging creativity, critical thinking, innovation, and lifelong learning.

M₃: To develop competent and ethical professionals with strong values, leadership skills, and social responsibility.

M₄: To promote industry-oriented learning and research through collaboration, practical exposure, and adoption of emerging technologies.

M₅: To prepare globally competitive graduates capable of adapting to evolving challenges and contributing effectively to the global economy.

Vision & Mission of Department of Civil Engineering

Vision

To emerge as a center of excellence in civil engineering education, delivering globally relevant knowledge and developing ethically strong engineers dedicated to building the nation.

Mission

M1: To provide strong foundational and advanced knowledge in civil engineering and technology through effective teaching–learning processes.

M2: To inculcate ethical values and professional responsibility among students to develop socially responsible engineers.

M3: To promote practical learning and industry interaction through fieldwork, internships, and real-world projects.

M4: To encourage innovation, research, and sustainable engineering practices addressing global and societal needs.

M5: To prepare competent civil engineers capable of contributing effectively to infrastructure development and national growth.

Program Outcomes (POs)

- 1. Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- 2. Problem analysis:** Identify and analyses well-defined engineering problems using codified standard methods.
- 3. Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
- 4. Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- 5. Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- 6. Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
- 7. Life-long learning:** Ability to analyse individual needs and engage in updating in the context of technological changes.

Program Educational Objectives

PEO1: To impart science-based engineering education to develop professional skills that will prepare the students for immediate employment in relevant branch of civil engineering in industry.

PEO2: To develop human potential to its fullest extent so that intellectually capable and creatively gifted leaders can emerge in range of professions.

PEO3: To develops among students the awareness of and the competence to be savvy users of information technology.

PEO4: To develop among students the ability to work with others, in professional and social settings.

PEO5: To develop a global view among students so that they can appreciate diversity in the world and in intellectual pursuits and the desire and ability to keep learning throughout life.

Programme Specific Outcome

PSO1: Apply principles of mechanics and basic sciences to analyze civil engineering structures. Survey, map, measure and analyze data for sustainable infrastructure planning.

PSO2: Ability to enhance research skills and utilize advanced computing tools for analysis, design and implementation of these systems for resolving real life / social problems.

PSO3: To prepare plan, drawings, estimates, reports and execute all Civil Engineering projects by applying modern construction techniques, equipments and software's which will equip them to complete the project in the stipulated time and cost.

Republic Day celebration at GIACR, Rayagada

The **Republic Day celebration** at **GIACR, Rayagada** was held with great patriotic fervour and enthusiasm on **26th January 2023**. The event began with the **hoisting of the National Flag** by the Principal, followed by the rendition of the **National Anthem**, creating an atmosphere filled with pride and unity. In his address, the Principal highlighted the significance of the Indian Constitution and urged students to uphold the values of democracy, equality, and integrity.



Students from various departments, including Diploma Civil Engineering, presented **patriotic songs, speeches, and cultural performances** that showcased their love and respect for the nation. The campus was beautifully decorated with tricolour flags, balloons, and banners symbolizing national pride. Competitions such as **essay writing, debate, and painting** on the theme of “Unity in Diversity” were organized to encourage creative expression among students.

Faculty members and staff also participated actively, making the event vibrant and meaningful. The celebration concluded with the **distribution of sweets** among all students and staff. The Republic Day event at GIACR, Rayagada not only reminded everyone of the sacrifices made by the freedom fighters but also inspired the students to contribute responsibly towards the progress and development of the nation.

Industrial Visit of Diploma Civil Engineering to Utkal Alumina Rayagada

The Department of Diploma Civil Engineering at **GIACR Rayagada** organized an **industrial visit to Utkal Alumina International Limited**, located at Doraguda, Rayagada on 30/01/2023. The visit aimed to provide students with practical exposure to large-scale industrial construction, structural design, and civil maintenance practices in an operational industrial environment.



During the visit, students were guided by the company's engineering team, who explained the **construction techniques, material testing processes, water treatment systems, and infrastructure layout** of the alumina plant. The students observed various civil engineering applications such as foundation design, reinforced concrete structures, and the use of advanced machinery in large-scale projects.

The industrial experts also discussed **safety measures, environmental management practices, and sustainability approaches** adopted by Utkal Alumina to minimize industrial impact on the local ecosystem. The interaction helped students understand how classroom knowledge is applied in real-world scenarios.

Faculty members accompanying the students appreciated the company's hospitality and support in facilitating such an informative visit. The industrial visit to Utkal Alumina proved to be a valuable learning experience, enhancing the students' technical knowledge, practical skills, and understanding of modern industrial operations relevant to civil engineering.

Blood Donation Camp at GIACR Rayagada

A **Blood Donation Camp** was organized at **GIACR Rayagada** in collaboration with the **District Red Cross Society and Rayagada Government Hospital** on 15th February, 2023 with the objective of promoting social responsibility and humanitarian values among students. The event witnessed enthusiastic participation from faculty members, staff, and students from various departments, including Diploma Civil Engineering.



The camp was inaugurated by the Principal, who emphasized the importance of blood donation as a noble act that saves lives and strengthens community health. A team of trained doctors and medical staff conducted the blood collection with utmost safety and hygiene. Students came forward voluntarily to donate blood, showing their compassion and commitment towards society.

Throughout the event, awareness was also created about the health benefits of regular blood donation and the critical need for blood in emergency medical situations. Refreshments were provided to all donors after donation, and appreciation certificates were distributed to encourage their contribution.

The event concluded successfully with an overwhelming response and positive spirit across the campus. The **Blood Donation Camp at GIACR Rayagada** reflected the institution's dedication to social welfare and humanitarian service, inspiring students to be responsible citizens and contribute selflessly to the betterment of society.

Alcohol Abuse Awareness Camp Organised by Civil Engineering Dept of GIACR Rayagada at Barijholra Village

The **Department of Diploma Civil Engineering of GIACR Rayagada** organized an **Alcohol Abuse Awareness Camp at Barijholra village on 05/03/2023** as part of its community outreach and social responsibility initiative. The main objective of the camp was to educate the villagers about the harmful effects of alcohol consumption on health, family, and society.



Faculty members and students actively participated in the campaign, conducting interactive sessions, skits, and poster presentations to spread awareness about the physical, mental, and social consequences of alcohol abuse. Health experts and counsellors were invited to address the gathering, emphasizing the importance of leading a healthy lifestyle and seeking medical help in cases of addiction.

Students also distributed pamphlets and displayed banners highlighting messages such as “Say No to Alcohol” and “Healthy Living for a Better Future.” The villagers showed great interest and appreciated the efforts of the GIACR team in bringing such an informative programme to their locality.

The camp concluded with a pledge by participants to discourage alcohol abuse and promote a healthier community. The **Alcohol Abuse Awareness Camp at Barijholra** successfully instilled a sense of social responsibility among students and reinforced the institution’s commitment to community development and public welfare.

Farewell to Outgoing Students of Diploma Engineering at GIACR Rayagada

The **Department of Diploma Engineering** at **GIACR Rayagada** organized a grand **Farewell Ceremony** to bid adieu to the outgoing batch of final-year students with warmth and affection on 05/04/2023. The event was held in the college auditorium, beautifully decorated to create a festive and emotional atmosphere. Faculty members, staff, and students from all departments attended the occasion to celebrate the achievements and memorable moments of the graduating batch.



The programme began with a welcome address by the Head of the Department, who appreciated the students for their dedication and discipline during their academic journey. Several cultural performances, including songs, dances, and skits, were presented by junior students to entertain and honour their seniors. The Principal, in his speech, congratulated the outgoing students and encouraged them to uphold the values of hard work, honesty, and professionalism in their future careers.

Outgoing students also shared their experiences, expressing gratitude towards the faculty and the institution for their guidance and support. Mementos and certificates were distributed as tokens of remembrance. The event concluded with group photographs and a vote of thanks. The **Farewell Ceremony at GIACR Rayagada** was a heartwarming occasion, filled with emotions, joy, and pride, marking the successful completion of an important chapter in the students' lives.

Expert talk on Pavement Failure

An Expert Talk on “Pavement Failure” was organized by the Department of Civil Engineering on 7th April 2023. The session was delivered by Dr. Anshuman Bhuyan, Assistant Professor at GIET University, Bhubaneswar. The objective of the talk was to provide students with in-depth knowledge about the causes, types, and prevention of pavement failures in highway engineering.

Dr. Bhuyan elaborated on different types of pavement failures such as cracking, rutting, potholes, stripping, and fatigue failure. He explained the major reasons behind these failures, including poor drainage, inadequate compaction, subgrade weakness, overloading, and improper material selection. Real-life case studies and site examples were discussed to help students understand practical challenges faced during road construction and maintenance.

The speaker also highlighted modern techniques used in pavement evaluation, maintenance strategies, and quality control measures to enhance pavement performance and durability. Emphasis was given to the importance of proper design, construction supervision, and regular inspection.

The interactive session enabled students to clarify their doubts and gain practical insights into pavement engineering. The expert talk significantly enriched students’ technical understanding and strengthened their knowledge in transportation engineering.



Cleanliness Drive at Sirikona Village



The Department of Civil Engineering organized a Cleanliness Drive at Sirikona on 10th April 2023 with the objective of promoting environmental awareness and community hygiene. The programme was conducted as part of the department's social responsibility initiative to encourage cleanliness and sustainable living practices among rural communities.

Students and faculty members actively participated in the drive with great enthusiasm. The team cleaned public areas, roadsides, and open spaces by removing plastic waste, polythene covers, and other non-biodegradable materials. The participants also educated the local residents about the importance of maintaining cleanliness to prevent diseases and ensure a healthy living environment.

During the programme, students interacted with villagers and explained proper waste disposal methods, segregation of biodegradable and non-biodegradable waste, and the harmful effects of littering. They encouraged the community to adopt hygienic practices and reduce the use of plastic products.

The villagers appreciated the efforts of the Civil Engineering Department and assured their cooperation in keeping the surroundings clean. The cleanliness drive not only improved the local environment but also instilled a sense of civic responsibility among students, strengthening the bond between the institution and the community.