

# SRUSHTI-2024

Annual Magazine-2024



Society of  
Civil Engineering

Department of  
**Civil Engineering**

C. V. Raman Polytechnic  
Bhubaneswar

VISION	<ul style="list-style-type: none"><li>• Civil engineering department is committed to impart knowledge and excellence in civil Engineering to the students and to produce civil engineers of high calibre, technical skills and ethical values to meet current and future challenges.</li></ul>
MISSION	<ul style="list-style-type: none"><li>• To produce civil engineers with quality technical skills aligned with industry needs to solve real life problems of the society.</li><li>• To create teaching learning environment for students to acquire knowledge as per need and to motivate towards entrepreneurship and to pursue higher studies.</li><li>• To serve construction industries, civil engineering profession and the community at large through dissemination of knowledge and technical services to improve quality of life and enhance employability.</li><li>• To inculcate self-learning attitude and professionalism.</li></ul>

<p><b>PO</b></p>	<ul style="list-style-type: none"> <li>• <b>Basic and discipline specific knowledge.</b></li> <li>• <b>Problem analysis</b></li> <li>• <b>Design/development of solutions</b></li> <li>• <b>Engineering tools, experimentation and testing</b></li> <li>• <b>Engineering Practices for society, sustainability and environment</b></li> <li>• <b>Project Management</b></li> <li>• <b>Lifelong Learning</b></li> </ul>
<p><b>PEO</b></p>	<ul style="list-style-type: none"> <li>• To analyze in civil engineering profession or Higher education by acquiring thorough knowledge and concepts in fundamentals of engineering.</li> <li>• To Apply knowledge and skills to real life problems and there by rendering safe and economical structures against natural calamities and also environmentally sustainable and useful to society.</li> <li>• To understand entrepreneurial endeavors and to develop effective communication skill and passion for learning.</li> </ul>
<p><b>PSO</b></p>	<ul style="list-style-type: none"> <li>• Able to meet the needs of public in the design and execution of quality construction work considering health, safety, cultural and environmental factors.</li> <li>• Analyse and design regular and complex structures applying knowledge of building analysis software package.</li> <li>• Able to work effectively as an individual or in a team having acquired leadership skills and manage projects in multidisciplinary environment.</li> </ul>



***Shri Sanjib Kumar Rout***

***Chairman, C.V. Raman  
Polytechnic***

We are compelled to offer the greatest infrastructure, instruction, and global learning because of our longstanding dedication to academic success. Our campus provides an engaging atmosphere that fosters discoveries and develops our students into self-sufficient thinkers and action takers.



***Dr. Guda Sridevi***

***Principal, C.V. Raman Polytechnic***

Founded in 2005, C.V. Raman Polytechnic in Bhubaneswar strives to lead the world in technical education by working with leading organizations and sectors. It aims to create top-tier professionals with both technical know-how and life skills by emphasizing innovation and skill development. The institute equips students with cutting-edge training facilities and industry-aligned curricula to help improve society by making them job-, world-, and future-ready.



***Mr. Ambika Prasad Mohanty***

***Hod of Civil Engineering***

***CVRP***

The department of civil Engineering came into being in 2005 with a commitment to train young minds to be leader in their chosen profession and serve the society to enhance the quality of life. The department has an array of highly dedicated team of faculty members with varied experience in academy, industries and expertise in their own domain having an excellent track record and academy career to make a formidable team to steer the department march forward. The department has well equipped laboratory which plays a vital role for acquiring practical knowledge. We, firmly believe in delivering quality education aligned with requirement of industries creating a vista for employability.



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HEIGHTS

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# **Theodolite**

A **theodolite** is a precision optical instrument for measuring angles between designated visible points in the horizontal and vertical planes. The traditional use has been for land surveying, but it is also used extensively for building and infrastructure construction, and some specialized applications such as meteorology and rocket launching.

It consists of a moveable telescope mounted so it can rotate around horizontal and vertical axes and provide angular readouts. These indicate the orientation of the telescope, and are used to relate the first point sighted through the telescope to subsequent sightings of other points from the same theodolite position. These angles can be measured with accuracies down to micro radians or seconds of arc. From these readings a plan can be drawn, or objects can be positioned in accordance with an existing plan. The modern theodolite has evolved into what is known as a total station where angles and distances are measured electronically, and are read directly to computer memory.

In a transit theodolite, the telescope is short enough to rotate about the trunnion axis, turning the telescope through the vertical plane through the zenith; for non-transit instruments vertical rotation is restricted to a limited arc.

The optical level is sometimes mistaken for a theodolite, but it does not measure vertical angles, and is used only for leveling on a horizontal plane (though often combined with medium accuracy horizontal range and direction measurements).

**Mr. Ambika Prasad Mohanty**

**HOD**



## **Width of National highway in India as per IRC**

*DEBI PRASAD PANDA, ASST PROF (CIVIL)*

In India, as per the rules & guidelines of Indian Road Congress (IRC), width or right of way (ROW) of national highway in India is varies between 30m to 75m wide. It is about 30m wide for 2 lane NH, 45m wide for 4 lane NH, 60m wide for 6 lane NH and 75m wide for 8 lane NH which includes width of roadway + other necessities + future extension. This is ideal, desirable standard width of National Highway. However, their actual width is varying according to geometric design of Highway Engineering and depending on land availability and economic condition.

The area of land that are acquired for the road along its alignment is termed as the right of way (ROW). This includes width of roadway + other necessities + future extension. Width of formation or roadway comprise of width of carriageway + width of paved shoulder + width of unpaved shoulder. Other necessities are Road margin uses for parking cycling Footpath, drainage and bus stoppage. Future extension of national highway will be required due to increased road traffic day by day.

One lane width is 3.5m wide for carriageway, maximum shoulder width is about 4.6m and minimum of 2.5m, width of median will be varying 5m to 7m wide, other space uses for parking, footpath, bus stoppage, accommodation of stop vehicle, drainage and service lane along with its alignment and future extension.





Width of National highway in India as per IRC

**Width of 2 lane National Highway as per IRC:-**In India, as per the rules

& guidelines of Indian Road Congress (IRC), total right of way of national highway in India is about 30m (100 feet) wide for two Lane Road. This includes width of 12m for roadways or built-up area those comprise of 2 lane carriage width of about 7m wide and paved shoulder width of 2.5m wide and rest about 18m will be used for future extension and development of Highway facilities. This figure might be little very according to geometric design of highway Engineering and land acquisition.

**Width of 3 lane National Highway as per IRC:-**In India, as per the rules

& guidelines of Indian Road Congress (IRC), total right of way of national highway in India is about 30m (100 feet) wide for 3 Lane Road. This includes width of 16m for roadways or built-up area those comprise of 3 lane carriage width of about 10.5m wide and paved shoulder width of 2.75m wide and rest about 14m will be used for future extension and development of Highway facilities.

**Width of 4 lane National Highway as per IRC:-**In India, as per the rules & guidelines of Indian Road Congress (IRC), total right of way of national highway in India is about 45m (150 feet) wide for 4 Lane Road. This includes width of 27m for roadways or built-up area those comprise of 4 lane carriage width of about 14m wide, median of 5m wide along with kerb shyness, paved shoulder width of 4m wide and rest about 18m will be used for future extension and development of Highway facilities.

**Width of 6 lane National Highway as per IRC:-**India, as per the rules & guidelines of Indian Road Congress (IRC), total right of way of national highway in India is about 60m (200 feet) wide for 6 Lane Road.

# FEMINIST OUTLOOK ON “GOOD MEN”

*Miss Sumitra Parida, Asst.Prof*

“You could have just told me” is one of the many phrases that so called good men reverberate in urban liberal spaces. These men claim themselves to be better than others as, atleast, they are trying to have discussions with women by asking them how they are oppressed in status quo. They want women to elaborate things in a way that is comprehensible to them so that, these men can better understand what the whole fuss around feminism is because they genuinely care. The principles behind this being ‘if you are facing a problem, please tell me so that I can verify whether it’s a problem or not and whether it is something worth caring about’.

This idea is not only degrading to women who have had to suffer the brunt of sexism all their lives but is also inherently patriarchal. The idea that a man wants a woman to explain all their life and recount her trauma so that he can feel better associated with the movement, pushes the responsibility on the oppressed to take the onus of educating the oppressor about what is wrong in the society. At no point should it be upon the underprivileged to remind the pedestalised section of society as to how their privilege is hurting them, if these are truly good men they would have used their privilege to observe how in their families women are the ones who have always had fettered liberties, how different rules and scrutiny apply for men and women, how when their feminist friends were ranting on social media it was probably because they are so fed up of patriarchy always adversely affecting their mental health or how future trajectories for men include career and for women it means settling down and marry. Disregarding how hundreds of years of feminist texts is literally a google click away, men often hide behind their veil of privilege to deliberately ignore these sexist institutions when they are in front of them because it never concerns them or affects them in any manner and now that they have finally had a change of heart they want to spend their iota of attention to discuss if and how women are oppressed in the society.

The idea that these men want to learn about the patriarchal subjugation on their own terms is what is so problematic to begin with. They refuse to listen to 'angry' feminists because it hurts their fragile egos but even when you do try and have a reasonable discussion with them, they throw a series of hypotheticals and how patriarchy also oppresses men. While that in it of itself is not wrong, the shifting of discourse from how women are subjugated in every sphere of their lives to how women and men are, both, somewhat oppressed strips away the tenet of the feminist movement and delegitimizes the struggle of thousands of women over the years. Good men need to take the burden of recognising their privilege upon their own shoulders and educate themselves.

# ONLINE CLASS

Online , online and online

It's the era of quarantine.

We are totally stuck in virtually combine,

And curiously waiting for it's deadline.

On first day of lockdown,

I heard our college is fully shutdown.

We doing our class regularly online.

Not feel enough good, but it's fine.

Teachers are in camera looks so BORING,

And the lecture are continuously ignoring.

When teachers give question to finish,

We generally request to meet diminished.

We almost unaware with every theorem.

Net problem and nothing can audible becomes our genuine problem.

I pray that we overcome this situation and go to college again,

To give us relief from headache in our brain.

**BY:**

**KOUSHIK SAHOO (2<sup>nd</sup> year)**

# Waste management

Waste management (or waste disposal) includes the processes and actions required to manage waste from its inception to its final disposal.

This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process and waste-related laws, technologies, economic mechanisms.

Waste can be solid, liquid, or gaseous and each type has different methods of disposal and management. Waste management deals with all types of waste, including industrial, biological, household, municipal, organic, biomedical, radioactive wastes. In some cases, waste can pose a threat to human health. Health issues are associated throughout the entire process of waste management. Health issues can also arise indirectly or directly. Directly, through the handling of solid waste, and indirectly through the consumption of water, soil and food. Waste is produced by human activity, for example, the extraction and processing of raw materials. Waste management is intended to reduce adverse effects of waste on human health, the environment, planetary resources and aesthetics. Proper management of waste is important for building sustainable and livable cities, but it remains a challenge for many developing countries and cities. A report found that effective waste management is relatively expensive, usually comprising 20%–50% of municipal budgets. A large portion of waste management practices deal with municipal solid waste (MSW) which is the bulk of the waste that is created by household, industrial, and commercial activity. According to the Intergovernmental Panel on Climate Change (IPCC), municipal solid waste is expected to reach approximately 3.4 Gt by 2050.

In the first systematic review of the scientific evidence around global waste, its management and its impact on human health and life, authors concluded that about a fourth of all the municipal solid terrestrial waste is not collected and an additional fourth is mismanaged after collection, often being burned in open and uncontrolled fires – or close to one billion tons per year when combined. They also found that broad priority areas each lack a "high-quality research base", partly due to the absence of "substantial research funding", which motivated scientists often require.



Electronic waste (waste) includes discarded computer monitors, motherboards, mobile phones and chargers, compact discs (CDs), headphones, television sets, air conditioners and refrigerators.

## **Recycling-**

Recycling is a resource recovery practice that refers to the collection and reuse of waste materials such as empty beverage containers. This process involves breaking down and reusing materials that would otherwise be gotten rid of as trash. There are numerous benefits of recycling, and with so many new technologies making even more materials recyclable, it is possible to clean up the Earth. Recycling not only benefits the environment but also positively affects the economy.

**Salini Kumari**

**(2<sup>nd</sup> year) Civil dept.**

# MY INDIA

Bombay for Beauty

Delhi for Majesty

Bengal for Writing

Punjab for wrestling

Kashmir for Looking

Madras for Cooking

Gujarat for Health

M.P. for Wealth

A.P. for Hardworking

Maharashtra for Learning

Kerala for Dance

Mysore for Glance

Bihar for Mines

Himachal for Pines

Up for Ministers

Rajasthan for Heroism

Nagaland for Hills

Assam for Wells

Uttaranchal for Toil

Odisha for Soil

This is my INDIA

Gracious, Glorious, Royal

**By- Rahul Kumar**

**F22029001015,**

**3<sup>rd</sup> Year**



## **Essay on Holi**

'Holi' (the festival of colors) is a festival that I always look forward to. This is the day when we are allowed to smear each other with colors and stuff ourselves with sweets.

This is also the day when people forgive and forget enmity or any differences with someone who wants to reconcile. As the legend goes, 'Holi' is named after 'Holika, the sister of cruel King Hiranya Kashyap. The king claimed himself to be Almighty and asked all his subjects to worship him instead of God. But his own son, Prahalad, worshipped God, not the king. Holika was blessed not to be burnt in fire, so she tried to kill Prahalad on insistence of the king by sitting in pyre with Prahalad. Prahalad came hale and hearty out of the pyre, but Holika was burnt to ashes. Thus, Holi marks the victory of good over evil.

On the evening of Holi, we had a huge bonfire in front of the house. Many neighbors too joined us, and we sang and danced late into the night. First, we put a little color on the feet of our elders and sought their blessings.

*Jitendra Kumar*

*3<sup>rd</sup> Year*

# SAVE THE EARTH

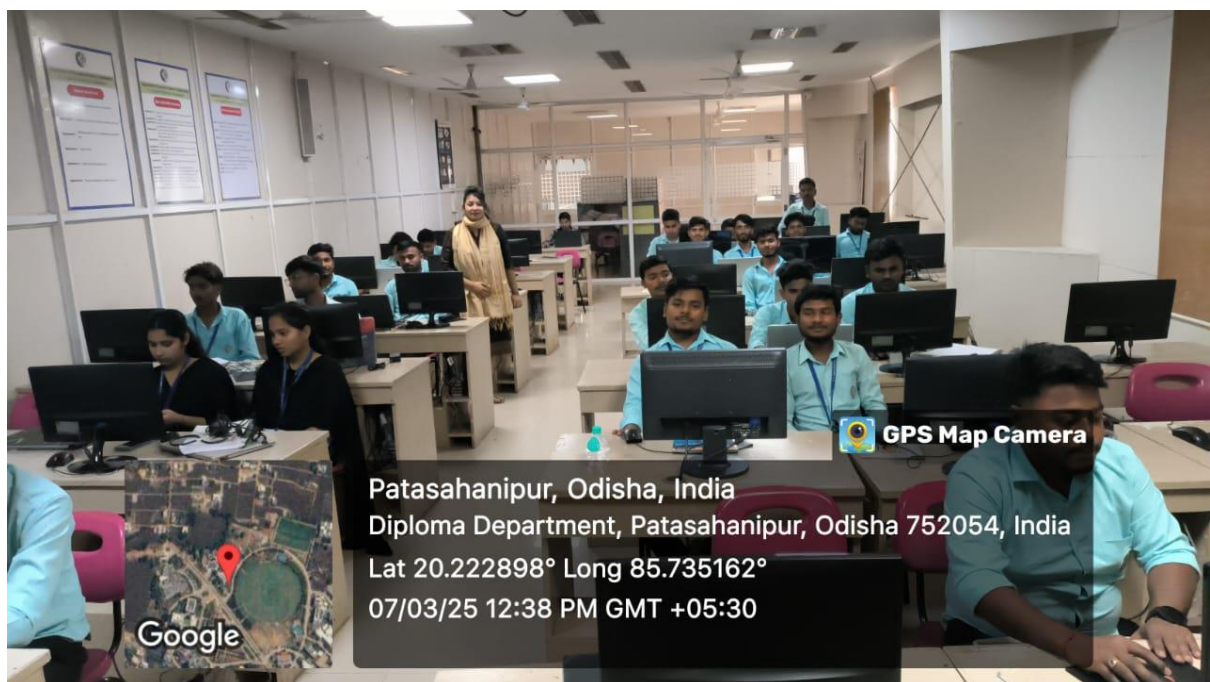
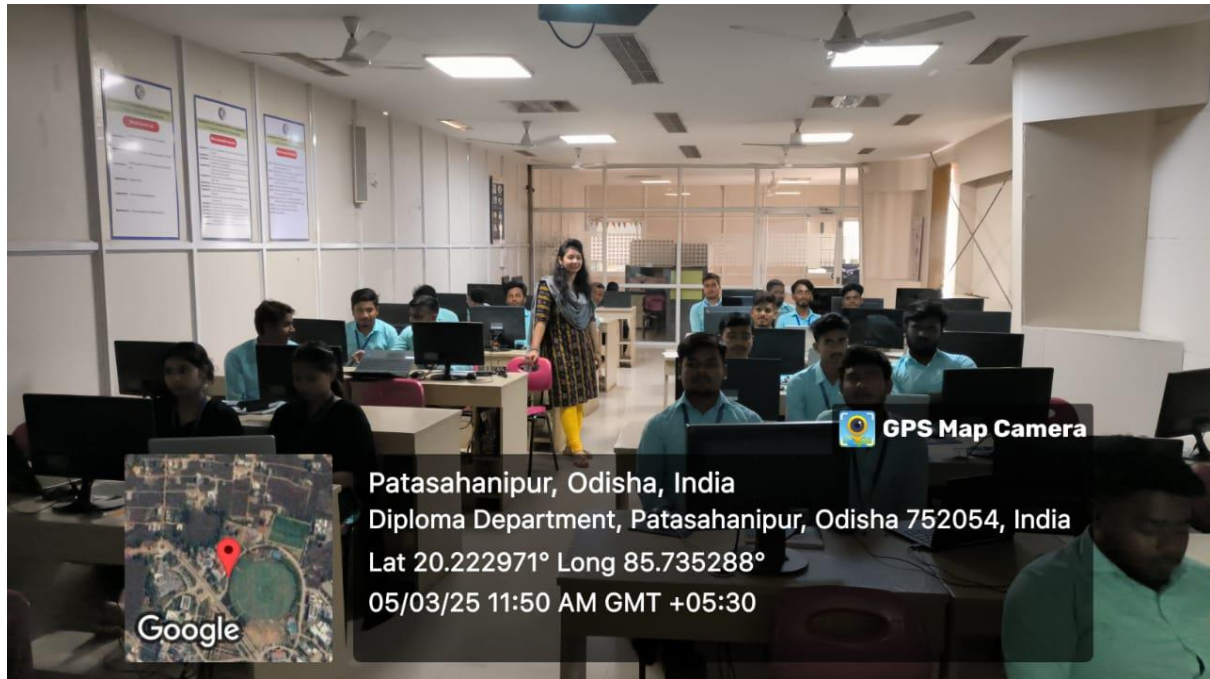


NAME- SUBODH KU. SAHU, BRANCH - CIVIL, Regd- F23029001024 (4<sup>th</sup> sem)

- C.V. RAMAN Poly. 805R

# Workshop & Seminar

## Training on GIS and Remote Sensing



## CoE training on Water technology



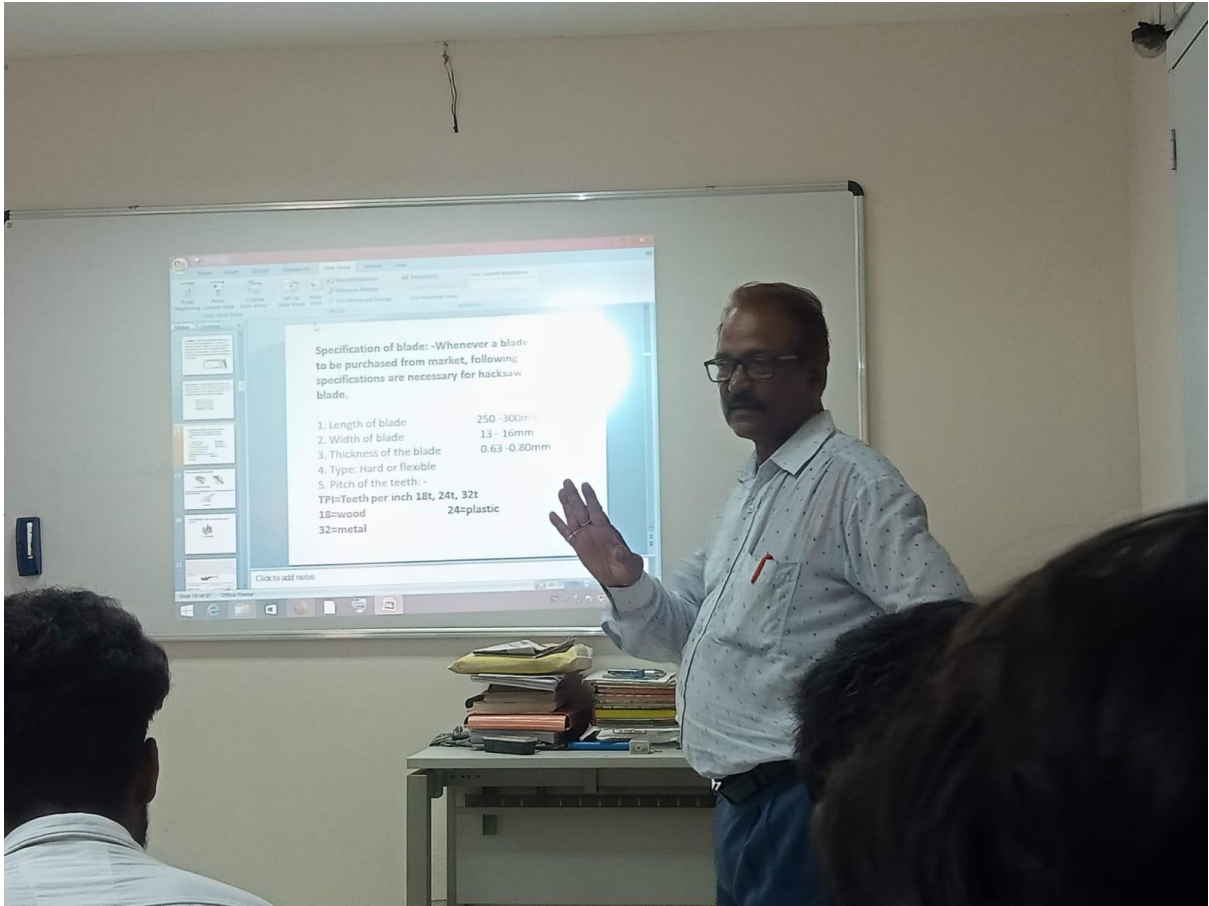


## CoE training on Plumbing and heating





Patasahanipur, Odisha, India  
6PFP+43F, Patasahanipur, Odisha 752054, India  
Lat 20.222923°  
Long 85.735014°  
22/03/24 03:30 PM GMT +05:30





## **Conclusion**

**Civil engineering plays a vital role in disseminating knowledge, showcasing advancements, and connecting professionals in the field, ultimately contributing to the development and improvement of infrastructure and society. civil engineering is a vital field that contributes to the development of modern society in numerous ways. From conceptualizing and designing infrastructure to creating and maintaining it, civil engineering is involved in every stage of the process.**

