

Sipna College of Engineering and Technology, Amravati

# Vision of the Department:

To provide quality professional education for creating reputed civil technocrats and entrepreneurs for the sustainable infrastructure development and cater the need of the society.

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Newsletter 2022 Volume I | Issue I

# About Department

Civil engineering is a professional engineering discipline that deals with the design, construction and maintenance of the physical and naturally built environment, including works like roads, bridges, canals, dams, and buildings. Civil engineering is the oldest engineering discipline after military engineering, and it was defined to distinguish non-military engineering from military engineering. It is traditionally broken into several sub-disciplines. Civil engineering takes place on all levels: public sector from municipal to international companies.

To cater the needs of the society, Sipna College of Engineering & Technology, Amravati is obliged to impart quality civil engineering education by making available all requisite contemporary infrastructures, books, equipments and facilities along with well qualified faculty members.



# Vision of the Department

To provide quality professional education for creating reputed civil technocrats and entrepreneurs for the sustainable infrastructure development and cater the need of the society.

# Mission of the Department

- To provide state of the art resources that contributes to a competitional learning environment.
- To contribute to advancement of knowledge through regular interaction with industries and offer solution to their problems.
- To remains updated with contemporary technology and develop managerial skills.
- To inculcate moral and ethical values among the students to fulfill society's needs.

# **Program Educational Objectives**

## Engineering Graduates will be able to :

PEO1 Acquire the fundamental knowledge in basic sciences and civil engineering to solve real life problems.

PEO2 Succeed in getting engineering positions in government, public and private construction sector.

PEO3 Succeed in the pursuit of higher studies and continue with life-long learning.

PEO4 Get aware of social responsibility, ethical standards and environmental issues to serve the society.

Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
1	September 2021	15.09.2021	Workshop on "DigitalInteractive ContentDevelopm ent for CivilEngineering"	A.S. Pand and Student Activity Coordinator s, Civil Engg. Dept	2nd, 3rd and final	75	The workshop wasaimed towardorientati on of thestudents towardimporta nce ofdigital content, overview of toolsrequired, samplecontentp resentation.





Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
2	February 2022	01.02.2022	A webinar on "Career Perspective of Civil Engineering"	Mr. Rajyawardh an Singh "Civil Guruji" [Civil Engineering Technical Institute]	3rd year	32	Career counselling and opportunities in civil engineering as well as role of civil engineer at various levels was discussed in this webinar.



Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
3	February 2022	02.02.2022	A seminar on "Enter the AutoCAD"	Students Activity Team, 3 rd Year Civil Engineering	3rd year	28	Introduction to AutoCAD and its applications were presented in the seminar for students of second year.



Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
4	March 2022	12.03.2022	Visit to "CREDAI Property Expo 2022, Amravati"	Students Activity Team, 3 rd Year Civil Engineering	3rd year	14	A visit to CREDAI Property exhibition was conducted for 3 rd year civil engineering students. Aim of the visit was to create awareness regarding current trends in construction industry



Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
5	March 2022	22.03.2022	Technical visit to "Railway Station, Badnera"	Prof. R. B. Wath	Final Year	52	Technical Visit for understanding the practical aspects of railway engineering was conducted for final year civil engineering students



Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
6	March 2022	26.03.2022	Webinar on "Future of Construction"	Ms. Vishwa Shah (Social Media Executive) And Prajyot Rajpure (Member, Olous Constructio n App)	Final Year	16	The new digital wave incivil engineering andconstructio n industrywas discussed withstudents in this webinar



Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
7	April 2022	08.04.2022	Technical site visit wastewater treatment plant	Prof. Y. S. Khandekar	Final Year	55	A technical visit was arranged at Laalkhedi Wastewater Treatment Plant, Amravati for final year students for understanding the prtactical aspects of wastewater collection, treratment and disposal.





Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
8	April 2022	11.04.2022	Introduction to civil engineering softwares	Mr. Rishikesh Tantan, Associate of Mr. Hitesh Lahoti, Civil Engineering Software Academy (CESA), Pune	Second Year	42	Entry level softwares such as AutoCAD and its applications, scope of various software training as a career in Civil Engineering was discussed in the seminar.





Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
9	April 2022	11.04.2022	Recent trends in civil engineering softwares	Mr. Rishikesh Tantan, Associate of Mr. Hitesh Lahoti, Civil Engineering Software Academy (CESA), Pune	Third and Final Year	62	Recent changes and updations in civil engineering software industry were discussed in this seminar





Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
10	April 2022	12.04.2022	Technical visit - Site visit - Design of Steel Structures - Steel Bridge	Prof. S. M. Patil	Third Year	58	Steel bridge design and construction aspects were practically understood by the students in this site visit





Sr. No.	Month	Date	Activity Name	Name of Guest / Resource Person / Activity Conducted by	Year	Number of Students attended / participate d	Remarks
11	April 2022	20.04.2022	Technical visit - Site visit - Water Treatment Plant, Tapovan, Amravati	Prof. A. V. Tiwari	Third Year	56	Practical aspects of water treatment, various water treatment units were understood during the visit





Department of Civil Engineering, Sipna COET, Amravati

# **Teacher - Guardian Scheme**

The Teacher- Guardian Scheme allocation for the academic year 2021-22 is as follow:

Sr. No	Student ID	Name Of	Year of Admissio	Status	Name of TG
		Student	n	FY/DSY	
1	21BE0032	Gireeja Sanjay Pakhode	2021	FY	
2	21BE0037	Prathamesh Santosh Rithe	2021	FY	Prof P.V. Pothkar
3	21BE0138	Samiksha Milind Ingale	2021	FY	
4	21BE0595	Shruti Anil Shirbhate	2021	FY	
5	21BE0674	Ayan Ahmad Abdul Waheed	2021	FY	
6	21BE0182	Bipin kumar Mahendra Pandit	2021	FY	Prof Y S Khandekar
7	21BE0224	Shounak kumar Harendra Narayan	2021	FY	
8	21BE0170	Yuvraj Shivdas Gaykwad	2021	FY	
9	21BE0634	Vivek Vijayrao Aamle	2021	FY	
10	21BE0060	Prathmesh Mahendra Gumble	2021	FY	Drof S.D. Mahaian
11	21BE0093	Sagar Kanhaiyalal Madnani	2021	FY	ri Oi. S.r. Manajan
12	21BE0101	Asmita Kisan Bhilavekar	2021	FY	
13	21BE0678	Shubham Gajanan Thakare	2021	FY	
14	21BE0684	Aditya Rajesh Rawale	2021	FY	Prof A S Attal
15	21BE0725	Gauri Diliprao Ulhe	2021	FY	FIOLA.3. Atta
16	21BE0726	Samarth Rajendra Alaspure	2021	FY	
17	21BE0025	Shreya Rajendra Mahure	2021	FY	
18	21BE0042	Aditya Milind Sakharkar	2021	FY	Prof P. R. Wath
19	21BE0449	Alok Devanand Lakade	2021	FY	FIUL R.D. WALL
20	21BE0178	Atul Kumar Shivbalak Kumar	2021	FY	

21	21BE0230	Vishwajeet Karan Sitaram Prasad	2021	FY	
22	21BE0444	Prathmesh Nilesh Gulhane	2021	FY	Dr. A.V. Tiwari
23	21BE0617	Ayush Vilas Dupare	2021	FY	
24	21BE0643	Rohan Bharat Tayde	2021	FY	1
25	21BE0681	Haridas Suresh Choudhari	2021	FY	
26	21BE0235	Krishna Murari Ramchandra Verma	2021	FY	Prof. S.M. Patil
27	21BE0048	Rajat Prakash Gulhane	2021	FY	
28	21BE0355	Bhavik Prashant Kamble	2021	FY	- Prof. M.D. Tare
29	21BE0438	Vaishnavi Ramesh Khandekar	2021	FY	
30	21BE0459	OmShriram Chandurkar	2021	FY	
31	21BE0676	Anuj Dipakkumar Shahade	2021	FY	
32	21BE0677	Abhay Sundarlal Rathood	2021	FY	1
33	21BE0698	Aditya Dipakrao Lande	2021	FY	
34	21BE0022	Gaurav Chandraprakash Deshmukh	2021	FY	Prof.
35	21BE0124	HarshalRamesh Khade	2021	FY	S.N.
36	21BE0450	Kunal AnilGhate	2021	FY	e Kalbend
37	21BE0480	SakshiGajanan Jadhao	2021	FY	-
38	21BE0632	Priti Onkar Ghotekar	2021	FY	Prof. A.S. Pand
39	21BE0695	Om Pramodrao Shirbhate	2021	FY	
40	21BE0233	Aditya Kumar Ashok Singh Singh	2021	FY	1
41	21BE0227	Laxminarayan Vakil Gond	2021	FY	
42	21BE0145	Aniket Pramod Mhala	2021	FY	Prof. A.A. Pande
43	21BE0487	Juhi Purushottam Parate	2021	FY	
44	21BE0594	Tushar Narendrakumar Thakare	2021	FY	
45	21BE0630	Rohit Mohan Mahore	2021	FY	
46	21BE0171	Anand Raj Bhola Chaudhary	2021	FY	
47	21BE0141	Sagar Pundlik Chavhan	2021	FY	
48	21BE0567	Sejal Pravinrao Radke	2021	FY	
49	21BE0596	Vedant Prabhudas Wankhade	2021	FY	Prof.
50	21BE0168	Aman KumarShivaji Kumar	2021	FY	Badnakh
51	21BE0183	Biresh Kumar Kishori Yadav	2021	FY	e
52	21BE0187	Manish Kumar Prem Kumar Yadav	2021	FY	
53	21BE0197	Shivendu Bhaskar Arun Kumar	2021	FY	

Sr. No	Student ID	Name Of Student	Year of Admissio n	Status	Name of TG
				FY/DSY	
1	21BE0004	BHANEGAONKAR PRASAD ASHISH	2021	DSY	Prof. R.V. Rothkar
2	21BE0009	WANKHADE VAIBHAV PRADIP	2021	DSY	Prof. Y.S. Khandekar
3	21BE0027	BORKAR PRAJWAL NANA	2021	DSY	Prof. S.P. Mahajan
4	21BE0035	MESKAR TEJAS GAJANANRAO	2021	DSY	Prof. A.S. Attal
5	21BE0053	GADE AYUSH VIJAYRAO	2021	DSY	Prof. R.B. Wath
6	21BE0049	SAWARKAR MAYUR RAJKUMAR	2021	DSY	Dr. A.V. Tiwari
7	21BE0058	KOTHEKAR ANKITA MILIND	2021	DSY	Prof. S.M. Patil
8	21BE0061	KURWADE SWAPNIL MANOHAR	2021	DSY	Prof. M.D. Tare
9	21BE0066	WADATE SANKET KISHOR	2021	DSY	Prof. S.N. Kalbende
10	21BE0096	PATIL SAKSHI BHIMBUDDHA	2021	DSY	Prof. A.S. Pand
11	DSE21131791	KANGALE POOJA SUDHAKAR	2021	DSY	Prof. A.A. Pande
12	DSE21112058	ATHAWALE YOGESH SUNIL	2021	DSY	
13	DSE21137567	DESHMUKH PALASH AVINASH	2021	DSY	Prof.
14	DSE21131437	POWALEKAR SHYAM VILAS	2021	DSY	R.R. Badnakh e
15	DSE21131039	PATIL NIKHIL DILIPRAO	2021	DSY	

#### Laminar Flow – A Fluid Mechanics Wonder

Laminar flow is a type of fluid flow where the particles move in parallel layers, with little or no mixing between layers. This type of flow is characterized by smooth and predictable movement and is often used in engineering applications where precise control of fluid motion is required.

Laminar flow occurs when the fluid moves at a relatively low velocity and the fluid viscosity is high. In this type of flow, the fluid particles move in a coordinated and orderly manner, with each particle following the same path as the particles surrounding it. The result is a smooth and predictable flow that can be easily controlled and manipulated.



One of the primary advantages of laminar flow is its ability to reduce turbulence and fluid resistance. This makes it ideal for applications such as pipeline transportation, where the goal is to maximize the flow rate while minimizing friction losses. Laminar flow can also be used in heat exchangers, where precise control of fluid temperature and velocity is essential for efficient heat transfer.

Laminar flow is also commonly used in laboratory settings for experiments that require precise control over fluid motion. For example, laminar flow can be used to control the flow of fluids in microfluidic devices, allowing researchers to study the behavior of cells and molecules in a controlled environment.

Asmita S. Jamodkar 18BE0073

#### **Tunnel ventilation – Safety and Need**

Tunnel ventilation is an essential aspect of tunnel design and operation, providing a safe and comfortable environment for both passengers and equipment. Tunnels can become hazardous due to the accumulation of exhaust gases, fumes, and smoke from vehicles and equipment. Effective tunnel ventilation is essential for removing these pollutants and maintaining safe and healthy air quality.

There are two primary methods of tunnel ventilation: longitudinal ventilation and transverse ventilation. Longitudinal ventilation involves the use of air ducts along the length of the tunnel to create a continuous flow of air.

Transverse ventilation involves the use of ventilation shafts or fans to create a cross-flow of air within the tunnel.



Tunnel ventilation systems are typically designed to meet specific air quality standards, such as the Euro Norms or the US Clean Air Act. These standards define the permissible levels of pollutants in the tunnel air, and the ventilation system must be designed to ensure compliance with these standards.

Tunnel ventilation systems can also play a critical role in the event of a fire or emergency situation. The ventilation system can be used to remove smoke and toxic gases from the tunnel, improving visibility and allowing for safe evacuation of passengers and emergency responders.

#### Sakshi N. Rithe 18BE0074

#### **Ground Improvement Technique using Stone Columns**

Ground improvement techniques are commonly used in civil engineering to improve the load-bearing capacity and stability of weak soils. One such technique is the installation of stone columns, also known as vibroreplacement or vibro-stone columns.

Stone columns are typically constructed by drilling or vibro-compacting compacted stone aggregate into the soil. This process effectively reinforces the soil, creating a stable column that can support significant loads. The stone columns can be installed either vertically or inclined to meet the required design parameters.

The use of stone columns as a ground improvement technique offers several advantages. First, stone columns can be installed quickly and efficiently, minimizing disruption to ongoing construction projects. Second, the technique is highly adaptable and can be used in a wide range of soil conditions. Finally, stone columns can be designed to meet specific project requirements, including loadbearing capacity, settlement control, and drainage.



The effectiveness of stone columns as a ground improvement technique has been demonstrated in numerous civil engineering projects around the world. For example, stone columns have been used to improve the load-bearing capacity of soils in the construction of embankments, foundations, and retaining walls. The technique has also been used to improve the stability of slopes and reduce the risk of landslides.

The use of stone columns as a ground improvement technique offers numerous benefits, including improved load-bearing capacity, stability, and drainage. The technique has been used successfully in numerous civil engineering projects around the world and continues to be a valuable tool for addressing soil instability and other ground-related challenges.

# Shashank A. Thakare 18BE0026