Department of Civil Engineering

GOVERNMENT POLYTECHNIC KHAMGAON

(Under Directorate of technical Education, Maharashtra Government)



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Inside.....

- From Editor's Desk
- From Principal's Desk
- From HOD's Desk
- स्थापत्य अभियंत्रिकी व बांधकाम अभियंता - एक दृष्टीपटल
- Industrial Visits
- Student Speaks
- Faculty Speaks
- Farewell Program

VISION:

"To be an outstanding department dedicated to provide competent technical manpower catering to needs & challenges of industry & society."

MISSION:

Department of Civil Engineering is Committed to:

- 1] To create Civil Engineers with essential knowledge, technical skills & ethical values to serve the industry & society.
- 2] To provide the resources that contributes to effective learning environment.
- 3] To promote innovative thinking & lifelong learning with industry interaction.

PROGRAM OUTCOME (POS):

- **PO1. Basic** and **Discipline** specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- PO 2. Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.
- **PO 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.
- PO 4. Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- PO 5. Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- **PO 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.
- **PO 7.Life-long learning:** Ability to analyse individual needs and engage in updating in the context of technological changes.

PROGRAM SPECIFIC OUTCOMES (PSOS):

- **PSO1.** Construction, Planning and Designing: Perform optimal Civil Engineering construction planning and designing activities of desired quality.
- **PSO 2. Construction, Execution and Maintenance:** Execute Civil Engineering constructions and maintenance using relevant materials and equipment's.
- **PSO 3. Local Need Aspect:** The application of maintaining and operating new & existing infrastructure while protecting the public and environmental health.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS):

- **PEO 1:** Provide socially responsible, environment friendly solutions to Civil engineering related broad-based problems adapting professional ethics.
- **PEO 2:** Adapt state of the art Civil engineering broad based technologies to work in multidisciplinary work environments.
- **PEO 3:** Solve broad based problems individually and as a team member communicating effectively in the world of work.

From Editor's Desk...



Dear Readers,

It is indeed a great honor to be the Newsletter Editor for the Civil Engg. Department and it is an immense pleasure to launch this edition for June 2023.

In this issue, we will recount the various projects and activities in which department is actively involved. Few points I would like to highlight here are, regular departmental activity, different technical site visits, arranging expert lecture, and various CESA activities along with NBA preparation.

Finally, huge thanks to Shri. R. H. Jawkar (Alumni and Rtd. Dy. EE. WRD), Principal Mauli College of Engineering, J.E. and C.O. Municipal Council Khamgaon, Chairman Manglam Industries MIDC Khamgaon, Shri.S.P.Thotange (EE PWD), Shri.J.N. Kale (AEE PWD), Shri. S. R. Soni, Shri.Dr. P. V. Bahekar and Shri.AkshadMnasane (CE-6-I who has contributed for the wonderful writing, without which this newsletter issue wouldn't have been completed. Last but not least, I would like to thank Shri. V. T. Atole (I/C HOD, CE), Shri. P. V. Theng (Co-Editor), for everlasting support throughout the creation of this edition.

Shri. M. D. Ghodle

Lecturer. CE

From Principal's Desk...



Dear Readers,

The Journey Of Thousand Miles Starts With A Small Step!

It is an honor and a thing of pride to be a part of an institute which has long legacy of success. Government polytechnic khamgaon basically, caters to the needs of rural area in and around Buldana district.

It is very much complimented by Community polytechnic to serve the purpose of technical education of all strata of society. Government Polytechnic Khamgaon was founded in 1961. It started with three core branches viz. Civil Engg., Mechanical Engg. & Electrical Engg. Later it spread its wings and began two branches named Computer Engg. & Electronics Engg.

Government Polytechnic Khamgaon is a stepping stone in the shine of Vidarbha region. Institute has given numerous engineers to the society since 1963. They are servings to the best of their capacity because of the strong foundation and platform provided by Government Polytechnic Khamgaon. That's why Institute has always been sought after by students all over Maharashtra. The cream and meritorious students are further trained and polished with required engineering skills and human values, so that society gets skilled engineers and good human beings.

After taking over the charge of such a vibrant campus, it's an opportunity and challenge for me as an engineer and Principal.

The challenge is very much accepted by starting technical activities like internships, MOOCS, industrial visits, expert lectures in the field of engineering, soft skills and so on.

New ideas, suggestions, corrections are welcomed so that Government Polytechnic Khamgaon will be on national and international horizon inthe field of engineering.

The woods are lovely, dark and deep
But I have promises to keep
And miles to go before I sleep
And miles to go before I sleep

Dr. Sameer S. Prabhune Principal G. P. Khamgaon

From HOD's Desk...



Dear Readers,

It gives me immense pleasure to lead the department of Civil Engineering.

Education is recognized to be primarily a process of getting students absorb new ideas and ways of thinking to prepare them for life.

Civil Engineering is a broad field of engineering which involves the building of various structures like Roads, Railways, Airports, Tunnels, Aqueducts, Dams, Retaining walls, Cannels, Culverts, Buildings, Water tanks, Water Supply lines, Drainage lines etc. It involves planning, Design, Construction, Maintenance and Management of Structures.

Civil Engineering Department of Government Polytechnic Khamgaon aims at developing analytical and experimental skills in students to apply in various fields of Civil Engineering.

The Civil Engineering Department has well-qualified teaching faculties with industrial experience who are enthusiastic in imparting the quality teaching to the students along with different expert lecture from Expertise in the field. The emphasis is laid on a proper understanding of the fundamentals of the subjects through site visits, industrial training , PPT, Video clips and case studies. It has well-equipped laboratories, computational facilities, classrooms and provides a good environment for learning. All faculty members are also engaged in research and consultancy projects which benefit the students for active learning. The department also has its own library housing a good number of quality reference books for the benefit of staff and students.

I will assure that our students will prove to be an invaluable asset to society and industry. Our Objectives :

- 1. To provide sound academic environment to students for a complete learning experience.
- 2. To provide state-of-the-art technical infrastructure and motivate students to realize their own potential.
- **3.** To promote the technical skills and ensure all-round development of the students. I wish all the Students and Faculty a great academic career.

Shri.V.T .Atole
I/C Head of Department
Civil Engineering

स्थापत्य अभियंत्रिकी व बांधकाम अभियंता - एक दृष्टीपटल

स्थापत्य अभियांत्रिकी ही सर्वात जुनी व प्राचिन अभियांत्रिकी शाखा आहे. यामध्ये नागरी आयोजन, बांधकाम आणि बांधलेल्या इमारतींचे अनुरक्षण व इतर सामाजिक प्राधिकरण संबंधित क्षेत्रे येतात. पृथ्वी, जल किंवा संस्कृती आणि त्यांच्या क्रिया यांच्या सबंधित असल्यानेच इंग्रजीत याला सिव्हील संबोधले जाते. आज स्थापत्य क्षेत्रात पाणी पुरवठा, मलिनःस्सारण, पूर व्यवस्थापन आणि वाहतूक या विभागांचाही अंतर्भाव होतो. स्थापत्य शास्त्र आपल्या विश्वाला, राहत्या जागेला व परिसराला अधिक सुखकर तसेच आल्हाददायक बनविण्यास मदत करते. आजच्या प्रगतशील काळात अन्न, वस्त्र व निवारा या मानवाच्या मुलभूत गरजा भागविण्यासाठी खरोखरच स्थापत्य अभियांत्रिकी शास्त्राची अत्यंत निकडीची गरज भासते आणि म्हणूनच स्थापत्य अभियांत्रिकी शाखा प्रत्येक मानवाचा जिवलग मित्रच आहे असे संबोधणे सार्थ ठरेल.

स्थापत्य अभियंत्याचे काय काम असते?

बांधकाम अभियंत्यास काम करण्यास आभाळाएवढे विस्तृत कार्यक्षेत्र आहे. स्थापत्य अभियंत्यास प्रत्येकवेळी चाचणी परीक्षणावरूनच प्रत्यक्ष प्रकल्पाचे नियोजन करण्यासाठी त्याला लॉजीकल विचाराअंती अंतिम निष्कर्ष काढावाला गतो. बांधकामअभियंत्यास संगणक सॉफ्टवेअर वापरून जलीय प्रणाली व उभारण्या यांचे नियमनानुसार आरेखन करावे लागते. त्याचप्रमाणे सर्व बांधकामे योग्य पद्धतीने व बरोबर होतात की नाही हे बघणे बांधकाम अभियंत्याचेच काम असते. सुरक्षेसोबतच त्यांना बांधकाम क्षेत्र हे स्वच्छ व कोणत्याही अडथळ्याविना राहील याची काटेकोर काळजी घ्यावी लागते. अनुभवी तसेच वरिष्ठ बांधकाम अभियंते प्रकल्पाचे योग्य त-हेने नियोजन होते आहे अथवा नाही हे पण बघतात. प्रकल्पाचा नियोजित खर्च वाढू नये व सर्व नियोजित कामे अंदाजपत्रकाच्या मर्यादेतच राहतील याकडे सर्वच अभियंते लक्ष ठेवतात. बांधकामास आवश्यक असणारी माहिती पुरविणे, अश्या माहितीच्याकडे सर्वचे लक्ष वेधणे, काही बदल झाल्यास त्याचे आदेश निर्गमित करणे, साहित्य पुरवठ्याचे तसेच प्रकल्पावरील कृशल व अकृशल कामगारांचे देयक देणे इत्यादी कामे बांधकाम अभियंत्याच्या दैनंदिन व्यवहारात असतात आणि ती काळजीपूर्वक पार पाडावी लागतात.

स्थापत्य अभियंत्यात कोणते गुण असायला हवेत?

बांधकाम अभियंत्यास गणित, विज्ञान त्याचप्रमाणे निसर्गाचे पुरेपूर व सखोल ज्ञान असते. याव्यतिरिक्त स्थापत्य अभियंत्याच्या अंगी अनेक योग्यता तसेच क्षमता असतात. प्रत्येक बाबीचे चिंतन, अडथळ्यावर व समस्यावर मात करणे, सल्लागाराचे म्हणणे नीट ऐंकून घेणे, प्रत्येक गोष्ट शिकणे व त्याचा अभ्यास, बारीक देखरेख तसेच निर्णय क्षमता इत्यादी महत्वाचे गुण स्थापत्य अभियंत्याच्या अंगी असणे अत्यंत गरजेचे आहे. पुढे येणा-या प्रत्येक अडथळ्यावर सर्वकष विचार करणे, इतर सहका-याच्या त्याविषयीच्या कल्पना निट ऐंकणे, त्याचा अभ्यास करून प्रकल्प सुरू होण्याआधी त्याबद्दलची संपूर्ण माहिती प्रकल्पावरील सर्व सहका-यांना देणे ही अत्यंत गरजेची बाब आहे. बांधकाम अभियंत्याला प्रकल्प निर्माणा दरम्यान गणित व विज्ञानातील त्यांचे ज्ञान वापरून बांधकाम प्रकल्पात येणारे अडथळे व त्यावरील समस्या सोडवाव्याच लागतात. बांधकाम अभियंत्यांनी प्रकल्पाच्या कामावरील कामगार व उपकरणे/यंत्रे यांची देखभाल व नियंत्रण ठेवणे अत्यंत जरूरीचे आहे. नियोजित प्रकल्प निर्धारित वेळेत कसा पूर्ण हाईल व त्याची योग्य ती गुणवत्ता कशी राखली जाईल हे पण बघावयास लागते. बांधकामा दरम्यान काही अचानक समस्या उभ्या राहिल्या तर त्यांची उकल बांधकाम अभियत्यांनाच त्वरीत करावी लागते.

स्थापत्य अभियंत्याच्या अंगी असंख्य क्षमता

बांधकाम अभियंत्याच्या अंगी असंख्यक्षमता असतात. स्थापत्य कामात तृटी आढळल्यास त्याबद्दल कारणे देणे, सहकाऱ्यासोबत सूचनांचे आदान-प्रदान करणे, प्रकल्पाची बदलती परिस्थिती जाणून घेणे, समस्या उद्भवण्यापूर्वीच अंदाज येणे अथवा घेणे, तोंडी, लेखी व आरेखित सूचना समजणे, आकडेवारीचे संच लावणे, स्पष्ट व स्वच्छ समजेल असे बोलणे, चतुर्थ परिमितीचे काळ क्षेत्र यांचे आकलन करू शकणे व वास्तविक आरेखन व बांधकाम पद्धतीतील विविध प्रकारांचे ज्ञान असणे इत्यादी ब-याच क्षमता स्थापत्य अभियंता स्वतःच्या अंगी जोपासत असतो.आभाळाएवढ्या विस्तृत क्षमता तसेच योग्यता असताना देखील आज स्थापत्य अभियंत्याचे त्याच प्रमाणे स्थापत्य क्षेत्राचे नाव बाजारात तळागाळाला गेल्यासारखे वाटते आणि हे का घडते? याचे चिंतन प्रत्येक स्थापत्य अभियंत्याने केले पाहिजेत. स्थापत्य अभियंता ही पदवी किंवा पदविका संपादन केल्यानंतर त्याचे बाजारातील स्थान व मुल्य अतिशय उच्च दर्जाचे असणे आवश्यक आहे पण आज ते

स्थान व मुल्य अबाधित राहिलेले नाही. डॉक्टर फक्त वैयक्तिक मानवी जीवन सुखी व निरोगी राहण्याची काळजी घेतो पण आपले स्थापत्य अभियंते प्रत्येक मानवाचे संपूर्ण जीवन सुखकर, संस्कारी, आनंदमय, सुरक्षित त्याचप्रमाणे निरोगी रहाण्याची अगदी तंतोतंत काळजी घेत असतात आणि म्हणूनच आज समाजामध्ये डॉक्टरला जेवढा मान सन्मान तसेच आशिर्वाद मिळतो तेवढाच मान सन्मान एव्हाणा त्यापेक्षाही जास्त मानसन्मान स्थापत्य अभियंत्याला मिळाला पाहिजेत पण आज स्थापत्य अभियंत्याला डॉक्टर इतके मानाचे स्थान मिळालेले नाही. स्थापत्य अभियंता नेहमी आपले तन, मन व धन या त्रीसुत्रीचा अचुक सदूपयोग करूनच प्रत्येक प्रकल्प विहीत वेळेतच यशस्वी करण्याचा अटोकाट प्रयत्न करत असतो.

स्थापत्य अभियंत्याचे स्थान नेहमी उच्च आणि सकारात्मक

डॉक्टर, वकील व स्थापत्य अभियंता या तिन्ही जगतात खरोखरच स्थापत्य अभियंता हा उच्च स्थानावर राहतो. पृथ्वीतलावर रोगराई व अत्यंत भयानक रोगांची साथ अवतरल्यावर डॉक्टरचे स्थान उच्च होते. तसेच पृथ्वीतलावर भ्रष्टाचार व गुन्हेगारी वाढल्यानंतर वकीलाचे स्थान उच्च होते म्हणजेच काय नकारात्मक परिस्थितीत डॉक्टर व वकीलाचे स्थान तसेच मुल्य वाढलेले निदर्शनास येते पण आज स्थापत्य अभियंत्याचे स्थान तसेच मुल्य प्रत्येक माणसाच्या आणि संपूर्ण जगताच्या उत्कर्षाबरोबर वाढत जाते. स्थापत्य अभियंत्याचे स्थान नेहमी उच्च व सकारात्मक असते व ते स्थान नेहमी वाढीचे संकेत दर्शविते. डॉक्टर व वकील नकारात्मक स्थितीतून सकारात्मक परिस्थिती निर्माण करतात पण माझे स्थापत्य अभियंते नेहमीच सकारात्मक स्थितीला अति सकारात्मक म्हणजे सुपर पॉझीटीव्ह परिस्थिती निर्माणाकडे नेण्याचा चंग बांधत असतात. मग सांगा पाहू स्थापत्य अभियंता हा प्रगतीचा केंद्रबिंदू आहे की नाही? हो, स्थापत्य अभियंता खरोखरच प्रगतीचा केंद्रबिंदू आहे.

स्थापत्य अभियंता देशाच्या उत्कर्षाचा केंद्रबिंदू

स्थापत्य अभियंत्याची बाजारातील पत वृद्धींगतकरण्यासाठी प्रत्येक स्थापत्य अभियंत्याने स्वाभिमानी जीवन जगण्याची वृत्ती अंगिकारली पाहिजेत. कोणासमोरही दबून जाता कामा नये. सर्व स्थापत्य अभियंत्यांनी एकाच छताखाली येण्याची अत्यंत गरज आहे. स्थापत्य अभियंत्याच्या फुटीरतावादी वृत्तीमुळे प्रत्येक कार्पोरेट व्यावसायिक तसेच बिल्डर त्याचा गैरफायदा अगदी सहजपणे खिशात टाकून आपली पोतडी भरतात. स्थापत्य शाखेत काम करणा-या प्रत्येक अभियंत्यास मानपानाची चांगली वागणूक मिळणे अगदी अत्यावश्यक आहे. स्थापत्य अभियंता देशाच्या उत्कर्षाचा केंद्रबिंदू आहे आणि म्हणूनच नेहमी त्याचे बाजारातील स्थान व समाजातील पत नेहमीच उच्च राहील त्याचप्रमाणे त्याचे वैयक्तिक जीवन सुखकर कसे बनेल याकडे शासनाने अत्यंत काळजीपूर्वक लक्ष दिले पाहिजेत.

स्थापत्य शास्त्राकडे चांगल्या नजरेने पाहण्याची गरज:

आज आपल्याला काही महत्वाच्या तसेच अद्यावत प्रकल्पासाठी परकीय तंत्र आयात करावे लागते आणि त्यासाठी भरमसाठ मुल्य मोजावे लागते. आय.आय.टी. सारख्या अत्यंत प्रगत व अद्यावत संस्थेतून बाहेर पडणारे स्थापत्य अभियंते उच्च पगारासाठी परदेशी रवाना होतात, म्हणजेच काय आपल्या देशात त्यांना उचित मान तसेच उच्च मुल्य मिळत नाही आणि म्हणूनच उच्चिशिक्षीत व अतिहुशार स्थापत्य अभियंत्यांना आपल्या देशात थांबविण्यासाठी उचित प्रयत्न शासनाने केले पाहिजेत. अतिहुशार स्थापत्य अभियंत्यांचा सदूपयोग व मानपान चांगल्या प्रकारे केले तर भारताला बांधकाम क्षेत्रात परकीय तंत्राच्या परावलंबाला बळी पडावे लागणार नाही. शासनाने स्थापत्य शास्त्राकडे चांगल्या नजरेने पाहिले तर खरोखरच भारत देश बांधकाम क्षेत्रात अग्रेसर तसेच अतिप्रगत बनेल आणि म्हणूनच प्रत्येक स्थापत्य अभियंत्याला त्याचा योग्य मोबदला तसेच त्याचा उचित मानसन्मान केला पाहिजेत. प्रजा सुखी तर राजा सुखी ह्या अत्यंत पुरातन तंत्राप्रमाणे स्थापत्य अभियंता मानाने उच्च व पानाने सुखी तर त्याच्या हातातील प्रत्येक प्रकल्प गुणनियंत्रणाच्या मापदंडानुसार टिकाऊ व सुरिक्षतच बनेल आणि देशाला त्या प्रकल्पांचा अनंत काळासाठी अत्यंत सुखकर व सुरिक्षत उपभोग घेता येईल आणि भारत देश बांधकाम क्षेत्रात जगप्रसिद्ध होईल.



(रामकृष्ण हरिभाऊ जवकार) से.नि. उपविभागीय अभियंता, जलसंपदा विभाग, शासकीय तंत्र निकेतन खामगांव माजी-विद्यार्थी

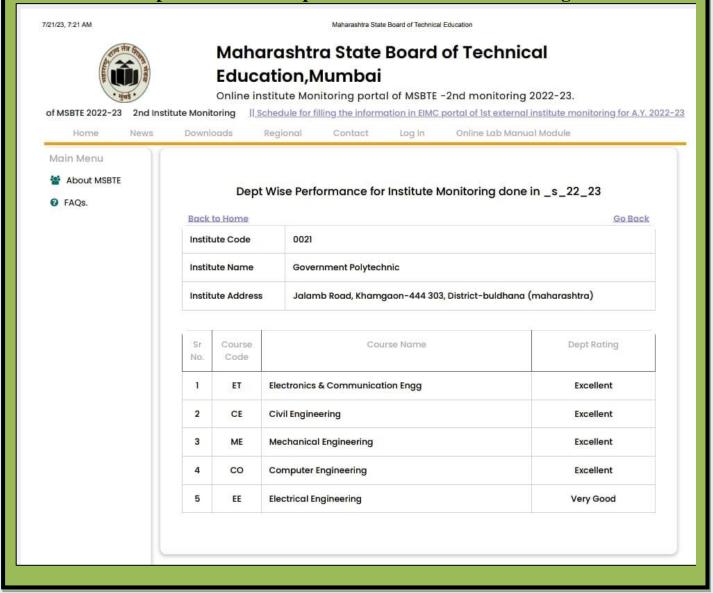
INDUSTRIAL VISIT ACADEMIC YEAR 2022-23 (CE)

Sr. No.	Name of Visit	Venue/ Place	Date of Visit	Branch Year Semester	No. of Beneficiary	Name of Lecturer
1.	Water Treatment Plant	JalkaBhalang	23/09/2022	CE - 5 I	65	Dr.P.V. Bahekar Miss. S.M. Ingale
2.	Intake Well	GeruMatargaon	23/09/2022	CE - 5 I	65	Dr.P.V. Bahekar Miss. S.M. Ingale
3.	Solar Power Plant	MauliEngg. College Shegaon	20/10/2022	CE - 5 I	69	Mr.M.D.Ghodle Miss. S.M. Ingale
4.	Visit to Nagar Parishad, Khamgaon under SWM Subject	Solid waste Management Plant at M.C.Khamgaon	01/04/2023	CE - 6 I	68	Dr.P.V. Bahekar Miss.S.M.Ingale Miss. P.S. Deshmukh
5.	Visit to Compost Plant	Municipal Council Compost Plant, Khamgaon	01/04/2023	CE - 6 I	68	Dr.P.V. Bahekar Miss.S.M.Ingale Miss. P.S. Deshmukh
6.	Visit to Abhay Tiles	MIDC Khamgaon	01/04/2023	CE - 6 I	68	Dr.P.V. Bahekar Miss.S.M.Ingale Miss. P.S. Deshmukh
7.	Visit to Electric pole Manufacturing Factory	Manglam Industries MIDC Khamgaon	01/04/2023	CE - 6 I	68	Dr.P.V. Bahekar Miss.S.M.Ingale Miss. P.S. Deshmukh
8.	Visit to Birla Cement Outlet for product examination	Cement MIDC Khamgaon	01/04/2023	CE - 6 I	68	Dr.P.V. Bahekar Miss.S.M.Ingale Miss. P.S. Deshmukh
9.	Site Visit at Under construction Building of Dr.SheetalChavan Madam Hospital	Gokul Nagar, Khamgaon	01/04/2023	CE - 2I	60	Mr.A.P.Gujar Mr.P.H.Ingle Miss. P.A. Yadgire
10.	Site Visit at Under construction Building of Reliance Mall	Nandura Road, Khamgaon	01/04/2023	CE - 2I	60	Mr.A.P.Gujar Mr.P.H.Ingle Miss. P.A. Yadgire
11.	Site Visit at Under construction site for study of footing & Foundation	Nandura Road, Khamgaon	01/04/2023	CE - 2I	60	Mr.A.P.Gujar Mr.P.H.Ingle Miss. P.A. Yadgire
12.	Site Visit at Under construction Building and carried out field test on bricks & Cement	Gokul Nagar, Khamgaon	01/04/2023	CE - 2I	60	Mr.A.P.Gujar Mr.P.H.Ingle Miss. P.A. Yadgire
13.	Site Visit at Under construction Building and shown details information of reinforcement	Nandura Road, Khamgaon	01/04/2023	CE - 2I	60	Mr.A.P.Gujar Mr.P.H.Ingle Miss. P.A. Yadgire
14.	Site Visit at Under construction building and study of various materials available on site	Gokul Nagar, Khamgaon	01/04/2023	CE - 2I	60	Mr.A.P.Gujar Mr.P.H.Ingle Miss. P.A. Yadgire

EIMC visit to Department

As per the policy of Maharashtra state Board of Technical Education, Mumbai, external academic and institute monitoring is carried out once in academic year. In this A.Y 2022-2023, External institute monitoring committee i.e. EIMC visited our institute and department in April 2023 by committee of G. P. Washim. EIMC team throughly observes the teaching learning process and NBA work done by department and also share their experience regarding NBA. At last EIMC team gave best wishes for the NBA.

Academic performance of department in academic monitoring 2022-23



SITE VISIT AT UNDER CONSTRUCTION BUILDING OF RELIANCE MALL (CE - 2I)







Site Visit at Under Construction Building of Dr. SheetalChavan Madam Hospital







Educational visit is arranged at Auditorium Hall under construction costing Rs. 7 cr. By Municipal Council, Khamgaon. For the better understanding of students to know more technical and practical knowledge about materials and construction processes .



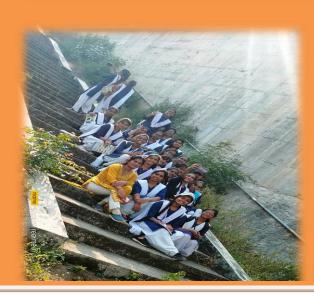
EDUCATIONAL VISIT AT KHADAKPURNA DAM (CE-)













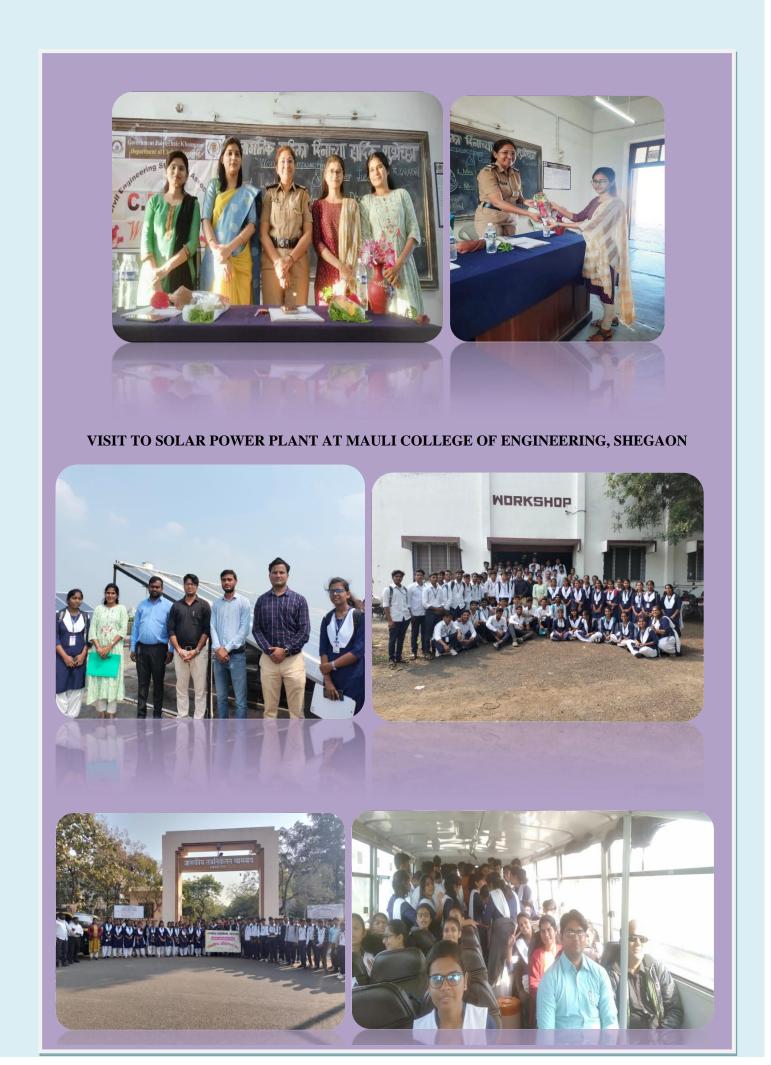
CULTURAL DAY CELEBRATION











Job Opportunities for Civil Engineering Diploma Passout Students in Rural Areas of Maharashtra

Greetings,

I am excited to share with you the multitude of job opportunities available for diploma passout students in civil engineering in the rural areas of Maharashtra. The demand for civil engineers in rural regions has been steadily increasing, owing to the focus on infrastructure development and the improvement of living conditions. Let's explore the wide range of opportunities available in various sectors:

1. Government Organizations:

- Public Works Department (PWD): PWD undertakes the construction and maintenance of roads, bridges, and public infrastructure in rural areas. Job profiles include Junior Engineer, Site Engineer, and Project Manager.
- Rural Development Department: This department focuses on rural development initiatives such as housing schemes, sanitation projects, and road development. Job opportunities are available as Junior Engineers, Project Coordinators, and Technical Assistants.

2. Water Management and Irrigation:

- Water Supply and Sanitation Department: This department is responsible for providing clean drinking water and sanitation facilities in rural areas. Job profiles include Water Supply Engineer, Sanitation Engineer, and Project Coordinator.
- Irrigation Department: Irrigation projects play a vital role in agricultural development.
 Job opportunities are available in areas such as canal construction, dam projects, and water resource management.

3. Infrastructure Development Corporations:

- Rural Infrastructure Development Corporation: This corporation focuses on the overall infrastructure development of rural areas, including roads, bridges, and drainage systems. Job opportunities are available in roles such as Project Engineer, Site Supervisor, and Quality Control Engineer.
- Housing Development Authorities: These authorities are responsible for affordable housing projects in rural areas. Job profiles include Project Manager, Architect, and Site Engineer.

4. Private Construction and Consulting Firms:

 Private construction and consulting firms are actively involved in rural development projects. They offer opportunities in areas such as road construction, housing projects, and water management. Job profiles include Design Engineer, Structural Engineer, Quantity Surveyor, and Project Coordinator.

5. Research and Development Institutions:

 Research institutions and academic organizations undertake research and development projects related to civil engineering in rural areas. These projects focus on sustainable infrastructure and innovative solutions to address rural challenges.

These opportunities provide a platform for civil engineering diploma passout students to apply their skills and contribute to the development of rural areas. It is important to note that job opportunities may vary based on the region, ongoing projects, and government initiatives.

As you explore these opportunities, consider gaining practical experience through internships and apprenticeships to enhance your skills and increase your employability. Additionally, staying updated with advancements in technology and sustainable practices will give you a competitive edge in the job market. Embrace the opportunities available in rural Maharashtra and make a positive impact on the lives of people residing in these areas through your expertise and dedication. Wishing you a successful and fulfilling career.

Mr. M. D. Ghodle. Lecturer, Civil Engineering Department

Jigaon Dam: Empowering Communities with Sustainable Water Management

It gives me immense pleasure to share with you the remarkable journey of a significant construction project that is set to transform the landscape and lives of people in our region - the Jigaon Dam. As civil engineering students, we are privileged to witness the impact our field has on society, and the Jigaon Dam stands as a testament to the power of infrastructure in shaping a sustainable future.

Located in the picturesque village of Jigaon, in the heart of our region, the Jigaon Dam is an ambitious endeavor undertaken by the authorities to address the perennial water scarcity and ensure a steady supply of water for agriculture, irrigation, and the overall well-being of the local communities. This transformative project embodies the principles of sustainable water management and reflects the commitment of our government towards rural development.

The Jigaon Dam, once completed, will stand as a towering guardian of water resources, providing multiple benefits to the surrounding areas. Here are some key aspects of this remarkable project:

- 1. Water Storage and Management: The Jigaon Dam will have a capacity to store an estimated 50 million cubic meters of water, creating a vast reservoir that can cater to the irrigation needs of approximately 10,000 hectares of agricultural land. This extensive water storage capacity ensures a reliable water supply throughout the year, even during periods of drought.
- 2. Canal Network and Pumping Stations: A well-designed canal network will be constructed to distribute water from the Jigaon Dam to the surrounding farmlands. The canal system will consist of primary and secondary canals, equipped with efficient pumping stations that will lift water from the reservoir and propel it through the network. These pumping stations will utilize advanced engineering techniques to ensure optimal water flow and minimize energy consumption.
- **3. Water Distribution Infrastructure**: To facilitate the efficient distribution of water, a network of pipes and channels will be established to convey the water from the canals to individual farms. This distribution infrastructure will be designed with precision, ensuring equitable water distribution to maximize the productivity of farmlands and promote sustainable agricultural practices.
- **4. Impact on Society**: The Jigaon Dam holds immense potential for uplifting the lives of the local communities. With a steady water supply for irrigation, farmers will experience increased crop yield and improved livelihoods. The project will contribute to rural development by promoting agricultural growth, reducing migration to urban areas, and creating employment opportunities for the local population. Moreover, the availability of clean drinking water will improve the overall quality of life for the communities in the region.
- **5. Completion Timeframe**: The construction of the Jigaon Dam is progressing at a commendable pace. With the dedicated efforts of the engineering teams and construction workforce, the project is expected to be completed within the next two years. The nearing completion of this transformative endeavor fills us with anticipation and excitement for the positive impact it will bring.

The Jigaon Dam is a testament to the marvels of civil engineering, where technical expertise, meticulous planning, and environmental considerations converge. As students of civil engineering, we can draw inspiration from this project, witnessing firsthand the positive impact our field has on society and the environment.

As we witness the progress of the Jigaon Dam, let us be inspired by the potential of civil engineering to transform lives and create sustainable solutions. This project exemplifies the fusion of engineering brilliance and social responsibility, reminding us of our duty as future engineers to contribute meaningfully to the well-being of society. Let us eagerly await the completion of the Jigaon Dam and celebrate this remarkable achievement that will positively impact generations to come. Wishing you all an exciting and fulfilling journey in the realm of civil engineering and beyond.

AkshadMasne, (CE-6-I)

शिक्षानुभव में सुधार के लिए ध्यान योग तकनीकों का उपयोग

एस आर सोनी,

स्थापत्य अभियांत्रिकी,

सरकारी तंत्रनिकेतन, खामगांव

नमस्ते प्रिय पाठकों!

मुझे बड़ी खुशी हो रही है कि मैं आपके साथ इस महत्वपूर्ण लेख का साझा कर रहा हूँ जिसमें हम चर्चा करेंगे "शिक्षानुभव में सुधार के लिए ध्यान योग तकनीकों का उपयोग". जैसे कि हम सभी जानते हैं, ध्यान और योग का महत्व शरीरिक और मानसिक स्वास्थ्य में व्यापक रूप से मान्यता प्राप्त है,



लेकिन क्या आप जानते हैं कि ये तकनीकें हमारे शिक्षानुभव को भी सुधार सकती हैं? आधुनिक युग में, छात्रों को उच्चतम शिक्षानुभव और अच्छे अकादिमक परिणामों की आवश्यकता होती है. ध्यान और योग तकनीकें इस संदर्भ में एक महत्वपूर्ण भूमिका निभा सकती हैं. ये तकनीकें मनोशांति, स्वस्थ मनोवृत्ति और शारीरिक सुगमता को प्राप्त करने में मदद करती हैं जिससे छात्रों का अच्छा समय प्रबंधन, दिमागी स्पष्टता और अधिगम क्षमता में सुधार होता है.

योग का अभ्यास छात्रों को ध्यान केंद्रित करने और उनके अंतरंग मन को स्थिर और शांत करने की क्षमता प्रदान करता है. ध्यान अभ्यास छात्रों की चिंता और तनाव को कम करने में मदद करता है, जिससे उनकी समझ बढ़ती है और वे अधिक उत्कृष्टता के साथ अपनी अध्ययन कर सकते हैं. ध्यान योग के अभ्यास का प्रभाव न केवल छात्रों के अध्ययन प्रदर्शन पर होता है, बल्कि यह उनकी मानसिक तनाव, चिंता और संतुलन को भी सुधारता है. ये तकनीकें उनकी सामरिक और आत्मिक प्रगति में भी मदद करती हैं और उन्हें स्वस्थ जीवन शैली की ओर प्रेरित करती हैं.

हमारे विभाग के छात्रों के लिए, ध्यान और योग के अभ्यास का महत्व अध्ययन और अकादिमिक सफलता में एक महत्वपूर्ण संकेत है. हमें इस विशेष योग अभ्यास को अपनी दैनिक जीवनशैली में शामिल करने की सलाह दी जाती है तािक हम अपने अध्ययन को प्रभावी ढंग से संचािलत कर सकें. ध्यान और योग तकनीकों का उपयोग छात्रों को आत्मविश्वास, स्वस्थ मानसिक स्थिति, और सहजता प्रदान करके उन्हें अपार लाभ पहुंचा सकता है. ये तकनीकें छात्रों के आवेदनशीलता, ध्यान और योग्यता में स्धार करके उन्हें अपने शिक्षान्भव में विशेष महत्व देती हैं.

इसिलए, मैं आप सभी से अनुरोध करता हूँ कि आप अपने शिक्षानुभव में ध्यान और योग के अभ्यास का प्रयास करें और अपनी अकादिमिक प्रगित में सुधार देखें। ध्यान और योग का अभ्यास हमारे जीवन को स्वस्थ, स्थिर और सफल बनाने में मदद करेगा।

धन्यवाद!

एस आर सोनी.

Exploring Innovative Sustainable Materials for a Greener Planet

By Dr. Prasad Vijay Bahekar,

Civil Engineering Department, Government Polytechnic, Khamgaon

Greetings, Esteemed Readers!

I am delighted to share with you an enlightening article on the topic of "Revolutionizing the Construction Industry: In the face of escalating environmental challenges, it is imperative for the construction industry to embrace sustainable practices and materials that can safeguard our planet's future.

Traditional construction materials have long been associated with adverse environmental effects, including high carbon emissions, resource depletion, and extensive waste generation. However, we now have the opportunity to reshape the industry's trajectory by incorporating new sustainable materials that promote environmental stewardship and long-term sustainability.

These innovative materials offer a range of benefits, including reduced carbon footprint, enhanced energy efficiency, improved durability, and minimized waste generation. Some remarkable examples include recycled materials such as reclaimed timber, recycled plastics, and crushed concrete, which not only divert waste from landfills but also exhibit excellent performance properties. Additionally, bio-based materials derived from renewable resources, such as bamboo, hemp, and mycelium, are gaining traction for their low environmental impact and exceptional structural properties.

Moreover, advanced technologies and research are continually expanding the horizons of sustainable materials. Innovations such as self-healing concrete, which can repair cracks and extend the lifespan of structures, and photovoltaic glass, which generates clean energy, are transforming the way we conceive and construct buildings.

By incorporating these sustainable materials into our construction practices, we can significantly reduce our ecological footprint while creating healthier, more efficient and environmentally-friendly structures. Furthermore, embracing these materials aligns with global initiatives to mitigate climate change and achieve sustainable development goals.

As the custodians of tomorrow's built environment, it is our responsibility to explore and implement these sustainable alternatives. Through collaboration, research, and education, we can accelerate the adoption of these materials and contribute to a more sustainable and resilient future.

Let us embrace the potential of new sustainable materials and drive the transformation towards a greener planet. Together, we can build a future that balances the needs of society, the environment, and generations to come.

Wishing you all a rewarding journey in advancing sustainable construction practices.

Dr. Prasad Vijay Bahekar

Farewell Program for Final Year Students (2022-23)













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