

# AAKAR

'Siddirbhavathi karmajaa'

News Letter

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**DEPARTMENT OF  
CIVIL ENGINEERING**



**SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY & MANAGEMENT**

Accredited by NBA | Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi,  
Vishwothama Nagar, Bantakal, Udupi - 574 115, Karnataka, India  
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**SMVITM**



### **About Department :**

The Civil Engineering Department has been in existence since the inception of the Institute during the academic year 2010-11 with an intake approval of 60 Students. The Department has got a highly ualified team of faculty members having rich experience within academic and Industry. The Department is committed to provide quality education and produce competent engineers to meet the growing demand for professionals in Civil Engineering. The Department invites eminent personalities and academicians from prestigious Institutions and industries to deliver quality lectures to the Students frequently and has organized many highly useful workshops which are beneficial to the faculty, students and practisinengineers. The Faculty members attend various workshops/conferences/training programs on a regular basis, which would keep them abreast with the latest happenings and developments occurring in their related fields and upgrade their competencies and Skill-sets up to date.

### **What is civil Engineering?**

Civil Engineering is a professional engineering discipline that deals with design, construction & maintenance of the physical and naturally built environment. To put simply, civil engineers build bridges, roads, canals, dams, tall buildings and other large structures. Civil Engineering is all about creating, improving and protecting the environment in which we live. It provides the facilities for day to day life and for transport and industry to go about its work. Civil engineers are concerned with all types of structures including dams, bridges, pipeline, roads towers and buildings. They are responsible for the design and construction of all our transport system, the design and management of our gas and water supply, sewerage systems, harbours, airports and railways. Civil engineering plan, design and test of the structures of private and public building facilities.

### **Consultancy and Third-party inspection work**

Department of Civil Engineering undertakes Testing and Consultancy works for various agencies in the Udupi District

The area of consultancy includes:

- Laboratory testing of soil, cement, sand, Coarse aggregates, bitumen and water samples
- Design and Drafting of RCC and Steel Structures
- Field tests on roads and buildings to check the quality of work
- Inspection of roads, culverts, drains, buildings, etc.
- Concrete mix design
- Surveying of the mobile tower
- Water quality test
- Structural Test on reinforced bars

### **Third part inspection services to the following Organizations:**

- Nirmithi Kendra, Udupi
- City Municipal Council, Udupi
- Town Municipal Council, Kaup
- Panchayath Raj Engineering Division, Udupi

**Message from HOD**

Civil Engineering is the oldest Engineering Profession in the World. The American Society of Civil Engineers was founded in the year 1852. It defines Civil Engineering as the profession, in which a knowledge of the mathematical and physical science gained by study, experience and practice is applied with judgment to develop ways to utilize economically the materials and forces of nature for the progress of well-being of man.

The curriculum is not only a blend of theoretical and practical aspects of varied disciplines of civil engineering such as structural engineering, transportation engineering, geotechnical engineering, and water resources engineering, surveying, but also provides values based education, inculcating the qualities of a responsible engineer who can undertake any challenging project with right understanding towards holistic development of the society.

The booming population and increased demands of sustainable infrastructure in the form of high-end road and railway network, better water supply arrangements and concept buildings provides opportunities and new scope in the civil engineering path. This job is called “evergreen”. Students enrolling for admission in civil engineering in 2022 can prepare and train themselves with the right skill set to be instantly employed in to high-end national and international projects.

**Dr. Deepika B V**  
**Associate Professor & Head,**  
**Department of Civil Engineering**

## Our Vision

- To impart a quality holistic education and consultancy, in civil engineering with integrity, societal benefit, ethical standards and sustainable development.

## Our Mission

- To provide a value added education to make the civil engineers to address the complex and multi- faceted Civil Engineering problems
- To improvise the industry and institute interaction by interdisciplinary research
- To provide the necessary holistic education to be a leader, planner, decision maker, structural designer, constructor and operator of the built environment

## Programme Educational Objectives (PEOs)

The objectives of the Civil Engineering undergraduate program at SMVITM are to develop civil engineers with the following

5 years down the line after graduation, the graduates should have

- A strong foundation for becoming a technically competent human resource in the broad disciplines of Civil Engineering
- Excel in Civil Engineering profession to meet the challenges of construction industry
- Update and adopt modernization in Civil Engineering with lifelong learning
- Preserve the environment for the society by adopting sustainability in Civil engineering with professional ethics

## Programme Outcomes (POs)

Graduates of the Civil Engineering program are able to:

PO No	Graduate Attributes	At the end of the programme the student should be able to
1	Engineering Knowledge	Apply knowledge of mathematics, science, and engineering to solve the Civil engineering problems
2	Problem Analysis	Identify the problem, analyze, formulate and apply appropriate Civil engineering techniques to obtain the solutions
3	Design & Development of Solutions	Design Civil Engineering structures, components or processes by considering public health and safety, societal, sustainability and environmental issues
4	Conduct Investigations of Complex Problems	Conduct investigations of problems, search, identify and select relevant information from the literature to provide valid conclusions.
5	Usage of Modern Tools	Use modern tools for solving the engineering issues associated with social and professional context
6	Engineer & Society	Understand the role and responsibility of a Civil Engineer and apply the knowledge for the development of society
7	Environment & Sustainability	Apply the concepts of Civil engineering to minimize the environmental hazards by adopting sustainability in construction activities
8	Ethics	Understand and apply professional ethics for the issues relevant to the Civil engineering practices.
9	Individual & Team Work	Work as a member of a multidisciplinary project or research teams and have an understanding of leadership in teams and organizations.
10	Communication	Produce engineering reports, communicate the thoughts and ideas clearly and effectively.
11	Project Management & Finance	Demonstrate knowledge of the civil engineering project management principles and apply them to manage construction projects
12	Life-long Learning	Understand the need of engaging in life-long learning to update the knowledge in Civil Engineering field
PSO-1	Focus on developing and exposure to alternative/ advanced technologies	Understand, develop and implement state-of-art technologies related to civil engineering
PSO-2	Extension of knowledge and testing facilities for the society	Provide solutions to day-to-day civil engineering problems by extending the intellectual knowledge base and the testing facilities for the society

## **CONTENTS**

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- Activities Conducted During Even Semester
  - “Building planning & marking” -by Alumni’s
  - “Application and Demonstration of CivilEngineering Softwares - by Mr. Abhinav
  - “Future trends & opportunities in Civil Engineering”-by Er. Bharath Nishan
  - “Insights of Plumbing” - One day workshop by Mr. J M Amanna
- KSCST: 47th Series Student Project Programme (SPP): Sponsored Projects
- Internship Details
- Gold Medalist
- Group Photo



## Programme Conducted in Even Sem

### •“Building planning & marking”

-by Alumni's



Civil Engineering Department in association with Alumni, ISTE, Sthapathi Club organized two day workshop, 07th and 08th February, 2024 on “Building planning & marking” to the Civil Engineering students.

Speaking on this Er. Roshan S. Kotian, Alumni 2011-15 batch, Apex consultants Udupi. On day-1, gave insights on how to plan a simple two roomed building in Auto-cad software as per building bylaws in the city area incorporating the setback distances provided by the local authority, Panchayath and city municipal councils. He also gave a tips on how to design Vastu for building construction which is the need of the hour in the present days.

On day-2, Er. Harish Acharya, Alumni 2018-22 batch, Apex consultants Udupi gave lots of information about the Planning and marking of buildings in which he worked under Apex consultants.

Er. Roshan S. Kotian, & Er. Harish Acharya both took the hands session on building planning and marking of two roomed building in which students got the information of center line marking and knowledge of long wall short wall method of estimation. At the end of the program certificates were distributed to all the participants for the successful completion of two day workshop.

### •“Application and Demonstration of CivilEngineering Softwares”

- by Mr. Abhinav



Department of Mechanical Engineering in association Department of ECE, Civil Engineering, ISTE student chapter, ED Cell and Institution's Innovation Council has organized an invited talk on “Innovation and Entrepreneurial Opportunities in 3D printing” on 15 February 2024 at 10.00 AM.

Dr. Vijeesh V, Associate Director (R&D), NITTE Off-Campus Centre, NMAMIT, Nitte was the resource person of the program. The resource person in his address highlighted the following points.

- Interesting innovations came out across the world.
- Need for innovation
- Research activities at NITTE Off-Campus R & D Centre
- Additive manufacturing & 3D printing basics
- Ideas for student project works in 3D printing
- Applications of 3D printing in Medical/Dental Sciences
- Facilities available at NITTE Off-Campus R & D Centre
- Start-up opportunities in the area of additive manufacturing and 3D printing

The students of Mechanical Engineering, ECE and Civil Engineering have attended the program

## Programme Conducted in Even Sem

### “Future trends & opportunities in Civil Engineering”

-by Er. Bharath Nishan



The Civil Engineering Department in association with ISTE student chapter has organized an invited talk on “Future trends & opportunities in Civil Engineering” on 19 June 2024 at 3.00pm.

Er. Bharath Nishan, Founder & Principal consultant, Sri Omkar Associates Kundapura was the resource person of the program. In his address Er. Bharath Nishan highlighted the following points.

- Interesting innovations in Civil Engineering domain
- BIM software for facility management and utility services
- Difference between a Civil and IT Engineer interms of channelization of jobs
- Demand and supply of Civil Engineers in the present days era
- Applications of AI and 3D printing technologies in Civil Engineering projects
- Startup opportunities/ Enterpreneurship opportunities in construction field
- Shortage of skilled engineers and importance of learning the various types of softwares

The students of Civil Engineering attended the program. The toppers of CAD training program were felicitated by Ms. Smitha, Coordinator of EDU-CAD Udupi. Dr. Deepika HOD Department of Civil Engineering and other faculty members were present in program, Department of Civil Engineering Mr. Jayaram Nayak, proposed the vote of thanks and Mr. Sunil Haldankar compered the program.

### “Insights of Plumbing “

- One day workshop by Mr. J M Amanna



In association with ISTE student chapter and Sthapathi student club has organized an One day workshop on “Insights of Plumbing “ on 10 July 2024 at 9.00am. Mr. Johness Mohan Amanna Foreman, Department of Civil Engineering SMVITM, Bantakal was the resource person of the program. In the first half of the program Mr. Johness Mohan Amanna highlighted the following basic points of plumbing

- Planning a plumbing layout for a simple two BHK building
- Routing of plumbing lines in an economical manner
- Various types of pipes and fittings (GI, PVC, CPVC pipes)
- Open plumbing lines and concealed plumbing lines
- Applications of plumbing in various Civil Engineering projects
- Shortage of skilled contractors in Plumbing woks.
- Tools and machineries used in pipelines
- Hot water and cold water system pipelies

Mr. Sunil Haldankar and Mr. N Madhusoodhan, Assistant Professor Department of Civil Engineering conducted the hands-on sessions on utilizing the available fittings and pipelines (GI,PVC,UPVC). Students have developed on model of plumbing line for the 2 BHK house. The students have exposed to several activities such as fixing, cutting , and tool making such as internal and external threading of GI pipes , making of coupling on site for urgent repair works and machineries used in plumbing.



## Programme Conducted in Even Sem

SMVITM

### KSCST: 47th Series Student Project Programme (SPP): Sponsored Projects

Sl. No	PROJECT TITLE	NAME OF THE GUIDE(S)	NAME OF STUDENTS
01	Smart App Assisted Colorimetric Determination of Iron Ground Water: A Case Study in Udupi Taluk	Dr. Deepika B V	Mr. Shravan V Poojary Mr. Tanmay V Shetty Ms. Soujanya Ganapati Pai

### INTERNSHIP DETAILS:

Sl. No	STUDENT NAME	COMPANY NAME
01	ABHISHEK KUMAR	ERAM CONSTRUCTIONS, BHAGALPUR, BIHAR
02	HUNBAIT THUBRU	LAND TRADES BUILDERS & DEVELOPERS, MANGALORE
03	SAINBOR LYNGKHOI	LAND TRADES BUILDERS & DEVELOPERS, MANGALORE
04	SHRAVAN V POOJARY	RESIDENTIAL BUILDING SITE, KANNARPADY, UDUPI
05	TANMAY V SHETTY	RESIDENTIAL BUILDING SITE, KANNARPADY, UDUPI
06	G AKSHATHA	APEX CONSULTANCY, CONSULTING ENGINEER AND L B SURVEYOR
07	MADHURA UMESH NAIK	PUBLIC WORK DDEPARTMENT, HONNAVAR
08	MOHAMMED RAZIN	APEX CONSULTANCY, CONSULTING ENGINEER AND L B SURVEYOR
09	NETRAVATI V MOGER	APEX CONSULTANCY, CONSULTING ENGINEER AND L B SURVEYOR
10	P HRUSHIKESH	ADVANCE PAVEMENT SYSTEMS LABORATORY
11	SOUJANYA GANAPATI PAI	APEX CONSULTANCY, CONSULTING ENGINEER AND L B SURVEYOR

## Gold Medalist of Batch 2020-24



**G AKSHATHA**

## Group Photo




**BATCH-2020-24**

**CIVIL ENGINEERING**



**TESTS ON WATER**  
As per BIS standards

**CONDUCTIVITY  
TURBIDITY  
CHLORIDES  
FLOURIDE  
IRON  
pH  
TDS  
E-COLI  
HARDNESS  
ALKALINITY  
CHLORINE DEMAND  
RESIDUAL CHLORINE**



**Tests on Building Materials**

Compressive strength, water absorption and efflorescence of bricks.

Compressive and flexural strength of timber and ceramic/roofing tiles.

Tensile strength, percentage elongation, weight and other properties of mild and TOR steel.

Fineness modulus, crushing and impact values, flakiness and elongation indices, abrasion and water absorption of coarse aggregate.

Fineness modulus, silt content and bulking of fine aggregates.



**Soil Investigation**  
Tests on soil

Index properties, grain size distribution, standard and modified compaction characteristics.

Shear strength parameters, permeability values, consolidation characteristics.

California Bearing Ratio (CBR) Value and determination of Safe Bearing Capacity (SBC) etc.

Soil investigation report with recommendations



**Tests on Cement/ concrete**

Mix Design of concrete for varieties of works.

Compressive strength, of Concrete cubes and solid/hollow blocks, bricks etc.

Concrete air permeability (blaine type).

Specific gravity, Normal consistency and setting time of cement.

Workability of concrete using flow table as well as slump test.

Soundness of cement using autoclave.

Flexural strength of hardened concrete.

Non Destructive Testing.

Permeability of concrete as per DIN Standards.



**Tests on Highway Materials**

Flash and fire point of bitumen.

Ductility of bitumen.

Viscosity of bitumen.

Measurement of resistance to plastic flow.

Bitumen consistency testing.

Specific gravity test on bitumen.

Quantification of percentage of bitumen used in road construction.

Crushing strength of aggregates.

California Bearing ratio test to determine the road subgrade strength.

**We also undertake**

Surveying works including mapping and preparation of layout plans, counter map and earthwork estimation.

Analysis design and drawing of all Civil Engineering sub-structures and super structures.

Estimation, costing and valuation of proposed and existing structures.

Third party inspection for flood damage, drought and other infrastructure works sanctioned under various heads, executed by different Government agencies such as PWD, Panchayathraj, Irrigation department, and Municipal authorities etc.

**For Testing, Consultancy and R&D Works/Needs**  
Contact us: +91 97424 06206, +91 97401 69411



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