AAKAR

A News Letter

Of

THE DEPARTMENT OF

CIVIL ENGINEERING

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SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY & MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
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SMVITM

AAKAR
Newsletter

Department of Civil Engineering

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

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 ofcivil engineering such as structural engineering, transportation engineering, geotechnicalengineering, 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

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Programe Conducted in Even Sem

- Workshop on -

"Building Planing & Marking"

In association with Alumni Cell and Stapathi Student club organized a workshop on "Building Planning and Marking" for final year students of Civil Engineering which was held on 27 th & 28 th February 2023 in the institute premises. Resource persons for the workshop were Alumni of Civil Department from second , eighth and ninth batch. The session were split in to four parts
First day : morning session
Zone regulations of Udupi was taught/ discussed by Er. Roshan S Kotian, Alumni (2011-15 batch) and Er. Abhijith serigara , Alumni (2017-21 batch) working in Apex consultants Udupi. Later explained how to study the single layout plan and plot it in Auto cad and find its area.. Afternoon session. How to take setbacks were taught for a site of 60' * 40'. Plan was plotted for the setback drawing. Marking of the boundary was done in the ground.
Second day : Morning session
How to take center to center drawing was taught. Afternoon session - Er. Roshan S Kotian, Alumni (2011-15 batch) , Er. Abhijith serigara , Alumni (2017-21 batch) and Er.Rakshith Poojary Alumi (2018-22 batch) from Apex Consultants Udupi guided the students regarding use of this workshop in their future days. Students were been split into teams and step wise building marking process has been demonstrated. The students benefited with hands-on session on foundation marking for their developed plan in the field.

- "Lights Camera SMVITM"

A Vediographer's Perspective...!

The Sthapati Club of Civil Engineering Department in association with Digital Publicity of Shri Madhwa Vadiraja Institute of Technology & Management (SMVITM), Bantakal, organized a Videography Competition at the institute premises from 17th March 2023 to 02nd April 2023. Mr. Roshan A Kotian, Asst professor, SMVITM and Mr. Shriharsha Kulkarni, president of Sthapati Club and his team informed the rules before the start of the event. The event was split in two rounds, judgement and instagram round. It held for over 2 weeks and over 15 teams Participated in the event with each having minimum of two members in a team. Out of 15 teams played only 2 teams won in each round and the winners in Judgement round were team of Veerendra Nayari, Nishanth A Jathan &Manish secured 1st place, Saurabh R Acharya secured 2nd place. The winners in the Intagram round were team of Tanmay Shetty, Shravan Poojary& Prasanna G Shet secured 1st place, team of Gautham Bhat, Karthik Bhat & Sainath Shetty secured 2nd place .

Programe Conducted in Even Sem

• "JENGA" Tournament

The Student Club of Civil Engineering Department, STHAPATI of Shri Madhwa Vadiraja Institute of Technology & Management (SMVITM), Bantakal, organized a "JENGA" tournament at the institute premises on 20th March 2023. At the beginning a short video was presented of Late. Mr. Ananthesh Rao, Professor Dept. of Mechanical Engineering as a mark of respect. Later, Mr. Shriharsha Kulkarni, president of Sthapati Club and his team welcome the participants and rules were explained before the start of the event. Five sessions were conducted and over 50 teams attended the event with each having two members in a team. Eighteen students of Department of Civil Engineering volunteered in the event. Out of 50 teams played only 2 teams got selected to the last round and the winners were Chandan(4MW22EC021) & Shripada(4MW22EC060) of Electronics and Communication Department secured 1st place, Vijaylakshmi (4MW19CS115) & Shamitha S Amin (4MW19CS082) of Computer Science Engineering Department secured 2nd place. The consolation prize was bagged by Deeptha(4MW19CS107) & Afifa (4MW19CS081) of Computer Science Engineering Department.
The Prizes were distributed by Mr. Sunil Haldankar, Sr. Asst Professor, Department of Civil Engineering and Mr. Madhusoodhana Rao N, Asst. Professor, Department of Civil Engineering, SMVITM, Bantakal.

•"World Water day" celebration

The Sthapati Club of Civil Engineering Department in association with ISTE faculty chapter of Shri Madhwa Vadiraja Institute of Technology & Management (SMVITM), Bantakal, organized a technical talk on account of World water day at the institute premises on 10th April 2023. Dr. Anish Kumar Warrier, Associate Professor, Department of Civil Engineering, MIT, Manipal gave a talk on "The issue of Microplastic Pollution in the Aquatic Ecosystem of Coastal Karnataka". He divided the talk into 2 parts 1 st he spoke about the plastics and its causes, effects and types and in the second part was about his research work in various resources such as, Case study in micro plastics pollution in river Nethravthi, micro plastics in Manipal Lake and micro plastics in St. Marys Island. He also spoke about research work of submarine groundwater discharge of microplastics and research work near Kota Mangrove region on fishes and crabs. He gave various examples related to plastics use as coffee cups, grocery bags, ordering online food.He spoke about what is plastic, what is it made of, how it is made and about micro plastics and macro plastics and its causes to ocean. He said that 117 trillion plastic bags currently present in oceans. He spoke on major topic on what happens to the aquatic life by the plastic and gave the example of midway-island. He informed about the physical threat to marine life.

Programe Conducted in Even Sem

• Workshop on

" Bar Bending & Scheduling

The Department of Civil engineering of Shri Madhwa Vadiraja Institute of Technology, in association with ISTE Student Chapter & STHAPATI student club organized a workshop on "Bar Bending and Scheduling" on 18 th April 2023. The workshop started with the brief introduction on relevance of Bar bending schedule (BBS) by Mr. Sunil Haldankar Assistant Professor (Sr), He also explained about the different size of rebars, calculation of weight per meter length of various rebars and its uses. Wherein he elucidates on the footing reinforcement, provision of top and bottom reinforcement for the footing, bent up bars, two legged stirrups, providing of hooks, main straight bar, Anchor bars, main bent up bars, binding of the bars.

In the second part hands on training on bar bending by Mr. Sandarsh Acharya ,Mr. Ayush Shetty from the final year Civil Deparment. All the students from final year and pre final year where involved in it. All the students had got the opportunity to make stirrups using 8mm bars. In this session proper method of installation column reinforcement, providing of top and bottom reinforcement ,proper way of binding the stirrups to the main bars has been taught.

•Value Added Course -

"Revit -MEP"

The Department of Civil engineering of Shri Madhwa Vadiraja Institute of Technology, Bantakal in association with Edu CADD Udupi, organized a "Value Added Course – Revit MEP" training in college premises on 06th February 2023 to 13th February 2023. The Inauguration of the value added course was done by the Principal Dr. Thirumaleshwara Bhat officially by opening the Revit software on the 06th February 2023. The Guest of the program was Mr. Bharath trainer EduCADD Udupi gave insight into the importance of learning the software to prepare students to become entrepreneurs and to increase the job opportunities by making them industry ready by bridging the gap between Industry and Curriculum. In his address, he highlighted that it is of higher priority for the civil engineers to understand the digital techniques and proper software skills to build the infrastructural development and modern machines with futuristic views. In his presidential remarks principal motivated students to gain various software skills and college management will provide opportunities to enhance software skills. In today's market, software skills are valuable addition to students' core subject knowledge and contribute to a prosperous professional life. The sessions were conducted from 06th February 2023 to 13th February 2023.

Programe Conducted in Even Sem

• "Industrial Visit"

The Department of Civil engineering of Shri Madhwa Vadiraja Institute of Technology, in association with Entrepreneurship development cell & STHAPATI organized a "Industrial Visit" to Kapu – Hotel Construction site and Udupi – Residential building construction site on 13th April 2023. The Students were taken first to Kapu site where Hotel site was under construction. The Site Engineer Mr. Rahul explained the Post Tensioning of Prestressed Concrete Beams with the mechanism of providing the tensioning in tendons. He also explained the detailing of reinforcement using structural drawings for beam and one way slab sections. Er. Roshan S Kotian explained the design aspects of the building and in detailed explained setback drawings in the sanction drawings. The students learnt the volume mixing of concrete in site for M35 Grade of concrete and got in depth knowledge of reinforcement detailing with bar bending.

Then the Students were taken to Udupi site where a Residential building pile foundation construction was in progress. The Site Engineer Mr. Sharath & Mr. Harish explained the soil condition and the requirement of pile foundation. Using structural drawing the detailing of reinforcement of pile foundation was explained in detail. Er. Roshan S Kotian explained the site scenario and rule & regulations to be followed for the approval of the buildings.

•" Virtual Site visit by Alumni"

Civil Engineering Department of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal in association with Alumni Cell, Iste Student chapterand and Placement cell organized a Virtual site visit on "Manufacturing process of Precast elements" for second and third year students of Civil Engineering which was held on 28 June 2023 in the institute premises. Resource persons for the virtual site visit was Mr. Kishor from 2018 passed out batch. He is currently working in AL Rashid Abetong.co Saudi Arabia as QC Material Engineer. This is one of the leading Precast Company in Saudi Arabia. The session started with Introduction about resource person and company details. He also stressed about his development after engineering in various company in India and his approach to the company he is currently working in. He explained about the topics regarding precast elements; its material, construction process in Industry, various technologies used. He compared the precast technology with the current practice; i.e time and cost saving. He also explained about various projects Handled by their company like City, 2000+ villa etc. Kishore explained about the various machineries that could be used in various site. In detail, he explained about load and member calculation, hollow slab, bar bending for precast elements.

Programe Conducted in Even Sem

- "Site Visit" - Niramaya

Civil Engineering Department of Shri Madhwa Vadiraja Institute of technology and management organized a technical site visit to the proposed construction of "NIRAMAYA" Nursing college to the second year Civil Engineering students. On the first visit students and faculty members visited class rooms of "Niramaya" Nursing college where students witnessed the construction of Deck slab which is the part of super structure of building and constructed over the girder that transfer the live load of vehicles to the sub structure and substructure further transfer the load to the foundation. When the load applies from concrete slab, the live load will applied to spans and columns will support the foundation. On site Long span is connected to two steel columns, one end is connected with plate R.C.C column and another end is connected with plate R.C.C slab. Here students also able to get the knowledge of I section beams, welding process and rebarring activities and concreting activities. In the second site visit students visited the proposed construction of Girls hostel where students got to know the false ceiling construction technique, unique materials like V board partition wall construction and puff sheets used for roofing works.

Fauculty Development Program Attended(FDP)


NPTEL-AICTE
Faculty Development Programme
(Funded by the MoE, Govt. of India)

This certificate is awarded to
JAYARAM NAYAK B
for successfully completing the course
Retrofitting and Rehabilitation of Civil Infrastructure
with a consolidated score of 63 %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Jan-Apr 2023)

Duration of NPTEL course : 12 Weeks

NPTEL Completion Certificates


Elite
NPTEL Online Certification
(Funded by the MoE, Govt. of India)

This certificate is awarded to
JAYARAM NAYAK B
for successfully completing the course
Retrofitting and Rehabilitation of Civil Infrastructure
with a consolidated score of 63 %

Online Assignments	22.66/25	Proctored Exam	40.74/75

Total number of candidates certified in this course: 294

Jan-Apr 2023
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

KSCST Student Projects (2022-23) : Sponsored Projects

Sl. No	PROJECT TITLE	NAME OF THE GUIDE(S)	NAME OF STUDENTS
01	Spatial distribution of iron content in the aquifers using GIS interpolation and treatment using low cost filter media : A case study in Udupi taluk	Dr. Deepika B V	Mr. Adarsh Mr. Adithya Krishna Bhat Ms. Priyanka D'Souza
02	Construction of compound wall using Demolition waste	Mr. Roshan S Kotian	Mr. Shriharsha Kulkarni Ms. Renuka Mr. Akhilesh
03	Feasibility of cementless interlock blocks as a green pavement systems: Futuristic sustainable construction practices	Mr. Sunil S Haldankar	Mr. Sandarsh Acharya Mr. Chandan K R Ms. Chaithra Ramanvar
04	Evaluation of performance and energy saving potential of earth air tunnel system inside the building as sustainable alternative	Mr. N Madhusoodana Rao Mr. Roshan S Kotian	Mr. Sandarsh Acharya Mr. Chandan K R Ms. Chaithra Ramanvar

Internship Details :

Sl. No	STUDENT NAME	COMPANY NAME
01	Arjun D Rai	Siddi Subramanya Stone Industries, karkala
02	Aayush Kumar	Ranchi Design & Consultancy Services Pvt.Ltd. Bihar.
03	Adarsh	M/s SS Alur Construction Co. Vijayapura
04	Adithya Krishna Bhat	M/s SS Alur Construction Co. Vijayapura
05	Akash B Acharya	New Mangalore Port Trust, Mangalore
06	Akhilesh	Simons and Associates, Udupi
07	Anwitha	New Mangalore Port Trust, Mangalore
08	Chaithra Ramannavar	Simons and Associates, Udupi
09	Chandan K R	Sarga Associates, Sagara
10	Prajwal	Simons and Associates, Udupi
11	Priyanka Dsouza	M/s SS Alur Construction Co. Vijayapura
12	Shravan Kumar	AFCONS Infrastucture Ltd. J & K
13	Shriharsha Kulakarni	PWD Yadagiri
14	Sinchana	New Mangalore Port Trust, Mangalore
15	Sonu Kumar Yadav	A.G Associates , Udupi
16	Varun	Simons and Associates, Udupi
17	Vinuth Cs	New Mangalore Port Trust, Mangalore
18	Vybhav S Kotian	New Mangalore Port Trust, Mangalore
19	Ayush H Shetty	Rangadhol Engineers, Shivamogga
20	Ranga Swamy	K C Constructions
21	Renuka Mallikarjuna Biradar	M/s SS Alur Construction Co. Vijayapura
22	Sandharsh R Acharya	Simons and Associates, Udupi

Topper

ANWITHA (2019-23 Batch)

2019-23 Batch
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 effloresence 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 andwater absorption of coarse aggregate.

Fineness modulus, silt content and bulking of fine aggregates.

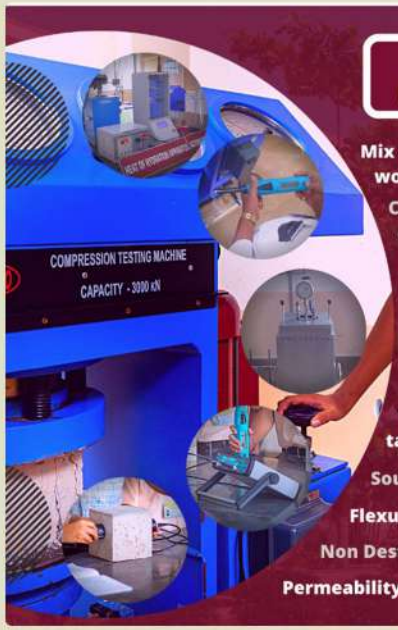
Soil Investigation
Tests on soil

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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