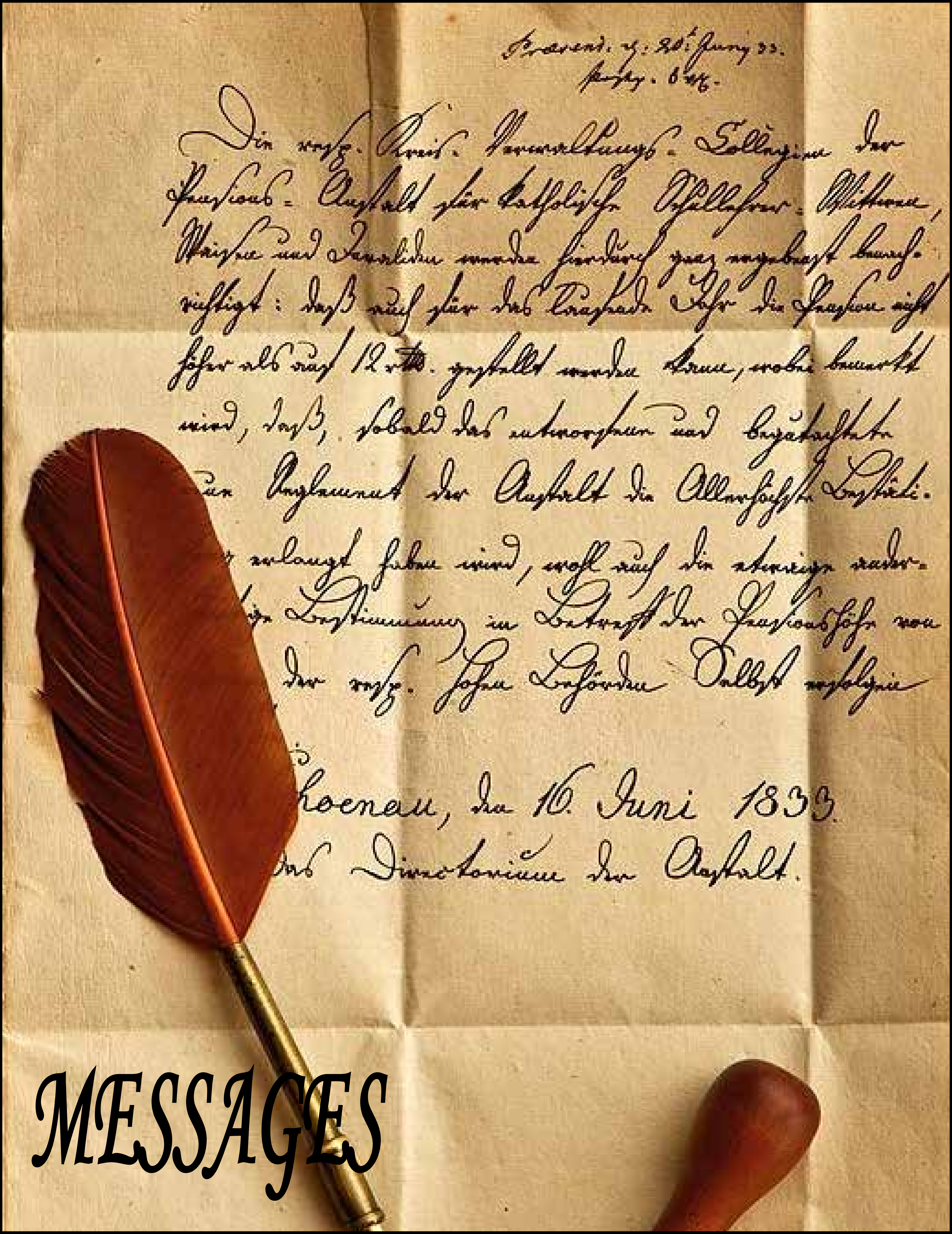
MAGAZINE

2017-2018

DEPARTMENT OF CIVIL ENGINEERING

STELLA MARY'S

COLLEGE OF ENGINEERING



MESSAGES

Chairman's Message

Dr.Nazerath Charles

Our vision is to create technocrats who can address the needs of the society through exploration and experimentation and to uplift mankind. Our institution strongly believe in academic excellence through effective teaching and learning process. The institution also strongly believes that education is the key to a nation's progress and hence aims in creating responsible citizens of our nation. Our institution trains and equip our students to get placed in multinational companies by improving their theoritical and practical skills .

CEO's Message

Mr.Carol Judeson

The Department of Civil Engineering Engineering, established in 2014, is one of the most dynamic departments of SMCE. All the classrooms and laboratories are fully equipped and are made available for teaching and research purposes. Classroom teaching is supplemented with Tutorials, Paper presentation, projects, internships, group assignments, educational tours and industrial visits for effective delivery of curriculum. Our students are not only academically sound but also good in extracurricular activities. Our students are also part of our college sports teams and won many zonal level prizes. Nearly 95% of our graduates are placed in good companies and few are entrepreneurs.

I am really delighted to tell that the Civil Department stands as one of the best department of SMCE.

Director's Message

Mr.P.Renjitham

Education is a gateway to success. I wish all students to acquire knowledge through professional skill development. Stella Mary's college of Engineering enable students to gain theorotical and technical skills through interactive teaching learning process. Our Institution determined to produce true employability skill through practical training.

Principal's Message

Dr.R.Suresh Premil Kumar

Education always plays a vital role in the overall development and personality of an individual. Having realized this importance, SMCE aims to impart strong knowledge to its students who are young and are in thirst for it. SMCE will constantly work to provide the best knowledge to its students, through a team of dedicated staff and experienced faculty. Students are sure to get a new and good academic experience at our institution which would turn them into a holistic personality at the end of their course.

HOD's Message

Dr.R.Venkatah Krishnaiah

Department of Civil engineering is established in the year 2014. We have well equipped laboratories, classrooms with good learning environment and research facilities. The faculty are well experienced and talented. Other than curriculum, our department concentrates on many skill developing courses and projects. Our department students are extremely talented. They excel in academics and their participation in co curricular and extracurricular activities are remarkable.

Editor's Message

Mr.T.Ragin

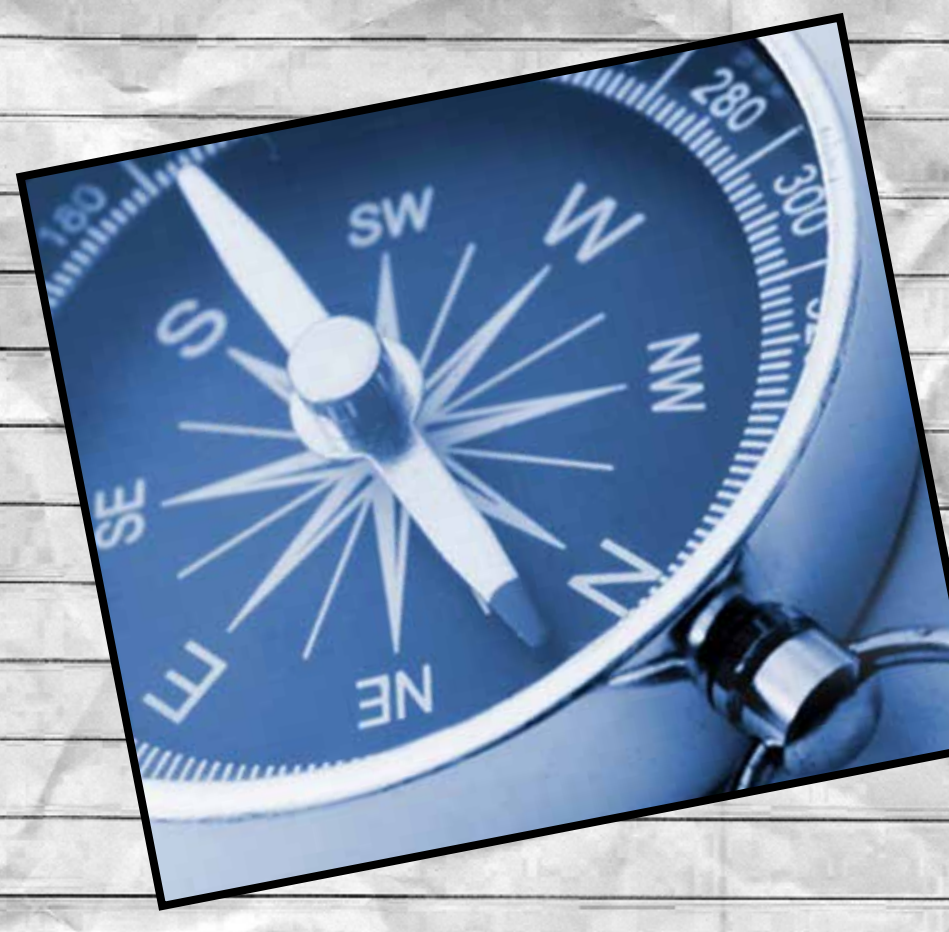
SMCE promote an encouraging, value-based environment. It improves the skills of students in diverse programs to make them a valuable member of the society. It also aims in making the learning an enriching and pleasant experience through effective pedagogical methods. Research on socially relevant and need-based is given importance in our institution. Students WILL get a new and good CURRICULAR AND CO CURRICULAR experience at our institution which would turn them into a holistic personality at the end of their course.

VISION

To emerge as a premiere institution, acknowledged as a centre for excellence imparting technical education, creating technocrats who can address the needs of the society through exploration and experimentation and uplift mankind.

MISSION

To provide an education that transforms students, through rigorous course-work and by providing an understanding of the needs of the society and the industry.



QUALITY POLICY

Stella Mary's College of Engineering, committed to imparting technical education, creating technocrats strives to achieve the institution's goal by :

- **Focusing on the overall development of the students in strengthening their leadership skills.**
- **Building an environment that is conducive for effective teaching, learning and research.**
- **Improving the job prospects of students incorporating value-added programmes to the curriculum.**
- **Periodically assessing the effectiveness of the programmes offered at the institute and responding positively to the needs of the industry.**
- **Contributingeffectively to the growth of the nation, by exposing the students to demonstrate their entrepreneurship skills.**
- **Adopting the best practices for quality improvement that continuously benchmarks the institution against premier institutions.**

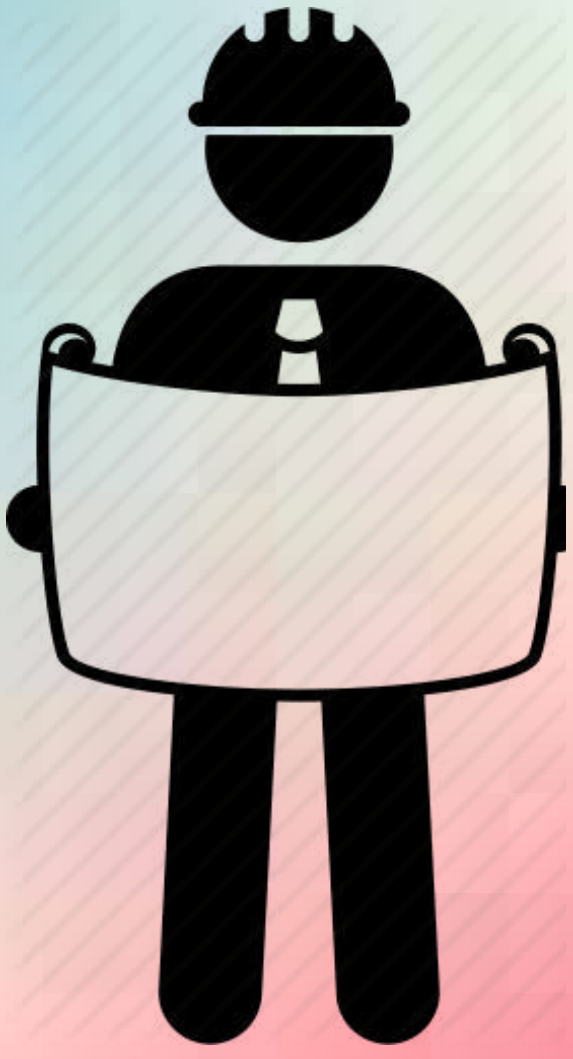
ABOUT THE DEPARTMENT

The civil engineering department was started in the year 2014 with the intake of 60 students. The department has steadily grown in all spheres such as student strength, physical infrastructures and central and department library. The department has well qualified and experienced faculty. The department develops a long term relationship with industries and guides the student effectively. The students are provided with high level "Pathways" that enable them to gain access to high tech career opportunities.

VISION

To provide world class technical education with ethics and professionalism and to create civil engineer with high technical competencies who would full fill the challenges and needs of today's scenario with the help of green technology.

MISSION



- To impart quality technical education, imbibing life-long learning and concern for environment.
- To create job o pportunities in research, industry and consultancy both nationally and internationally.
- To provide technical s kills, leadership qualities and team spirit among the students.
- To establish center of excellence in emerging areas of research to find solution to the problem faced by the society.

Program Outcomes (POs)

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and team work: Function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.

10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Program specific Outcomes (PSOs)

PSO 1 : Applying concepts and solving problems in the branches of Civil Engineering such as Structural, Environmental, Hydraulics, Construction Management, and Geo technical Engineering.

PSO 2 :Assess the environmental impact of various projects and take required measures to curb environmental deterioration

PSO 3 :Able to use latest soft wares pertaining to various streams of Civil Engineering.

Program Educational Objectives (PEOs)

- **PEO1: Graduates will have a successful career in the field of Civil Engineering by meeting the needs of industries or will become entrepreneurs.**

- **PEO2: Graduates will have a sound foundation in engineering fundamentals which is necessary to analyse engineering problems and the ability to persue higher studies.**

- **PEO3: Graduates will work collaboratively on multi-disciplinary projects by engaging in life-long learning process throughout their professional life.**

Environmental Engineering Laboratory

In this laboratory the students will be able to know the common environmental experiements relating to water and wastewater quality.

List of Equipments

Oxygen analyzer,Spectrophotometer, Ion – selective electrode, Sodium Potassium Analyzer – Flame Photometer 5.Gas Chromatography, Atomic absorption spectroscopy (Ni, Zn, Pb),Nephlo-turbidity me ter, BOD Analyser,COD Analyser,Jar Test Apparatus.

List of Experiments

Determination of Ammonia Nitrogen in wastewater, Coagulation and Precipitation process for treating waste water, Determination of suspended, volatile, fixed and settleable solids in wastewater,B.O.D. test,C.O.D. test, Nitrate in wastewater,Phosphate in wastewater, Determination of Calcium, Potassium and Sodium, Heavy metals determination - Chromium, Lead and Zinc.(Demonstration only)

Soil Mechanics Laboratory

Students will able to identify physical and mechanical properties of soil in the field and laboratory settings. This include preparing soil samples for testing, performing the test, collecting and analyzing data, interpreting the results and writing technical reports.

List of Equipments

Sieves,Hydrometer,Liquid and plastic limit apparatu, Shinkage limit apparatus,Proctor compaction apparatus, UTM of minimum of 20KN capacity,Direct shear apparatus , Thermeometer, Field den sity measuring device ,Triaxial shear apparatus , Three gang consolidation test device.

List of Experiments

Determination of index properties, Permeability determination (constant head and falling head methods), One dimensional consolidation test (Determination of co-efficient of consolidation only),Direct shear test in cohesion-less soil,Unconfined compression test in cohesive soil,Laboratory vane Shear test in cohesive soil ,Tri-axial compression test in cohesion-less soil(Demonstration only),California Bearing Ratio Test.

Strength of materials Laboratory

Demonstrating the basic principles in the area of strength and mechanics of materials and structural analysis to the students through a series of experiments.

List of Equipments

UTM of minimum 400 kN capacity,Torsion testing machine for steel rods,Izod impact testing machine,Hardness testing machine, Beam deflection test apparatus,Extensometer,Compressometer, Dial gauges,Le Chatelier's apparatus,Vicat's apparatus, Mortar cube moulds.

List of Experiments

Tension test on mild steel rod,Compression test on wood, Double shear test on metal,Torsion test on mild steel rod , Impact test on metal specimen (Izod and Charpy) , Hardness test on metals (Rockwell and Brinell Hardness Tests), Deflection test on metal beam,Compression test on helical spring, Deflection test on carriage spring,Test on Cement.

Computer Laboratory

To outline the basic principles associated with CADD and to demonstrate common drafting techniques and shortcuts used by professionals. CAD (Computer Aided Design) provides a convenient mean to create designs for almost every engineering discipline.

List of Equipments

Computer system of Pentium IV or equivalent (1 for each student) ,AUTOCAD (software).

List of Experiments

Principles of planning, orientation and complete joinery details ,Buildings with load bearing walls 3. Buildings with sloping roof,R.C.C. framed structures, Industrial buildings – North light roof structures,Unconfined compression test in cohesive soil , Building Information Modeling.

Survey Laboratory

Students learn techniques for gathering field data with both traditional and modern instruments and demonstrate their proficiency on weekly lab exercises and a comprehensive semester project and final exam.

List of Equipments

Total Station,Theodolites Atleast 1 for every,Dumpy level, Plane table,Pocket stereoscope,Ranging rods,Levelling staff , Cross staff, Chains,Tapes, Arrows, Hand held GPS.

List of Experiments

Study of theodolite,Measurement of horizontal angles by reiteration and repetition and vertical angles,Theodolite survey traverse,Heights and distances - Triangulation - Single plane method,Tacheometry - Tangential system - Stadia system - Subtense system,Setting out works - Foundation marking - Simple curve (right/ left-handed) - Transition curve, Field observation for and Calculation of azimuth,Field work using Total Station. Principles of planning, orientation and complete joinery details ,Buildings with load bearing walls 3. Buildings with sloping roof,R.C.C. framed structures, Industrial buildings – North light roof structures,Unconfinedcompressiontestincohesivesoil,BuildingInformationModeling.

Soil Mechanics Laboratory

The behavior and properties of structural materials, e.g. concrete, asphalt and steel can be better understood by detailed, well-designed, first hand experience with these materials. The students will become familiar with the nature and properties of these materials by conducting laboratory tests.

List of Equipments

Concrete cube moulds,Concrete cylinder moulds,Concrete Prism moulds, Sieves,Concrete Mixer,Slump cone,Flow table,Vibrator,Trovels and planers,UTM– 400 kN capacity,Vee Bee Consistometer,Aggregate impact testing machine,CBR Apparatus,Los - Angeles abrasion testing machine, Marshall Stability Apparatus.

List of Experiments

Tests on fresh concrete,Test on hardener concrete,Theodolite survey traverse,Test on aggregates, Tests on bitumen, Test on bitumen mixes.

Hydraulics Engineering laboratory

The main objective of this lab is to build fundamental concepts combined with strong analytical and problem solving abilities that would form the backbone of many other subjects in higher educations.

List of Equipments

Bernoulli's theorem – Verification Apparatus, Calculation of Metacentric height water tank Ship model with accessories,Measurement of velocity Pitot tube assembly, Venturimeter,Orificemeter,Flow through mouthpiece, Centrifugal pump assembly with accessories (single stage), Centrifugal pump assembly with accessories (multi stage), Reciprocating pump assembly with accessories, Deep well pump assembly set with accessories.

List of Experiments

Flow measurement,Losses in pipes,Pumps,Turbines, Determination of metacentric height.

Our Teaching Faculty

Name: Dr. R.Venkatah Krishnaiah
Designation: Head, Associate Professor
Qualification: M.E, Ph.D

Name: Mr.J.Prakash Arul Jose
Designation: Associate Professor
Qualification: M.E

Name: Mrs.C.Shibani
Designation: Assistant Professor
Qualification: M.E

Name: Mrs. M.Ashni
Designation: Assistant Professor
Qualification: M.Tech

Name: Mrs. N. Agnes Flora
Designation: Assistant Professor
Qualification: M.E

Name: Mr. T.Ragin
Designation: Assistant Professor
Qualification: M.Tech

Name: Mrs. S. Indira
Designation: Assistant Professor
Qualification: M.E

Our Non-Teaching Faculty

Name: Mrs.Sworna K.Jancy Bai
Designation: Assistant Professor
Qualification: M.E

Name: Mr.I.Vijayan
Designation: Assistant Professor
Qualification: M.E

Name: Mr.Satheesh
Designation: Lab Instructor
Qualification: B.E

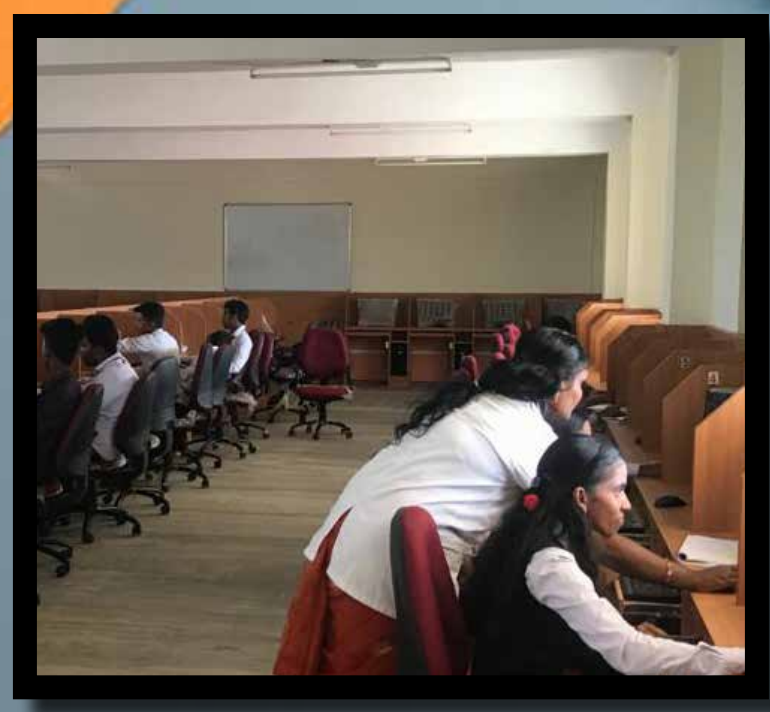
Name: Ms.Muthulekshmi
Designation: Lab Assistant
Qualification: DCE

Student participation In Various events

Seminars were conducted in the topics of current trends in order to impart technical and practical knowledge in students.Resource from various industries were invited to share their knowledge with faculty and students.

Orientation program were conducted for newly joined studnts in order to improve their skills in communication, basic civil engineering, basic mathematics and various soft skills.

Value added course/certification course was offered to the students to improve their technical and employability skills.Courses on recent softwares were introduced to equip them to meet the current industrial trends.



Guest Lecture were conducted in various topics to bridge the gap in the curriculam and to meet the needs of the industries. Resource persons from various institutions and industries were invited to deliver the lectures of current importance.

PTA is actively involved in aiding smooth functioning of the college.The executive committee chaired by the HoD coordinates the activities of the PTA. Its efforts are oriented towards improving facilities in the college .It also aims in improving the personality and learning skills of their wards.

Industrial visit is an oppurtunity for the students to gain the practical knowledge on the functioning of various industries and it is also paves a way to interact with the experienced persons working in the industry. The Students will also be exposed to the materials and machines involved in the production and manufacturing units.They also will understand the importance of teamwork while interacting with the employees.

Celebrations


APPY ONAM


9th
MARCH
2019


YOUR MEMORY
A TREASURE AND MISSED
BEYOND MEASURE

Sports Achievements

Club Activities

Editorial Board

Chief Editor : Mr.T.Ragin
Assistant Proffessor

Co-Editor : Mrs.Sworna K.Jancy Bai
Assistant Professor

Abinesh Roy.A
8th Semester

Arul Jothi.P
8th Semester

Jenish.M.P
6th Semester

Arthi.M
6th Semester

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College of Engineering

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