

The Bauingenieur

Department of Civil Engineering

2020 - 21

International University Collaboration



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Approved by A.I.C.T.E, Ministry of HRD, Govt. of India Affiliated to J.C. Bose University of Science & Technology, YMCA, Faridabad



The Bauingenieur

Department of Civil Engineering

Contents

Message from the Chairman

Message from the Director

Message from the Head of Department

The Department

About the Department

Vision

Mission

Faculty

Academic Programmes

Civil Engineering

Course Benefits

Career Possibilities

Course Structure

Value Added Course / Online Certification

Awards & Achievements

Department in news

Publication and Initiatives

Online Certification

Projects

Workshop and Seminars

Industrial Visit

Infrastructure

Laboratory Facilities

Library

More About the Department

Electronics & Communication Engineering Technical Club

Students Initiative

Alumni Working Club

Department Alumni

Placement Adviser and Coordinator

Our Recruiters

Life At Aravali

Message from the CHAIRMAN

As we all know that education, business, profession, in fact, everything is changing at a fast pace globally. We need to be right there or we will be left behind. Hence the need arises to impart high-quality education along with the latest infrastructure, that is what our college focuses on and we know that by putting the right people on the job we can make it the biggest success story of our times. Our focus is on a balanced education that encompasses the tradition of ethics and the needs of a changing world.

Today, more than at any time in history, technology is changing. It has the power to transform economic, social, cultural and environmental situations of our country, so that our countrymen have food, shelter, education, healthcare and employment within a given time-frame. Aravali College of Engineering and Management, Faridabad, is dedicated to the task of making India a knowledge society by creating scientists, engineers and managers of proven capability.

The main goal is that the child not only becomes a successful individual in this vibrant and dynamic environment but also becomes a better human being that will make him responsible and a good citizen by upholding our values and ethics while maintaining their separate identity. The college aims at holistic development of a child. Our emerging profile is to equip our students and teachers with talent. Technologies and resources are developed so that they are ever ready to help our corporate sectors and leaders in the global market. I invite you to explore this unique and fulfilling field of study and join hands to realize the dream of becoming the next knowledge superpower. Looking forward to your co-operation.

The greatest gifts you can give your children are the roots of responsibility and the wings of independence.



Shri Dhan Singh Bhadana
Chairman



Message from the DIRECTOR



Dear Student,
Congratulations on joining the Aravali College of Engineering and Management family. I am delighted to welcome you to the ACEM, where we pursue excellence in all the institute activities in an attempt to transform young students into responsible and professional engineers/managers with a sense of social responsibility, human values and concern for the environment. Today, as our society becomes increasingly global, diverse, and technologically complex, we continue to find innovative ways to provide education that will equip you to make your mark on the world.

The contemporary design of our state-of-the-art labs, smart classrooms, meeting spaces, research, and teaching areas, etc., is an integral expression of our commitment to creating a physical environment that can sustain the production of learning and knowledge in the 21st century. We continuously strive to train the students to become excellent managers, thinkers and leaders of the society. In addition to developing managerial skills, students are also encouraged for entrepreneurship. For this, the college has a full-fledged Entrepreneurship Development Cell.

ACEM is approved by AICTE and affiliated to J.C. Bose University of Science & Technology, YMCA, Faridabad and offers a four-year B.Tech program in four branches, viz., Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering and Civil Engineering.

The institute has a very active training and placement cell which takes special initiatives to prepare the students for placements with the aim that every student gets at least one offer letter by the time they leave the institute. To provide practical exposure to students the institution organizes workshops, seminars, symposia, guest lectures, industrial visits and various competitions at inter and intra college level. The institution assures that all the students get an excellent academic environment and the opportunity to participate in co-curricular activities and the student's gets all-round development, finally get developed into a successful professional. Civil engineers can work in any infrastructure project. This ranges from the construction and maintenance of bridges, buildings, port, power stations, airports, dams, highways, expressways, waterways, industrial units, manufacturing plants, buildings, and factories, river and township planning construction and metro rails all are the workplace for civil engineers. Armed forces (Army/ Air Force/Navy), many others look for candidates with CE background.

Prof. (Dr) Suresh Kumar Jindal
M.Tech.(IIT Kharagpur), Ph.D

Message from the HEAD OF DEPARTMENT



An affectionate welcome to the Civil Engineering Department. Civil engineering is the second-oldest engineering discipline after military engineering. Civil Engineering is a professional engineering discipline that deals with the design, construction and maintenance of physically built works like roads, bridges, canals, dams and buildings. The earliest civil engineering works include Pyramids in Egypt, Highways by Roman engineers, Great Wall of China, Stupas in Sri Lanka, Old Qanat water management system and many more.

The notable earliest civil engineering works include aqueducts, harbors, bridges, dams etc., built in several parts of the world. India's first Prime Minister Jawahar Lal Nehru used the term "Temples of Modern India" while inaugurating Bhakra Nangal Dam, a civil engineering work which facilitated the progress of India. Some latest construction achievements are Chunnel Tunnel, Golden Gate Bridge, Empire State Building, The Queensferry Crossing, Jeddah Tower, Hong-Kong-Zuhai-Macau Bridge, The Alvarado Water Treatment Plant etc. These structures emphasize the importance of civil engineer. Civil engineers are important to the society as they are often referred to as "Builders of Nation".

There are many career paths for civil engineers. Civil engineers are essential in government agencies, private and public sector undertakings to take up various mega projects like metro railway projects, express highway corridors, industrial structures, reservoir projects, flyovers, townships and mega city projects. Today, the world is undergoing technological revolution, population growth and environmental concerns. All these changes create unique challenges for civil engineers. The next decade under the leadership of our Prime Minister, will be the most creative, demanding and rewarding times for civil engineers.

The department of civil engineering with its multifaceted faculty maintains its strong links with the construction industry by engaging in consultancy activities. The students here are encouraged to engage in extra-curricular and co-curricular activities which are essential for personality development, nurturing of team spirit and development of organizational skills.

Ms. ISHRAT SULTANA
PhD (P), M.Tech, B.E

THE DEPARTMENT

Considering as one of the oldest engineering disciplines, civil engineering involves planning, designing and executing structural works. Civil engineering deals with engineered constructions, planning, design, construction and management. The profession comprises of many disciplines like structural engineering, water resources engineering, transportation engineering and surveying. In any activity ranging from defense and industrial development to social welfare and economic growth, it has the largest quantum of resource allocation and utilization. The profession deals with a wide variety of engineering tasks including designing, supervision & construction activities of public works like roads, bridges, tunnels, buildings, airports, dams, water works, sewage systems, ports etc and offers a multiple challenging career opportunities. Students are not only made experts in technical aspects but also in interpersonal skills, a vital ingredient to excel in the fast-paced world.



Get Ready for 'THE NEXT BILLION'

VISION

The department has a vision to continue to achieve national and international recognition through innovation in civil engineering, to produce engineers having professional and leadership qualities with capacity to take up professional and research assignments in civil engineering and allied fields with focus on inter-disciplinary and innovative approach and to compete at the global level. The vision includes the department being a collegial, collaborative and welcoming environment to learn and work.

MISSION

- To impart quality and real time education to contribute to the field of civil engineering.
- To impart soft skills, leadership qualities and professional ethics among the graduates to handle projects independently.
- To develop graduates to compete at the global level.
- To deal with the contemporary issues and to cater to the societal needs.

FACULTY



Ms. Ishrat Sultana

Assistant Professor & HOD
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Experience: 7.5 Years of Teaching
: 1 Year of Industry
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Ms. Divya Shree

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Mr. Nishant Sharma

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Mr. Neelaz Singh

Assistant Professor
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: 01 year of Industry
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Academic PROGRAMMES



The duration of the B. Tech program is 4 years (8 semesters). The minimum requirement involves successful completion of the following course credits:

Credits – 160+3(MOOC) for a student to be eligible to get under graduate degree in engineering.

Structure of Undergraduate Engineering Program:

Sr.	Category	Breakup of Credits
1	Humanities and Social Sciences including Management courses	11
2	Basic Science Courses	24
3	Engineering science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	30
4	Professional core courses	48
5	Professional courses relevant to all chosen elective specialization/branch	23
6	Open subjects – Electives from other technical and /or emerging subjects	09
7	Project work, seminar and internship in industry or appropriate work place/ academic and research institutions in India/abroad	15
8	Mandatory Courses [Environmental Sciences, Indian Constitution]	Non credit
		160+3*

*Minimum credit to be earned is 03 through MOOC for all B.Tech. students in 2018-19 scheme.

Course Structure

B.Tech Civil Engineering

Semester 3:

- Basic Electronics(ESC201)
- Biology (BSC 01)
- Engineering Mechanics (ESC202)
- Energy Science & Engineering (ESC212)
- Life Science (BSC225)
- Effective Technical Communication (HSMC 01)
- Introduction to Civil Engineering (HSMC251)
- Computer-aided Civil Engineering Drawing Lab (ESC203P)

Semester 4:

- Instrumentation & Sensor Technologies for Civil Engineering Applications(PCC-CE201)
- Engineering Geology(PCC-CE202)
- Disaster Preparedness & Planning (PCC-CE203)
- Introduction to Fluid Mechanics (PCC-CE204)
- Introduction to Solid Mechanics (PCC-CE205)
- Surveying & Geomatics (PCC-CE206)
- Materials, Testing & Evaluation (PCC-CE207)

- Mechanical Engineering (ESC209)
- Instrumentation Lab (PCC-CE201P)
- Fluid Mechanics Lab (PCC-CE204P)
- Surveying Lab(PCC-CE206P)
- Materials Testing Lab (PCC-CE207P)

Semester 5

- Mechanics of Materials (PCC-CE301)
- Hydraulic Engineering (PCC-CE302)
- Structural Engineering (PCC-CE303)
- Geotechnical Engineering(PCC-CE304)
- Hydrology & Water Resources Engineering (PCC-CE305)
- Environmental Engineering (PCC-CE306)
- Transportation Engineering (PCC-CE307)
- Audit Course-1: Environment Science (MC CEFAE03)
- Hydraulic Engineering Lab (PCC-CE302P)
- Geotechnical Engineering Lab(PCC-CE304P)
- Transportation Engineering Lab (PCC-CE307P)
- Environmental Engineering Lab (PCC-CE306P)

Semester 6

- Construction Engineering &Management (PCC-CE308)
- Engineering Economics, Estimation & Costing (PCC-CE309)
- Elective-I (Railway Engg)(PEC-CEEL302-07)
- Elective-II (Construction Engineering Material) (PEC-CEEL304-07)
- Open Elective-I (Solid Waste)(OEEL302)
- Elective-III (Air & Noise Pollution Control) (PEC-CEEL306-10)
- Elective-IV (Design of Hydraulic Structures) (PEC-CEEL308-01)
- Audit Course-II Constitution of India (MC01)
- Project-1* (PROJ-CE301)
- Engineering Economics, Estimation & Costing Lab (PCC-CE309P)

Semester 7

- Elective V (PEC-CEEL401)
- Elective-VI (PEC-CEEL402)
- Elective VII (PEC- CEEL403)
- Elective VIII (PEC- CEEL404)
- Open Elective-II Suggested: Metro Systems & Engineering (Civil-OEC-26)
- Open Elective-III (OEC- 403)
- Civil Engineering - Societal & Global Impact (HSMC252)
- Project-2* (Continued from VI Semester, Project work) (PROJ- CE402)

Semester 8

- Industrial Project training (Duration Full Semester) (PROJ- CE 403)

Course Benefits

- Ability to design the RCC structures and the process to meet the desired requirement within constraints.
- Ability to design the steel structures and the process to meet the desired requirement within constraints.
- Ability to design the hydraulic structures like dams, weir and barrages.
- Ability to design the transportation system like roads, highways, railways.
- Knowledge of airports, harbor.
- Ability to deal with the problem like clean drinking water.
- Ability to survey the field.
- Ability to apply design and development principles in designing the civil engineering projects.

Career Possibilities

From a site engineer to general manager of construction company, there is a wide range of opportunity in private sector as well as in government sector as a civil engineer graduate.

Government Sector

Public Works Department (PWD), Indian Railways, Irrigation Department, NHAI, Military Engineering Services, Jal Nigam, Rural Development Department etc.

Public Sector

DMRC, NTPC, IOCL, NHPC, GAIL etc

Private Sector

L&T, DLF, JP, Infra, Gammon India ltd, HCC etc



Value Added Course / Online Certification

During the time of recruitment most of the leading companies look for technically sound candidates and preference is given to skillful team player who is equipped with different skills, HR techniques, verbal aptitude, personality, communication skills, interaction skills, body language and who has undergone the value added courses & industrial exposure.

To prepare the students according to the needs of industry and to enhance the placement opportunities, the management is striving to mould the students. Keeping with this motto, the department has introduced various value added training sessions on personality development, English language skills, verbal aptitude, quantitative aptitude, soft skills, industry interaction and industry exposure.

MOOC (Massive Open Online Course)

A massive open online course (MOOC) is a free web-based distance learning program that is designed for the participation of large number of geographically dispersed students.

Introduction to Civil Engineering

One of the oldest engineering disciplines, civil engineering is the applied science of physics and mathematics to address the infrastructural needs of human civilization. This includes construction engineering, bridge engineering, highway engineering and the basic maintenance of roads, canals, dams, and buildings. Throughout history civil



engineers have not only been key to advancing societies, but their work has produced some of our most enduring artifacts for example, the Ancient Egyptian pyramids or the Roman aqueducts – both stand as enormous feats of civil engineering.

Who is a Civil Engineer?

A civil engineer helps to design and build public works infrastructure including roads, bridges, canals, dams, airports, sewerage systems, pipelines, buildings, and railways.

What do Civil Engineers do?

Beyond the study of structural engineering books, today most civil engineers work in offices designing structural plans that can withstand changes in our environment including earthquakes and hurricanes. Civil engineers are also often responsible for the construction management of civil engineering projects in the field.

Higher Surveying

Conventional survey techniques are all about measuring 2D or 3D coordinates of a point for mapping of a surface. Though accurate, these techniques are time consuming for topographic mapping. With development of various hard and soft technologies in last two decades, advanced mapping techniques have evolved. It gives a paradigm shift as conventional surveys are superseded by advanced surveying techniques, which are not only accurate and flexible but require minimum time to acquire large amount of 3D data.

Soil Structure Interaction

The study of soil-structure interaction (SSI) is related to the field of earthquake engineering. It is very important to note that the structural response is mainly due to the soil-structure interaction forces that bring an impact on the structure. This is a form of seismic excitation. A committee of engineering research deals with the study of soil-structure interaction only when these forces bring an appreciable effect on the basement motion when it is being compared with the free-field ground motion. The free-field ground motion can be defined as the motion recorded on the surface of the soil, without the involvement of the structure.

The structural response to an earthquake is highly dependent on the interaction between three linked systems, namely: The structure, The Foundation, The underlying soil

The soil-structure interaction analysis is the method of evaluating the collective response of the three linked systems mentioned above for a specified ground motion.

Maintenance and Repair of Concrete Structures

This course helps students learn how to identify various deterioration mechanisms or damage mechanisms in concrete structures (say, deterioration of metallic reinforcement and cementitious materials). The course discusses both the scientific aspects and its use while practicing repair works at site. Use of various non-destructive, partially-destructive tools to assess the condition of the structure is discussed. Also, tips on selecting measurable parameters that are useful in deciding the further repair and maintenance practices is provided. Following this, practices for typical near-surface repair, corrosion protection, structural strengthening, structural stabilization etc is discussed in detail. At the end of the course students are able to suggest evaluation and repair/retrofitting methods for extending the service life of concrete structures. Importance for preventive maintenance practices (instead of corrective maintenance practices) is discussed throughout the course work.

INTENDED AUDIENCE:

Graduate and undergraduate students, research scholars, practicing engineers, repair experts and scientists working in the areas of concrete science and technology

PREREQUISITES:

Completed three years of a bachelor program in civil engineering

INDUSTRIES TO BE BENEFITED:

1. Govt. agencies and public/private companies involved in the design, construction and maintenance of concrete structures
2. Govt. agencies : National Highway Authority (NHAI), Central Public Works Department (CPWD) and PWD/Housing departments of various states
3. Chemical manufacturers: BASF, SIKA Corporation, Euclid chemicals, and other chemical admixture companies
4. Cement companies: ACC Ltd, Ambuja cement, JSW cement Ltd, JK Cement Ltd, Penna Cement Industries Ltd, Ultratech cement Ltd and other cement industries
5. Steel companies: JSW Steel, Tata Steel, Steel Authority of India Ltd and other steel industries
6. Repair contractors: Vector Corrosion Technologies, HILTI and other cathodic protection industries
7. Owners/Builders/Structural Consultants: L&T Construction, Shapoorji Pallonji Construction Limited (SPCL), DLF Limited, Tata Housing, STUP Consultants, Engineers India Limited (EIL)



Summer Training Programs in Civil Engineering

Why should I join civil engineering summer training programs?

Summer training program for civil engineering students from Skyfi labs is the best way for developing practical skills in the summer vacation. The program involves applying the theory learnt in a practical manner and developing projects/ analysis using industry standard software. This experience helps to improve the most important skill missing in regular college curriculum and gives a great experience of a summer internship. The certification provided in the summer training program helps to showcase skills in the resume to prospective civil engineering recruiters.

Duration of each summer training program

Each summer training program is for a duration of 6 months.

Where are these summer training programs conducted?

Civil engineering summer training programs are being offered at construction sites. The schedule is designed to match with the summer vacations in the respective areas so that students can utilize this opportunity and develop skills that will help them in their future career.

AutoCAD

AutoCAD stands for Automatic Computer-Aided-Design. It is a commercial software application for 2D & 3D (CAD). It is also used for web application and a mobile application which is known as AutoCAD 360.

In the end of the course the students are required to work on a project. The search for skilled candidates is the first priority of every organization. Some kind of CAD training is necessary to boost their career. With the training the students can produce appealing piece of work. Those days are gone when designs were drawn manually.

Benefits of the AutoCAD

- 3D Modeling
- Increase in the productivity of the designer.
- Creating documentation of the designing
- Improves the quality of the design.
- Saving of design data and drawings
- Speed

Certification:

Autodesk

STAAD.Pro

STAAD or (STAAD.Pro) is a structural analysis and design software application originally developed by Research Engineers International in 1997.

STAAD.Pro is one of the most widely used structural analysis and design software products worldwide. It supports over 90 international steel, concrete, timber & aluminium design codes.

It can make use of various forms of analysis from the traditional static analysis to more recent analysis methods like p-delta analysis, geometric non-linear analysis, pushover analysis (static-non linear analysis) or a buckling analysis. It can also make use of various forms of dynamic analysis methods from time history analysis to response spectrum analysis. The response spectrum analysis feature is supported for both user defined spectra as well as a number of international code specified spectra.

Additionally, STAAD.Pro is interoperable with applications such as RAM Connection, Auto PIPE, SACS and many more engineering design and analysis applications to further improve collaboration between the different disciplines involved in a project. STAAD can be used for analysis and design of all types of structural projects from plants, buildings, and bridges to towers, tunnels, metro stations, water/wastewater treatment plants and more.

Certification:

Autodesk



Awards & Achievements

STUDENT'S ACHIEVEMENTS

A number of students from the department have been selected in Railways and SSC examinations.

A number of students have cleared GATE Exam in the year 2019- 2020.

A number of students got merits in university (secured 1st rank in university exam)

A team (Anand Vinod, Shah Hashim-7th sem) secured 1st position in inter-college bridge design competition in DCTM college, Palwal

A team (Vikas, Suraj-5th sem) 2nd position in inter-college bridge design competition in EIT college, Faridabad.

Students (Ranjan, Shashank, Vishal Chand) of 6 semester won 2nd prize in survey burglars in Chandigarh university on 5th April, 2019



MDU Rank Holders

Dec 2018



Bharat Bhushan



Vishal Chand



Mohit Goyal



Sameer Saifi

YMCA Rank Holders

Dec 2018



Karan Bhardwaj



Badal



Akash

YMCA Rank Holder

Dec 2019



Karan Bhardwaj

Publications:

Ishrat Sultana (2019). "Use of heavy metal in pavement markings spreading toxicity in the environment", Universal review journal, Vol. VIII, D.O.I: 16.10089/URJ, Impact Factor: 5.7

Ishrat Sultana (2018). "An experimental study on utilization of E-waste in Bituminous pavement", IJRAR, Vol. V, Impact Factor: 5.75.

Divyashree Yadav and Naveen Kwatra (2014). "A review on evaluation of various hinge models for non-linear static Pushover analysis"(National conference on Innovation in Engineering, Pharmaceutical, Legal and Management Science on 30th May, 2014 at Bahra University, Shimla) Paper ID: ES/P27

Yadav, D., Kwatra, N., and Agarwal P. (2018). "Post Yield deformation parameters of reinforced concrete beam with corroded reinforcement". Structural Concrete, 20, 318-329. <https://doi.org/10.1002/suco.201800037>. Impact Factor: 1.885 (SCI Journal)

Divyashree Yadav, Naveen Kwatra & Pankaj Agarwal (2020) "Comparative post-yieldperformance evaluation of flexure member with corroded reinforcement", Structure and infrastructure Engineering, DOI: 10.1080/15732479.2020.1731557. Impact Factor: 2.43 (SCI Journal)

Neelaz Singh (2018). "A model study on batter pile group subjected to lateral loading in sandy soil", IJSRD, Vol. 6, Issue 1, ISSN (online): 2321 0613

Deepak Kumar (2017). "Performance-based seismic design of six storey reinforced concrete building" (ISBN:978-93-86238-21-4) in "NCRTESM 2017" organized by SRCEM, Palwal.

2. Evaluate the effect of type of concrete, water/cement ratio, curing and casting methodology on the mechanical property of concrete.
3. Use of different type of mix design of concrete.
4. Ability to learn to take responsibility, think critically and apply ethical theories on an engineering cube mix design project.

Model of multistory parking

This model provided information of parking slots by saving space, time.

Model of hydraulic bridge/cable-stayed bridge

This model showed the advantage of constructing hydraulic bridge for easy movement of vehicles as well as ships.

Model of water treatment plant

This model presented all the phases like coagulation, sedimentation, filtration, disinfection, sludge drying etc. of water treatment plant.

Model of underwater tunnel

To build underwater tunnel, builders dig a trench in the riverbed or ocean floor. They then sink pre-made steel or concrete tubes in the trench. After the tubes are covered with a thick layer of rock, workers connect the sections of tubes and pump out any remaining water. The same was presented through the model.

Classroom Projects

Construction of RCC structure ACEM at front gate

Students of 2nd year, 3rd year & 4th year under the guidance of faculties of civil engineering department constructed small structure of ACEM with a load of more than 200 kgs at front gate of the college.

Sitting benches by waste product

The department organized a competition of constructing & designing sitting benches with waste products. Most of the benches were constructed by using brick, concrete, glass bottles and tiles. A bench made of steel tubular section was made as well.

Construction of sample rigid and flexible pavements

Displayed both pavements in which their layers and thicknesses were highlighted for highways.

Concrete cube activity

Concrete cube activity for three different characteristics strength (Grades: M30, M40, M50 & M60) which were mix designed first, then presented and lastly constructed for their respective grades. This activity initiated active self-learning and exposed the students to industrial concrete application. At the end of the activity the students got an exposure to:

1. Design the concrete mix (M30, M40, M50 & M60- High Performance Concrete).



Workshop and Seminars

- Seminar on providing certification course on emerging technologies by INNOLABZ, New Delhi attended by Civil 7th semester students.
- Awareness program for engineering students on how to crack Civil Services Exam, Engineering Services Exam, GATE & PSUs by MADE EASY Education Pvt. Ltd.
- Seminar on various civil engineering design and analysis software organized by CAD Centre .
- Workshop on “Design & Analysis of RCC buildings in STAAD-Pro” organized by department of Civil Engineering, ACEM.
 - Industrial visit to National Council for Cement & Building Materials by Civil 3rd and 5th semester students.
 - Industrial visit to Hindustan Prefab Limited, New Delhi by Civil 5th and 7th semester students.
 - Industrial visit to Habitat 78 (Multistoried construction), Faridabad by Civil 4th and 6th semester students.
 - Industrial visit to Bridge construction at ManjhawaliGhat by Civil 3rd and 5th semester students.



Out Of The Classroom Project

The department organized a survey camp to provide an insight into determining the topography of particular area with the help of survey work, map study and reconnaissance work. The methods used for surveying included traversing, levelling and contouring.



Infrastructure

The college is spread over an area of 10 acres in the interiors of Greater Faridabad, covering all amenities and resources to generate a conducive learning environment. The college infrastructure includes spacious campus building, state of the art classrooms, laboratories and other amenities that help in enhancing the students academic learning and education as a whole. The campus has a cafeteria that serves nutritious food. It also has a medical room providing treatment in case of any emergency and maintains liaison with the doctors of the local hospital. The entire campus and hostel is wi-fi enabled and has round the clock security arrangements with CCTV and trained guards monitoring the area.

Aravali College of Engineering & Management has one of the largest library in the region with more than 20,000 books and thousands of National and International journals. Students and Faculty have free access to the library where they can study various titles for any particular topic. The library is also a hub for all college research oriented activities.

- Fully air conditioned library
- More than 20,000 books
- National /International online journal
- Vast collection of e-books and online catalogue

Library



TECHNICAL
SOCIETY

“ WE CONSTRUCT
THE WORLD ”

More About the Department

The department of Civil Engineering at Aravali College of Engineering and Management is committed to preparing undergraduates to be outstanding technocrats and responsible citizens and demonstrate the knowledge acquired in civil engineering steered by the principles of sustainable development. It is also committed to meeting the demand of international standards, exhibit proficiency as practicing engineers, academicians and researchers, hold professional ethics as consultants, entrepreneurs and pioneers while addressing the challenges of the society.

The department emphasize not only on project based learning specially in the field of design of structures with the latest software as per demand of industry like Stadd-pro, E-tabs, SAP Revit structure but also provides the most suitable curriculum for the Indian engineering service exam, graduate aptitude test (GATE) SSC-JE and many other government jobs. It uses different approaches - critical thinking analysis and design, encourage creativity, trial and error, looking for symmetry, patterns, induction, deduction and enquiry-based learning.

Our Teaching Pedagogy

The department faculty uses an array of teaching strategies because there is no single, universal approach that suits all situations.

The various activities which are managed by experts and faculties are:

1. Structural Design Skill Development
2. Project Based Learning
3. We Just Don't Draw We Built It
4. Advance Surveying Equipment Workshops

Laboratory facilities



The objective of the department has been to impart quality education. In order to ensure high standards for its students the department has well-equipped and fully furnished state of art laboratories. The Civil engineering department comprises of the following major laboratories:

CAD Design Lab aided with software like AutoCAD and RCC Detailing, Structural Software Lab aided with structural designing software such as STAAD Pro, Structural Mechanics Lab, Geo-technology Lab, Soil Mechanics Lab, Transportation Engineering Lab, Survey Lab, Environmental Engineering Lab, Fluid Mechanics Lab, Concrete Lab.

Student's Initiative



Technical Paper Presentation

Level: Undergraduate (engineering students) and Postgraduate (MBA students)

Skill Areas: Topics of respective domains

With a view to promote research oriented approach in students, the Technical team and Department of Civil Engineering of Aravali College of Engineering and Management organised a 'Technical Paper Presentation' event for B.Tech students. The student coordinators were Anand and Mohit from final year civil department. The event covered the essential aspects of writing a research paper covering topics such as idea generation, literature review, ethics of paper writing, drafting a research paper, qualitative research. As many as 45 students participated in the event and presented their technical papers which were evaluated by the faculty of various departments. The winners of competition were:

First Position:

Ms. Jyoti, Ms. Urja and Ms. Neha
(MBA) Topic: Impact of advertisement
on consumer buying behaviour

Quizzards Of Civil



Second Position:

Shivangi and Mr. Saurav (B.Tech-CSE)
Topic: Computer Vision

Third Position:

Mr. Anand Pandey (B.Tech- ME) Topic:
Electromagnetic Clutch

The department organized a quiz competition in the college campus. The student coordinators were Wasim and Anurag from civil 3rd year.

Recent Placement



Mrityunjay Yadav

(B.Tech Civil)

Placed in
Indus Floor India Pvt Ltd



Shaurabh

(B.Tech Civil)

Placed in
Art N Glass Inc



Vishal Chand

(B.Tech Civil)

Placed in
Art N Glass Inc



Govinda Kumar

(B.Tech Civil)

Placed in
Indus Floor India Pvt Ltd

Placement Adviser and Coordinator

Initiatives taken under the charter of Training & Placement cell:

HOW IT WORKS?

Corporate Mentoring

ACEM holds professional engineering lecture sessions via industry members. These insightful lectures offer students peek into a real - life engineering industry and what is expected of them.

Industry Internships

The students learn in real-world environment through organized industry internships that allow them to understand the practical application of the engineering education. These internships are a great way to network in the chosen field that eventually reflects on the resume during final placements.

Pre-placement Sessions

To be successful, there is a need to know the audience. With these sessions, students get to know what skills are important to get placed in their dream company.

- Employability check for final year students
- Industry Readiness Training for 2nd & 3rd year students of B.Tech.
- Membership of internshala
- Membership of CII
- Collaboration with Barclays for the training & placement of the students
- Regular participation in various events organised by BITS and IIT's
- Entrepreneurship development
- Online aptitude test preparation for students
- Live projects with Edugrad and Innolabz
- Seminars & industry visits

Training and Placement Officer
Mr. Devendra Kumar

CSE Department Placement Coordinator
Ms. Divya Shree



Pride of Indian Education Awards for Outstanding Placement Record

in Delhi/NCR
In the presence of
Ms. Mandira Bedi



Excellence in Student Placement Award

from **Dr. Manish Kumar**, CEO,
National Accreditation Board for Education
and Training at Higher Education
Summit, New Delhi.

Our Recruiters



Maharani Innovative Paints Pvt Ltd

(Wholly owned subsidiary company of Maharani Paints Pvt. Ltd.)



Prime Time Global Icon Awards for Education Excellence

(Engineering and Management Studies)
for the year 2019 in NCR.





SCHOLARSHIPS

A high-quality education is a significant and important investment for future. To make this incredible opportunity more affordable, we offer various scholarships.

Aravali Scholarship Test (AST)

To provide an opportunity to bright inquisitive young minds from across the country to study in most challenging and diverse academic environment, Aravali College of Engineering & Management conducts an entrance test for admission to various courses. AST is aimed at rewarding the brilliance and potential of young aspirants to win scholarships and study in courses of their choice.

Institute Level Scholarship

% of Marks	Scholarship
86% Above	100 % of Tuition Fee
81-85.99%	70 % of Tuition Fee
75-80.99%	50 % of Tuition Fee
70-74.99%	20 % of Tuition Fee

HOW TO REGISTER?

Log on to - www.acem.edu.in

Please Note - Scholarship is not applicable to reserved category.

SUPER ACHIEVER SCHOLARSHIPS

Scholarship based on All India rank in JEE Mains

All India Rank (AIR)	Scholarship
Less than 50000	100% of Tuition Fee
50001 to 75000	75% of Tuition Fee
75001 to 100000	20% of Tuition Fee
100001 to 125000	10% of Tuition Fee

Note - 5% of Total Seats will be offered under the above scheme

Scholarship based on marks in 10+2

% of Marks	MALE	FEMALE
90% Above	100%	100%
86-90%	50%	70%
81-85.99%	30%	50%
75-80.99%	20%	25%
70-74.99%		10%

Note:

- Scholarships given on tuition fee
- Terms and conditions apply

How To Apply

S. No.	Name of the Programme	Duration	FEES (Per Annum)	Minimum Eligibility Criteria	Criteria for Selection
1.	Civil Engineering (CE)	4 Yrs	95,000	Passed 10+2 examination with at least 45% marks in aggregate in 5 subjects. Eligibility is on the basis of percentage of aggregate marks in Physics, Chemistry(or any equivalent subject) & Mathematics.	Short listing of candidates on the basis of score in JEE Mains 2020 / SAT/ AST 2020 / XII Qualifying Examination.

University Charges of 8,500 INR (Per Annum) applicable separately for all courses

Hostel : AC Room Rs 75,000 INR (Per Annum)
Non AC Room RS 65,000 INR (Per Annum)

Life At Aravali

