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### About Himachal

**Himachal – An Educational Paradise for Students**

Popularly known as the Devbhumī – “Land of the Gods”, Himachal Pradesh is a beautiful hill state in India. The state is landlocked with the Tibetan plateau to the east, Jammu and Kashmir to the north, and the Punjab to the west. Himachal Pradesh has the second highest literacy rate in India next to Kerala. The standard of education in the state has reached a considerably high level as compared to other states in India with several reputed educational institutes for higher studies. The state government is working constantly to prepare plans and projects to strengthen the education system. The opening of Indian Institute of Technical Education, Mandi is a milestone for the Himachal Pradesh Government. Also, as a part of the Government’s effort to strengthen the education system, the Himachal Pradesh Technical University, which is the affiliating university for all the Technical Colleges run in the state, keeps on upgrading its syllabi from time to time to educate the students according to the prevailing industrial scenario.

### Students of Himachal– Aptitude to Excel

The students of Himachal are considered to be hardworking, loyal and have a spirit of social adaptability and leadership. Various researches have proved that students here in Himachal have high degree of intelligent quotient. By virtue of their inherent nature they have comparatively one of the lowest rate of attrition pan India on joining corporate world as a fresher. They are considered to be enthusiastic and dedicated to their work profiles.
VCOE was established in the year 2010 under the aegis of Mata Vaishno Devi Educational Society with the aim to provide higher education to the Students. At VCOE, we strive to shape young minds who can excel in their respective fields. The emphasis is on developing a well-rounded personality in the students who are trained to be prudent and practical with an ability to balance vision with ground reality.

Growth and evaluation are the hallmark of a vibrant institution. From this perspective the strides made by this College are impressive. We have expanded the outreach and scope of our academic activities with every passing year. The corresponding infrastructure has similarly witnessed requisite upgradation. It is a measure of our accomplishment that we have introduced PG Courses in the College.

It is owing to the fast growing reputation of this College that we have students from the neighbouring states.

Longitudes & latitudes

The Campus is located at Village Thapkour, PO: Bhadroya, Tehsil Nurpur, Distt. Kangra (H.P.) 176403 which is at Kandwal-Bhadroya-Pathankot State highway. It is 8kms from Kandwal Barrier (HP) & 3kms from Chakki Bridge (Pathankot). Local buses are available from both the places every half-an-hour. Nurpur town is 20kms, Indora 15kms & Pathankot City is just 3kms from the Campus.

Message from Principal's Desk

Modern era is driven by globalization and fast paced world economy excelling every minute at an amazing speed. Recent technological advancements have influenced our lives many fold. Every young mind today is faced with a challenge of keeping pace with the growing global changes as also to derive maximum advantages of technology revolution.

We at VCOE provide one stop platform for the emerging professionals in the field of Engineering & Technology to successfully acquire the 21st century skills. Our programs are future oriented and encourage students to acquire ideas, pursue excellence and celebrate discoveries. VCOE demands full participation from its students to develop their complete personality so they are able to stretch and increase their potential. Education at VCOE empowers students to challenge and to lead. Our endeavour is to develop employable professionals who are the best fit in their respective industry. Thus a comprehensive training program aimed at imparting soft skills, industrial skills and a leadership skills is embedded in the college curriculum.

Lt. Col.(Retd.) A.K.Khajuria
To impart necessary training to our students to meet the expectations of the Industry and to achieve 100% placement by providing them adequate job opportunities.

**Our Mission:**
- To provide sufficient training on aptitude tests, group discussions, presentations, communication skills, soft skills, facing HR and Technical interviews, to enhance the employability of the students.
- To make the students aware about the corporate culture and career opportunities by organizing guest lectures, workshops, seminars and industrial trainings by experienced personnel from the Industry.
- To partner with renowned organizations from the Industry and organize recruitment drives for our students within and outside the campus.

**Our Vision:**

To carry out activities for accomplishing its mission, the Training and Placement cell was formed with following members from the faculty:
1. Mr. Ankush Gupta
2. Mr. Jatinder Kumar
3. Mr. Abhishek Bhagwan
4. Mr. Randeep Singh
5. Ms. Amanpreet Kaur
6. Ms. Sukhkirandeep Kaur
7. Ms. Neha Mahajan

**WHY VCOE?**

Though, Vaishno college of engineering is in its infancy stage, it has already made a mark in the field of engineering. VCOE has got plenty of admissions within a very small span of time. VCOE ensures that academics is not confined to the classroom or straitjacketed within a prescribed syllabi, students are encouraged to move beyond the boundaries of course content & to explore various dimensions of knowledge. VCOE provides discussion forums to fasten critical thinking and to provide platform for honing talent in debates, dramatics, public speaking, quizzes & so on. It is a place which provides smooth entry into a career that offers ample opportunity for progress & learning. To facilitate this, there is a training & placement cell which maintains links with business houses & potential employers, inviting the leading corporate entities from diverse industries to select & place its students.

**“VCOE provides the best to its students, to derive the best out of them.”**

The teaching faculty of VCOE is highly qualified, dedicated and committed to upgrading their professional acumen. The methods of teaching are innovative and are aimed at stimulating the individual thought process & creating talented students. Healthy interaction between teachers & students facilitates a very encouraging & motivating learning environment in the college. To expose the students to the best brains in their respective fields, extension lectures and seminars are organized by the college wherein eminent educationalists, subject experts & professionals are invited to deliver lectures and to conduct workshop for students. VCOE also imparts world class finishing training programs by industry experts that prepare students for specific roles in the industry thereby giving them a definite edge over others. These programs cover both 'Technical and Business skills'. The mission is set to produce globally competitive technocrats and managers.

The batch of 2010-14 truly reflects VCOE’s strengths which among many include versatility, innovation, a keen interest in learning, and being able to excel in a fiercely competitive world.
Facilities for Recruiters

Faculty and student coordinators will be available for the recruiters for making all required arrangements on the day of recruitment drive. Seminar Hall with a capacity of up to 200 students for conducting pre-placement talks, analytical tests, etc. will be provided to the recruiters. Group discussion and personal interview rooms will be provided to the recruiters.

Travel and Accommodation

The College Campus is located in a very peaceful and calm location in Himachal Pradesh which is just about 3 kms from Pathankot city. Pathankot, which is a district of Punjab State, shares border with Himachal Pradesh and Jammu & Kashmir and is very well connected with them.

To reach our college, the following are the most easily accessible arrival points:
1. Chakki Bank Railway Station, Pathankot, Punjab. – About 6 Kms from the college.
2. Pathankot Railway Station, Pathankot, Punjab. – About 7 Kms from the college.
3. Kangra Airport, Kangra, Himachal Pradesh. – About 70 Kms from the college.
4. Pathankot Bus Stand – About 7 Kms from the college.

The college will arrange for a pick and drop service for these points. You can also travel by car from your departing city to our college. The accommodation will be provided in the best hotel in Pathankot.

The interested companies are requested to inform the placement cell about its schedule for placement well in advance so that proper arrangements can be made for their representatives.
CAMPUS

The campus has been developed over an area of more than 15 acres. The complex includes spacious class rooms, seminar halls & common rooms for girls and boys, well equipped laboratories & vast playgrounds. In-campus deep bore well provides ample quantity of fresh water round the clock. Water Coolers are installed in both academic and residential areas fitted with aqua guards to provide clean drinking water to the students. In addition to the stand by generator set, a 125 KVA UPS has also been installed to provide uninterrupted power supply in the event of power failure. Separate hostel for boys and girls provide a home away from home to the boarders.

Library

VCOE library combines the virtues of classic reading with the strength of 21st century technology and it has a vast collection of text books for students besides a collection of reference Books, Journals and periodicals. More than 10% books are added every year on recommendations of both faculty members and students. The library has a separate reference section, magazine and periodical section and a reading room. Provisions for reprography, photocopy and binding are also available.

Workshop

A workshop is a place where the budding technocrats learn handling of tools and basics operations on machines. We have a well maintained workshop with latest and most advanced equipment procured from reputed brands.

Infrastructure / Amenities

In Campus hostel facility is available for boys and girls separately on sharing basis. The building is newly constructed with spacious fully furnished and well ventilated rooms. A common room with television and indoor games is available which provides the hostel inmates an avenue for relaxation. Round the clock water supply with solar water heating system and captive power supply is also available in case of power failure.

Lab Facility

From the very beginning VCOE has taken the lead in establishing well equipped and modern lab facilities. The mission of VCOE is to enhance knowledge and educate students in latest technology used in industry and also to understand the practical aspects of each course/subject in depth. We are committed to generate, disseminate and preserve knowledge. With this aim, the laboratories at VCOE are equipped with tools and instruments to cater to the requirements of budding technocrats.

Wi-Fi Campus

A dedicated 4Mbps line has been installed to provide uninterrupted internet facility round the clock with 125 KVA UPS for back up. Through this line connected with other Hi-Tech gadgets the college has created a secured Wi-Fi zone in the campus.

Canteen & Stationery

A spacious canteen is functional in the campus serving hygienic snacks and refreshments. This also provides an avenue for relaxation for students and the staff. An exclusive stationery shop is available within the campus catering to the daily stationery requirements of the students including text books. Facilities like photocopying, binding and lamination etc. are also available at the shop.

Computing Facility

VCOE offers a state of the art computing facility with 1:1 student to Computer ratio. The computer labs housing more than 150 networked computers cater to the computing requirements of both staff and students. The computer labs offer the latest technology based terminals connected to servers.

Transportation Facility

Transportation facility has been arranged for the faculty, students and other staff at reasonable rates. College is providing buses from all near by areas such as Nurpur, Jwali, Indora, Pathankot & Kathua.
On 5th May 2012, Inter Branch Cultural Competition was organized by the Cultural Committee of the College where in students displayed their talents, which included folk dances, songs, skits, solo and group dances etc.

Student Activities
To achieve an all round excellence and to transform a young mind to a professional, who is not only technically sound but also a good human being, we at VCOE involve our students into a variety of activities wherein he can showcase and enhance his capabilities as well as support the social causes.

Aids Day Campaign
On 1st Dec 2012, a rally was organized by the students to spread awareness about AIDS in neighboring villages.

Traffic Awareness Campaign
As a part of Corporate Social responsibility, a Traffic awareness Campaign was organized on 02nd May 2012 followed by students educated the commuters on road safety at Pathankot, Kathua, Samba, Lakhimpur & Jammu.

Fresher Day
To welcome the fresh batch, fresher's day is celebrated at VCOE. This year the fresher's day was celebrated on 10th Nov 2012. The function was organized by the cultural and Co-Curricular activity Committee. Mr. Des Raj, MLA was the chief guest. The celebration started with lighting of the lamp of learning. The students mesmerized the spectators by presenting a variety of cultural events.

Sports Day
All work and no play makes jack a dull boy. To provide relaxation from the classroom sessions and also a platform for development of team spirit and leadership qualities, facilities for games and sports, both indoor and outdoor are available. Sports day is celebrated annually where students from all engineering streams are seen participating in huge numbers.

Blood Donation Camp
To mark the disability day on 17th Apr 2012, a blood donation camp was organized at VCOE under the supervision of Dr. Anju Puri, Zonal Hospital, Dharamshala. A number of students and faculty members donated blood.

Seminars & Workshops
Numerous interactive seminars and workshops by the experienced personnel of the corporate world are organized to enhance the technical & soft skills of the students.

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Tech Fest

To provide a national level platform for the students to showcase their talents, VCOE organized Tech Fest on 30th March 2013. About 1500 students from numerous colleges of various states attended the Tech Fest. Many cultural and technical competitions were held. In the end, the event was rocked by the dazzling performance of singing star Mr. Garry Sandhu, who has won the best newcomer Punjabi singer 2011 award.

Job Fair

“When the whole world was worried about firing, 20 + companies visited VCOE for hiring.” About 200 candidates from numerous colleges situated in various parts of India got shortlisted for interview in Job Fair 2013 held at VCOE campus on 29th April 2013. The participating companies were impressed by the quality of students present at VCOE and appreciated the efforts of the students, faculty and the management.
Empowering Nation through Quality Education

VCOE in News

STUDENT DEMOGRAPHICS

Batch 2010 Graduating in 2014

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Batch 2011 Graduating in 2015

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Batch 2012 Graduating in 2016

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# Department of Computer Science

The objective of the department of Computer Sciences is to impart quality education and state of art training to the students, exposing them to the current and developing areas of computer sciences and Engineering. The department has state of art facilities and a highly dedicated, multi disciplinary and committed faculty.

## Lab Facilities
- ICPC Lab
- N.A Lab
- OOP Lab
- Sad Project Lab
- Visual Programming Lab
- RDBMS Lab
- PC Hardware Lab
- Multimedia Lab
- Computer Graphic Lab
- Compiler Design Lab
- Operating System Lab
- Computer Network Lab
- System & Network Administration Lab
- Artificial Intelligence Lab

## Faculty of C.S.E
- Mr. Deepak Sharma (M.Tech/Ph.D)
- Mr. Abhilash Sharma (M.Tech)
- Ms. Sukhkirandeep Kaur (M.Tech)
- Mr. Ajay Sharma (M.Tech)
- Mr. Anuj (M.Tech)
- Mr. Jatinder Kumar (M.Tech)
- Ms. Simmi Dogra (B.Tech)
- Mr. Malkoot Singh (MCA)
- Mr. Bhuvesh Pathania (MCA)

## Management
- Ms. Priyanka Sharma (MBA)
- Ms. Ritika Sharma (MBA)
- Ms. Neha Pathania (MBA)
- Mr. Randeep Singh (MBA)

## Departments

### Semesters

#### Semester 1
- **Subject**
  - Engineering Mathematics – I
  - Engineering Physics-I
  - Engineering Chemistry
  - Communication and Professional Skills in English
- **Lab Name**
  - Engineering Chemistry Lab
  - Communication & Professional Skill Lab
  - Computer Programming Lab
  - Workshop Practice

#### Semester 2
- **Subject**
  - Engineering Mathematics-II
  - Engineering Physics-II
  - Disaster Management and Environmental Science
  - Basic Electrical and Electronics Engineering
  - Engineering Drawing and Graphics
- **Lab Name**
  - Engineering Physics Lab
  - Basic Electrical Engineering Lab
  - Basic Electronics Lab
  - Workshop Practice - II

#### Semester 3
- **Subject**
  - Engineering Economics
  - Data Structures and Algorithms
  - Computer Organization & Computer Architecture
- **Lab Name**
  - Data Structures Lab
  - Hardware/PC Lab
  - Digital electronics Lab
  - Communication Skill Lab II
  - Vocational Project Training

#### Semester 4
- **Subject**
  - Human Values and Professional E
  - Numerical methods for Engineers
  - System Software
  - Theory of Computation
  - Internet Technology (JAVA)
- **Lab Name**
  - Numerical Method Lab
  - Internet Technology Lab
  - Computer Graphics Lab
  - Extra Curricular Activity

#### Semester 5
- **Subject**
  - Principals of Management and Critical Thinking
  - Operating System
  - Modeling and Simulation
  - Analysis and Design of Algorithms
  - Computer Networks
  - Microprocessor and Interfacing
- **Lab Name**
  - Operating System Lab
  - Computer Networks Lab
  - Microprocessor Lab
  - Community Project/Survey Camp

#### Semester 6
- **Subject**
  - Open Elective
  - Database Management System
  - Compiler Design
  - Software Engineering
  - Artificial Intelligence
  - Information Storage Management
- **Lab Name**
  - System and Network Administration Lab
  - DBMS Lab
  - Artificial Intelligence Lab
  - C#.NET Lab

#### Semester 7
- **Subject**
  - Elective -I
  - Advanced Computer Architecture
  - Data Mining and Data Ware Housing
  - Wireless Communication and Mobile Computing
  - Soft Computing
- **Lab Name**
  - Data Mining Lab
  - Multimedia Application Lab
  - Industrial Training Viva
  - Seminar
  - Project-I

#### Semester 8
- **Subject**
  - Elective-II
  - Information System Security
  - Web Technology
  - Fundamentals of Cloud Computing
- **Lab Name**
  - Web Technology Lab
  - Project -II
  - General Proficiency
## SYLLABUS (Branch ECE)

### Semester 1

**Subject**
- Engineering Mathematics – I
- Engineering Physics-I
- Engineering Chemistry
- Communication and Professional Skills in English
- Basic Mechanical Engineering
- Principles of Computer Programming & C++

**Lab Name**
- Engineering Chemistry Lab
- Communication & Professional Skill Lab
- Computer Programming Lab
- Workshop Practice

### Semester 2

**Subject**
- Engineering Mathematics-II
- Engineering Physics-II
- Disaster Management and Environmental Science
- Basic Electrical and Electronics Engineering
- Engineering Drawing and Graphics
- Engineering Mechanics

**Lab Name**
- Engineering Physics Lab
- Basic Electrical Engineering Lab
- Basic Electronics Lab
- Workshop Practice - II

### Semester 3

**Subject**
- Human Values and Professional Ethics
- Engineering Mathematics-III
- Digital Electronics Engineering
- Analog Electronics Engineering
- Circuit Theory & Network Analysis & synthesis
- Communication Theory

**Lab Name**
- Digital Electronics Lab
- Analog Electronics Lab
- Electronics Simulation Lab
- Communication Skills Lab-II
- Vocational Project / Training

### Semester 4

**Subject**
- Indian Economic Development
- Numerical Methods for Engineers
- Communication System-I
- Electronic Measurement & Measuring Instruments
- Electronic Device Modelling
- Pulse Shaping and Wave Generation

**Lab Name**
- Communication system Lab - I
- Electronic Measurement & Measuring Instrument Lab
- PCB and Electronic Workshop
- MATLAB
- Extra Curricular Activity

### Semester 5

**Subject**
- Open Elective
- Microprocessor Theory and Application
- Communication System-II
- Power Electronics & its Application
- Electromagnetic Field Theory
- Linear Integrated Circuit and Design

**Lab Name**
- Microprocessor Lab
- Communication System Lab-II
- Power Electronics Lab
- Community Project/ Survey Camp
- Control Systems

### Semester 6

**Subject**
- Principles of Management and Critical Thinking
- Microcontroller and Embedded Systems
- Control Systems
- Antenna and Wave Propagation
- Optical Communication
- Microwave and Radar Engineering

**Lab Name**
- Microcontroller Lab
- Control Engineering Lab
- Microwave and Optical Communication Lab

### Semester 7

**Subject**
- Elective-I
- Digital System Design using HDL
- Digital Signal Processing
- Wireless & Mobile Communication
- CMOS & VLSI Design

**Lab Name**
- VLSI & HDL Lab
- DSP Lab
- Wireless Communication Lab
- Industrial Training Viva V$5$
- Seminar / Project-I

### Semester 8

**Subject**
- Elective-II
- Information Theory and Coding
- Principle of Soft Computing
- Computer Networks & Data communication

**Lab Name**
- Soft computing Lab
- Data Communication Lab
- Project-II
- General Proficiency
**SYLLABUS (Branch EE)**

**Semester 1**
- **Subject**
  - Engineering Mathematics – I
  - Engineering Physics-I
  - Disaster Management and Environmental Science
  - Basic Electrical and Electronics Engineering
  - Engineering Drawing and Graphics
  - Engineering Mechanics

- **Lab Name**
  - Engineering Physics Lab
  - Basic Electrical Engineering Lab
  - Basic Electronics Engineering Lab
  - Workshop Practice-I

**Semester 2**
- **Subject**
  - Engineering Mathematics-II
  - Engineering Physics-II
  - Engineering Physics-II
  - Communication & Professional Skills in English
  - Basic Mechanical Engineering
  - Principles of Computer Programming & C++

- **Lab Name**
  - Engineering Chemistry Laboratory
  - Communication & Professional Skills Lab-I
  - Computer Programming Laboratory
  - Workshop Practice-II

**Semester 3**
- **Subject**
  - Human Values and Professional Ethics
  - Engineering Mathematics-III
  - Transmission & Distribution of Electrical Power
  - Circuit Theory
  - Electrical Engineering Materials and Applications
  - Digital Electronics

- **Lab Name**
  - Transmission & Distribution of Electrical Power Lab
  - Circuit Theory Lab
  - Digital Electronics Lab
  - Communication Skills Lab-II
  - Vocational Project / Training

**Semester 4**
- **Subject**
  - Engineering Economics
  - Numerical Methods for Engineers
  - Electrical Machines-I
  - Power Electronics
  - Signals & Systems
  - Electrical Measurement & Measuring Instruments

- **Lab Name**
  - Electrical Machines-I Lab
  - Power Electronics Lab
  - Electrical Measurement & Measuring Instruments Lab
  - Extra Curricular Activity

**Semester 5**
- **Subject**
  - Open Elective
  - Electrical Machine-II
  - Transducers & Signal Conditioning
  - High Voltage Techniques & HVDC
  - Electromagnetic Field Theory
  - Microprocessor Theory and Applications

- **Lab Name**
  - Electrical Machine-II Lab
  - Transducers & Signal Conditioning Lab
  - Microprocessor Theory and Applications Lab
  - Community Project/ Survey Camp

**Semester 6**
- **Subject**
  - Principles of Management and Critical Thinking
  - Switchgear & Protection
  - Control Engineering-I
  - Electrical Power Generation
  - Electrical Drives and Facts
  - Microcontrollers & Embedded Systems

- **Lab Name**
  - Switchgear & Protection Lab
  - Control Engineering Lab
  - Microcontrollers & Embedded Systems Lab

**Semester 7**
- **Subject**
  - Elective-I/Electrical Machine Design
  - Biomedical Engineering
  - Power System Operation & Control
  - Communication Engineering

- **Lab Name**
  - Electrical Machine Design Lab
  - Biomedical Engineering Lab
  - Industrial Training Viva
  - Seminar
  - Project-I

**Semester 8**
- **Subject**
  - Elective-II
  - Computer Applications To Power System Analysis
  - Control Engineering-II
  - Digital Signal Processing

- **Lab Name**
  - Computer Applications To Power System Analysis Lab
  - Digital Signal Processing Lab
  - Project-II
  - General Proficiency

**Lab Facilities**
- Basic Electrical & Electronics-Engg. Lab
- Electrical Machine Lab-1
- Electrical Machine Lab-2
- Power Electronic Lab
- Control Engg. Lab
- Switch Gear & Protection Lab
- Micro Controller Imbedded-System Lab
- Transducers and signal-conditioning Lab
- Transmission & Distribution of Electrical Power Lab
- EMMI Lab

**Faculty of Electrical Engg.**
- Mr. Rajesh Kumar Bhatti
- Ms. Abhisek Bagwan
- Mr. Ankush Gupta
- Ms. Avneet Kaur
- Mr. Sunil Kumar
- Mr. Vijayant Sharma
- Mr. Sushil Gaind
- Ms. Anuradha Khajuria

**Dept. of Applied Chemistry**
- Ms. Swati
- Ms. Supriya
Department of Civil Engg.

Civil Engineering involves planning, designing & execution of infrastructure activities, viz buildings, roads, kingdoms etc. and offers a multitude of career opportunities. A Civil Engineer requires not only a high standard of engineering knowledge but also supervisory & administrations skills.

### SYLLABUS (Branch CE)

#### Semester 1

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lab Name</th>
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<tbody>
<tr>
<td>Engineering Mathematics – I</td>
<td>Engineering Chemistry Lab</td>
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<tr>
<td>Engineering Physics-I</td>
<td>Communication &amp; Professional Skill Lab</td>
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<td>Engineering Chemistry</td>
<td>Computer Programming Lab</td>
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<tr>
<td>Communication and Professional Skills in English</td>
<td>Workshop Practice</td>
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<tr>
<td>Basic Mechanical Engineering</td>
<td>Principles of Computer Programming &amp; C++</td>
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#### Semester 2

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<td>Engineering Physics-II</td>
<td>Basic Electrical Engineering Lab</td>
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<tr>
<td>Disaster Management and Environmental Science</td>
<td>Basic Electronics Lab</td>
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<td>Basic Electrical and Electronics Engineering</td>
<td>Workshop Practice - II</td>
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<td>Engineering Drawing and Graphics</td>
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<td>Strength of Materials</td>
<td>Fluid Mechanics Laboratory</td>
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<tr>
<td>Building Construction and Materials</td>
<td>Surveying-I Laboratory</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>Building Drawing</td>
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<tr>
<td>Surveying-I</td>
<td>Oral and Written Communication Skills Lab-II</td>
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<tr>
<td>Engineering Mathematics-III</td>
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#### Semester 4

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lab Name</th>
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</thead>
<tbody>
<tr>
<td>Human Values and Professional Ethics</td>
<td>Soil Mechanics Laboratory</td>
</tr>
<tr>
<td>Numerical Methods for Engineers</td>
<td>Hydropower and Fluid Machines Laboratory</td>
</tr>
<tr>
<td>Structural Analysis-I</td>
<td>Surveying-II Laboratory</td>
</tr>
<tr>
<td>Geotechnical Engineering-I</td>
<td>Extra Curricular Activity</td>
</tr>
<tr>
<td>Hydropower and Fluid Machines</td>
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<tr>
<td>Surveying-II</td>
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#### Semester 5

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lab Name</th>
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<tbody>
<tr>
<td>Principles of Management and Critical Thinking</td>
<td>Structural Analysis Laboratory</td>
</tr>
<tr>
<td>Structural Analysis-II</td>
<td>Concrete Laboratory</td>
</tr>
<tr>
<td>Design of Concrete Structures</td>
<td>Community Project/ Survey Camp</td>
</tr>
<tr>
<td>Geotechnical Engineering-II</td>
<td></td>
</tr>
<tr>
<td>Hydrology and Groundwater</td>
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<tr>
<td>Transportation Engineering-I</td>
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#### Semester 6

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lab Name</th>
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<tbody>
<tr>
<td>Open Elective</td>
<td>Civil Engineering Software Laboratory –I</td>
</tr>
<tr>
<td>Bridge Engineering</td>
<td>Transportation Engineering Laboratory</td>
</tr>
<tr>
<td>Irrigation Engineering</td>
<td>Environmental Engineering Laboratory</td>
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<tr>
<td>Transportation Engineering-II</td>
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<tr>
<td>Water Supply and System Engineering</td>
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<td>Estimation and Costing</td>
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#### Semester 7

<table>
<thead>
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<th>Subject</th>
<th>Lab Name</th>
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<tbody>
<tr>
<td>Elective-I: Design of Steel Structures</td>
<td>Structural Drawing</td>
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<tr>
<td>Design of Hydraulic Structures</td>
<td>Waste and Sewage Treatment Laboratory</td>
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<tr>
<td>Waste and Sewage Treatment</td>
<td>Industrial Training Viva VHS</td>
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<tr>
<td>Project Planning and Construction Equipments</td>
<td>Seminar</td>
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<td>Project-I</td>
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#### Semester 8

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lab Name</th>
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<tbody>
<tr>
<td>Elective-II</td>
<td>Civil Engineering Software Laboratory -II</td>
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<tr>
<td>Advanced Structural Design</td>
<td>Project-II</td>
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<tr>
<td>Water Resources and System Engineering</td>
<td>General Proficiency</td>
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<tr>
<td>Earthquake Resistant Design</td>
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<tr>
<td>Civil Engineering Software</td>
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**Lab Facilities**
- Geotechnical Engg. Lab
- Concrete Structure Lab
- Structural Analysis Lab
- Material Testing Lab
- Survey Lab
- Transportation Lab
- Environmental Engg. Lab
- Civil Engg. Software Lab
- Concrete Lab
- Hydro Power & FM Lab
- Building Material Lab

**Faculty of Civil Engg.**
- Mr. K.L. Mehta
- Mr. Harvinder Singh
- Mr. Navdeep Singh
- Mr. Mohit Vaid
- Mr. Bikash Sharma
- Mr. Dheeraj
- Mr. Satpal
- Mr. Sukhwinder Singh

**Applied Maths Qualification**
- Dr. Vishwakarma
  - PhD
- Ms. Alka Mahajan
  - M.Sc, M.Phil
- Mr. Narinder Kumar
  - M.Sc, M.Phil
- Mr. Avikar Sharma
  - M.Phil, Pursuing PhD
- Ms. Arti Mahajan
  - M.Sc, M.Phil

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Faculty of Civil Engg.
- Mr. K.L. Mehta
- Mr. Harvinder Singh
- Mr. Navdeep Singh
- Mr. Mohit Vaid
- Mr. Bikash Sharma
- Mr. Dheeraj
- Mr. Satpal
- Mr. Sukhwinder Singh

Dr. Vishwakarma
- PhD

Ms. Alka Mahajan
- M.Sc, M.Phil

Mr. Narinder Kumar
- M.Sc, M.Phil

Mr. Avikar Sharma
- M.Phil, Pursuing PhD

Ms. Arti Mahajan
- M.Sc, M.Phil
### SYLLABUS (Branch ME)

- **Semester 1**
  - **Subject**: Engineering Mathematics – I
  - **Lab Name**: Engineering Mathematics Lab
  - **Lab Name**: Basic Electrical and Electronics Engineering Lab
  - **Lab Name**: Basic Electronics Engineering Lab
  - **Lab Name**: Workshop Practice-I

- **Semester 2**
  - **Subject**: Engineering Mathematics-II
  - **Lab Name**: Engineering Mathematics Lab
  - **Lab Name**: Communication & Professional Skills in English
  - **Lab Name**: Basic Mechanical Engineering Lab
  - **Lab Name**: Principles of Computer Programming & C++

- **Semester 3**
  - **Subject**: Engineering Economics
  - **Lab Name**: Engineering Economics Lab
  - **Lab Name**: Applied Thermodynamics
  - **Lab Name**: Machine Drawing
  - **Lab Name**: Fluid Mechanics

- **Semester 4**
  - **Subject**: Human Values and Professional Ethics
  - **Lab Name**: Oral and Written Communication Skills Lab-I
  - **Lab Name**: Metrology and Interchangeability Lab
  - **Lab Name**: Kinematics of Machines

- **Semester 5**
  - **Subject**: Principles of Management and Critical Thinking
  - **Lab Name**: Fluid Machines Lab
  - **Lab Name**: Manufacturing Technology-II
  - **Lab Name**: Heat Transfer
  - **Lab Name**: Machine Design-I
  - **Lab Name**: Dynamics of Machines

- **Semester 6**
  - **Subject**: Open Elective
  - **Lab Name**: Measurement and Control Lab
  - **Lab Name**: Industrial Engg. & Production Management
  - **Lab Name**: Machine Design-II
  - **Lab Name**: I.C. Engines Materials Technology

- **Semester 7**
  - **Subject**: Departmental Elective-I
  - **Lab Name**: Measurement and Control Lab
  - **Lab Name**: Industrial Engg. & Production Management
  - **Lab Name**: Machine Design-II
  - **Lab Name**: I.C. Engines Materials Technology

- **Semester 8**
  - **Subject**: Departmental Elective-II
  - **Lab Name**: Measurement and Control Lab
  - **Lab Name**: Industrial Engg. & Production Management
  - **Lab Name**: Machine Design-II
  - **Lab Name**: I.C. Engines Materials Technology

- **Workshop**
  - **Mr. Bachan Lal**
  - **Mr. Amrjeet Singh**
  - **Mr. Atul Singh**
  - **Mr. Neeraj Kumar**
  - **Mr. Ashwani Kumar**

### Department of Mechanical Engg.

Mechanical Engineering is a core engineering discipline and one of the oldest discipline in the field of engineering. It requires a solid understanding of core concepts including mechanics, thermodynamics, fluid mechanics and energy. Mechanical engineers use the installation, operation and maintenance of machinery and production process.

The curriculum at VCOE aims at developing both practical and theoretical knowledge in different discipline of Mechanical Engineering offered by the department.
Faculty Profile

The teaching faculty at VCOE is a set of highly qualified and dedicated team of teachers having specializations in several disciplines. The competence and expertise of the faculty are constantly upgraded in phased manner under faculty development program. Majority of the faculty members are post graduate and PhD’s. Research papers of many faculty members have been published in both international and national journals. Some of them have also presented papers in seminars at various levels.

Milestones achieved by Faculty Members

1. Book Authored By
   - Mr. Jatinder Kumar
   - Mr. Anuj Sharma
   - Mr. Ashok Garg
   - Ms. Sukhkirandeep Kaur

2. Paper Published By
   - Dr. Vishwakarma
   - Ms. Amanpreet Kaur
   - Ms. Sukhkirandeep Kaur
   - Mr. Vijayant Sharma
   - Mr. Deepak Sharma
   - Mr. Abhilash Sharma
   - Mr. Rohit Uppal
   - Mr. Avikar Sharma
   - Mr. Ankush Gupta
   - Mr. Sanjeev Sharma
   - Mr. Sanjeev Singh Punia
   - Mr. Vinal Sharma
   - Mr. Ankush Sharma