

2020-21



BUILDING TECHNOCRATES WITH ETHICS

INFORMATION BROCHURE

**For Admission
to
Bachelor of Technology**

**Computer Science & Engineering
Electronics & Communication Engineering
Electrical Engineering
Mechanical Engineering**

**FACULTY OF ENGINEERING & TECHNOLOGY
GURUKULA KANGRI VISHWAVIDYALAYA, HARIDWAR**

NAAC 'A' GRADE ACCREDITED DEEMED TO BE UNIVERSITY U/S 3 OF UGC ACT 1956

www.gkv.ac.in

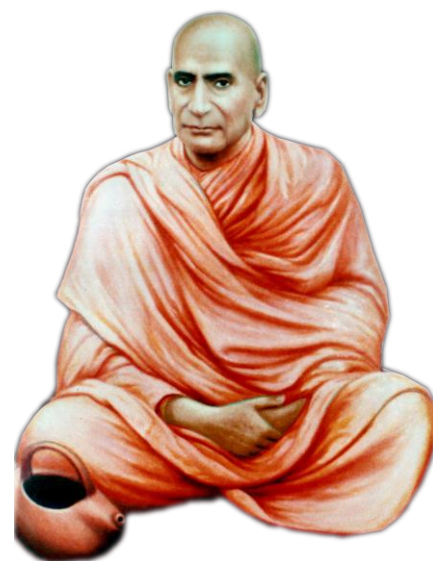
विवरण पत्रिका

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**For Admission
to
Bachelor of Technology
(B.Tech)**

in

- ✦ Computer Science & Engineering
- ✦ Electronics & Communication Engineering
- ✦ Electrical Engineering
- ✦ Mechanical Engineering



**अभियांत्रिकी एवं प्रौद्योगिकी संकाय
Faculty of Engineering & Technology
गुरुकुल काँगड़ी विश्वविद्यालय, हरिद्वार**

(नैक से "A" ग्रेड प्राप्त एवं यू0 जी0 सी0 एक्ट 1956 के सेक्शन 3 के अन्तर्गत समविश्वविद्यालय)

Gurukula Kangri Vishwavidyalaya, Haridwar

(NAAC 'A' Grade Accredited Deemed to be University u/s 3 of UGC act 1956)

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महत्वपूर्ण तिथियों के लिये विश्वविद्यालय की वेबसाइट
www.gkv.ac.in का अवलोकन करें। किसी भी तिथि में
परिवर्तन की सूचना विश्वविद्यालय की वेबसाइट पर ही दी जायेगी।

स्वस्तिपन्थामनुचरेम सूर्याचन्द्रमसाविव

From the Dean's Desk

Gurukula Kangri Vishwavidyalaya (GKV), gives real feel of Gurukula which is known for its philosophy of Vedic management, Innovative academic resources, green & calm environment with a blend of Vedic Culture as imagined by Swami Shradhanand ji, the great Vedic philosopher and founder of this prestigious University. Here in **Faculty of Engineering and Technology (FET)**, we nurture the overall personality of future intelligentsia and make them good human beings. I am glad to offer the various courses in Engineering and Technology to different sections of society with a mission to make this world more peaceful and meaningful place to live.



Over the last couple of years, FET has differentiated itself as a leading Engineering Campus through continuous improvement in its Engineering teaching pedagogies and sincere efforts to groom students. The role of a good educational institution is to bring out the latent abilities of students so as to ensure their overall development. FET has always believed in the concept that any work or play without learning makes a dull personality, so it lays emphasis on learning propelled teaching instead of traditional teaching pedagogies. Believing that the young minds of today will become the policy makers of tomorrow, FET tries to provide its young intellectuals, the opportunities to explore new and latest engineering tools and techniques, technologies to hone their skills. Today, in this intellectual, technical and competitive era, it is essential to be intuitive, creative and communicative to survive. FET provides platform to the young minds by conducting and participating in technical competitions, hackathons, conferences, symposiums, quizzes and many other outreach programs regularly to so that they can pioneer out of box thinking and tackle future challenges intelligently and calmly. Teachers of FET believe that life has a purpose of social service that can be fulfilled by contributing to this world, through our deeds of work and knowledge sharing.

Our B.Tech. programs in Computer Science & Engineering, Electronics & Communication Engineering, Electrical Engineering, and Mechanical Engineering produce the intellectuals who during their professional career always leave the footprints in the faculty as our alumni, which make us an intrinsically interfaced industry-academic body. Wherever they go, whatever they achieve, one thing remains unchanged and that is the relationship with FET faculties and students that gives FET the linkages with the industry for better placement record every year.

Prof. (Dr.) Pankaj Madan





FACULTY OF ENGINEERING & TECHNOLOGY

INFRASTRUCTURE

FET is spread in lush green campus over 13 Acres and has built-up area of 13344m². Hostel facility is available for B.Tech Students at Pt. Lekhrum and Swami Shradhanand hostel in main campus of Vishwavidyalaya and also a new hostel is under construction by the grant of AICTE in the FET Campus.

FACULTY LIBRARY

Faculty houses a good Library of its own which has approx. 31,000 books having more than 3600 titles. Books in the library are not only prescribed books but approaches other areas also, so that student get wider spectrum of world around. Faculty Library also has a separate reading room, besides this faculty library is a proud member of DELNET which is network of libraries of AICTE approved institutions. The circulation system of library is fully computerized and total volume of circulation is more than 21,000 per year. Library is also providing approx. 8500 online Journals through UGC-INFILIB facility, 186 reputed e-books titles are also available in library.

FACULTY COMPUTER CENTRE

Computer center provides IT related Service to the campus, it provides networking and internet facilities to various departments using optical fiber, wired and Wi-Fi networks. The computer center comprises of a lab of latest Window 10 Systems and a supporting window server 2008.

The internet in the faculty is provided through a 1 Gbps National Knowledge Network (NKN) connection which also serves as an extension to the resources at main campus, the computer center also hosts a local intranet website for offline viewing of NPTEL lectures and e-books resources.

अभियांत्रिकी एवं प्रौद्योगिकी संकाय

आधारभूत सुविधाएं

अभियांत्रिकी एवं प्रौद्योगिकी संकाय 13 एकड़ में फैला हरा भरा परिसर है जिसका 13344 m² क्षेत्रफल निर्मित हिस्सा है। बी.टेक के छात्रों के लिए हॉस्टल सुविधा पं. लेखराम एवं स्वामी श्रद्धानन्द छात्रावास में उपलब्ध है जो विश्वविद्यालय के मुख्य परिसर में है। इसके अतिरिक्त AICTE के मद से FET परिसर में भी हॉस्टल निर्माणाधीन है।

संकाय पुस्तकालय

संकाय में एक समृद्ध पुस्तकालय स्थापित है। जिसमें लगभग 3600 शीर्षकों की 31 हजार से अधिक पुस्तकों का संग्रह है। इन पुस्तकों में न केवल नियमित पाठ्य पुस्तकें हैं वरन् छात्रों की चतुर्दिक् ज्ञान वृद्धि के लिये विभिन्न विषय क्षेत्रों की पुस्तकों का संकलन किया गया है। संकाय पुस्तकालय में ग्रंथों के अध्ययन हेतु पृथकतः अध्ययन कक्ष स्थापित है, इसके अतिरिक्त संकाय पुस्तकालय अखिल भारतीय तकनीकी शिक्षा परिषद् द्वारा मान्यता प्राप्त संस्थानों के पुस्तकालयों के नेटवर्क DELNET का सदस्य है। पुस्तकालय में पूर्णतः कम्प्यूटरीकृत प्रणाली के माध्यम से प्रति वर्ष 21000 से अधिक पुस्तकों का आदान-प्रदान किया जाता है, इस हेतु प्रयुक्त कक्ष वातानुकूलित है। पुस्तकालय में कम्प्यूटर केन्द्र के माध्यम से लगभग 8500 ऑन लाइन जर्नल UGC-INFILIB के द्वारा उपलब्ध कराए जा रहे हैं, 186 प्रतिष्ठित ई-पुस्तकें पुस्तकालय में भी उपलब्ध हैं।

संकाय कम्प्यूटर केन्द्र

कंप्यूटर केंद्र परिसर में आई. टी. संबंधित सेवाएं प्रदान करता है, यह ऑप्टिकल फाइबर, वायर्ड तथा वाई-फाई नेटवर्क का उपयोग करके विभिन्न विभागों को नेटवर्किंग और इंटरनेट सुविधाएं प्रदान करता है। कंप्यूटर केंद्र में नवीनतम विंडोज 10 सिस्टम की एक प्रयोगशाला और एक सहायक विंडो सर्वर 2008 शामिल है।

संकाय में इंटरनेट 1 जीबीपीएस NKN इंटरनेट कनेक्शन के माध्यम से प्रदान किया जाता है जो की मुख्य परिसर में स्थित संसाधनों को उपलब्ध कराता है, कंप्यूटर केंद्र ऑफलाइन NPTEL व्याख्यान, eBOOKS देखने के लिए एक स्थानीय इंटरनेट वेबसाइट भी होस्ट करता है



Department of Computer Science & Engineering



Message from HOD

I feel honoured and privileged to be a part of Computer Science & Engineering department, the pioneer department of Faculty of Engineering Technology. We started our journey in 2000 with 40 students today we have an intake of 115 students this growth is all because of the confidence shown by our students and their parents. We feel proud to share that our students are not only working in all major IT companies like Google, Microsoft, Infosys, Tech Mahindra, IBM etc. but are also holding key posts in DRDO, ISRO, AICTE, MHRD etc and helping in building a better Nation by spreading the teachings of Gurukula in society.

Department provides atmosphere to the students for multifaceted development, where students are encouraged to channelize their potential in the pursuit of excellence with hands-on experience on Technologies like Cloud Computing, Blockchain, IoT, Machine Learning etc. We are the only Institute in Uttarakhand to have **Google Developer Student Club** where trainers from Google train our students on new technologies. I believe and assure you and your ward will not only become a better engineer by studying in CSE but would become a better human being an Engineer with Moral Values.

Dr. Mayank Aggrawal

DATA STRUCTURE:

Data Structure Lab emphasizes on programming exercise in representation of Stacks and Queues using Arrays and Linked list. Implementation of Singly linked list, Doubly linked list, Circular list, Insertion and Deletion from a Binary Search Tree (BST), Height Balance Tree (AVL). Implementation of various sorting and searching algorithms such as insertion sort, Selection sort, Bubble sort, Quick sort, Merge sort, Heap sort, Sequential search and Binary search. Implementation of various traversing algorithms like BFS and DFS etc.

OBJECT ORIENTED PROGRAMMING LAB:

Function in C++, parameter passing, call and return by reference, friend functions, inline functions, function overloading. Classes and objects: arrays within a class, memory allocation for objects, static members, returning objects, constructors, operator overloading. Inheritance: derived classes, single and multiple inheritance, hierarchical inheritance, constructors in derived classes, objects of other classes. Polymorphism: pointers to objects, this pointer, pointer to derived classes, virtual functions. Templates: class and function templates, template arguments, exception handling; use of files, learning to use Visual C++ environment.

COMPUTER NETWORK LAB:

Programme development for transmission error control. Hamming codes, CRC generation and checking. Simulations of MAC sublayer protocols, and window data link protocols. File transfer between nodes on a network. Implementation of routing algorithms security mechanisms and protocols.

DBMS LAB:

Writing different SQL queries for Creating a table, Insertion of records in a table, Updation of data in the table, deletion of a record from a table, Deletion of table, Searching records from the table, Constraints, Merging of two tables. Use of different keys such as primary key, foreign key, Unique key, Candidate key, Writing procedures, Triggers etc.

JAVA & .NET PROGRAMMING LAB:

Java programming lab emphasis programming exercise in classes and objects: Classes, Objects, Inheritance, Arrays, Interfaces, Packages etc. Exception Handling: Exception handling using Try and catch, Throws clause, Throw, Creating user defined exceptions. Multithreaded Programming: creating threads, Creating multiple threads, Thread Priorities. Implementation of Interthread communication, Suspending, Resuming and stopping threads. String Handling: Implementation of various file operations, I/O, Byte Stream, Serialization. Applet Class: Applet Display Methods, Passing parameters to applets. Event Handling: Sources of Events, Events Listener interfaces, Handling Mouse and keyboard events. Networking: Java and the net, TCP/IP client and server sockets, URL, URL connections. Servlets: Reading Servlet parameters, servlet chaining, Inter servlet communication, Applet Servlet communication. AWT: Working with windows, Graphics, Text; Control and layout Manager.

CLOUD LAB:

CloudLab provides researchers and students with control and visibility all the way down to the bare metal. Provisioning an entire cloud inside of CloudLab takes only minutes. Most CloudLab resources provide hard isolation from other users, so it can support hundreds of simultaneous "slices", with each getting an artifact-free environment suitable for scientific experimentation with new cloud architecture. Implementing IaaS in the host system and using cloud providers AWS, Google, Microsoft. Implementing PaaS on the AWS and Google.

PYTHON LAB:

Python programming lab to learn about sorting and searching using python. Advanced Regular expressions for data validations. Mathematical expressions. Introduction to Bigdata with Python and AI with Python.

INDUSTRY READY CURRICULUM:

CSE dept teaches all latest technologies like BigData, Cloud computing, Artificial Intelligence, Blockchain, Machine Learning.



Department of Electronics & Communication Engineering



Message from HOD

It is my pleasure and honor to welcome you to the Department of Electronics & Communication Engineering in faculty of Engineering and Technology, Gurukula Kangri Vishwavidyalaya. The department has a healthy environment where all the students and faculty members nurture the spirit of innovation, creativity and contribute effectively to the latest trends of technology.

The department has qualified and dedicated faculty members to provide good technical support and give individual attention to all the students and our faculty members are committed to teach our students the latest trends via smart teaching and learning process. The laboratories of the department are well equipped with sophisticated equipment's and professional tools in various fields of Electronics and Communication Engineering. The department has produced large number of highly accomplished alumni since its inception they are spread across the globe as professionals in industry, pursuing higher education and into research and development.

Dr. Vipul Sharma

ELECTRONICS DEVICES LAB:

This lab has various kits to study, characteristics of PN junction diode, Zener Diode, Application of PN junction diode as half wave rectifier and full wave rectifier, transistor characteristics in CE, CB and CC configuration and h Parameters, To study characteristics of FET, MOSFET, UJT, Oscillator.

DIGITAL ELECTRONIC LAB:

Verification of truth tables of IC 7400, IC 7402, IC 7404, IC 7408, IC 7432, IC 7486. To study truth tables of R-S, D and J-K, master slave flip-flop, half and full adder, Decoder, Binary to gray and gray to binary code converter, demultiplexer, Experiments are designed to be performed using a breadboard.

COMMUNICATION LAB:

Communication Laboratory of Electronics & Communication Engineering has various training kits like DSB/SSB AM Transmitter, DSB/SSB AM Receiver, FM Transmitter/Receiver, Sampling & Reconstruction, TDM Pulse AM/De Modulation, TDM Pulse Code Modulation/Receiver, Delta Adaptive. Delta & Delta Sigma M/Demo. Delta Formatting & Carrier Mod Transmitter, Carrier Demodulation & Delta Reformatting. CROs of 25 MHz, function pulse generator of 2 MHz and AM/FM function pulse generator of 2 MHz, PAM-PPM-PWM Modulation and Demodulation etc. are available in the laboratory. .

CIRCUIT SIMULATION LAB:

In Circuit Simulation lab department has various simulation software like orcad, electronic design software, Matlab Simulink, B2 Spice A/D circuit design tool, magic VLSI layout tool, Xilinx ISE, Ti-Tech C Compiler for Microcontroller Chip programming.

PCB LAB:

The Department has state of art of PCB lab where students learn how to fabricate the designed circuit/power supply on printed circuit board which is more robust and more compact in size, A advance version of PCB prototype machine can be use to construct (Single side PCB, Double side PCB, Antennas on Copper Clad)

LIC/IC APPLICATION LAB:

The laboratory is well equipped with the kits to study the characteristics of OP-AMP and their applications as adder or summing amplifier, subtractor or differential amplifier, inverting and non-inverting amplifier, differentiator and integrator, V to I and I to V converter, V to F and F to V converters and active filter, Schmitt trigger, pulse generator, envelop detector and window comparator, multivibrator etc.

MICROWAVE & ANTENNA LAB:

The Microwave Engineering Laboratory has various states of art microwave test benches. The experiment in this laboratory includes; study of characteristics of Gunn oscillator and Reflex Klystron, measurement of SWR and reflection coefficient, measurement of load impedance, measurement of guide/free space wavelength, measurement of polar pattern and gain characteristics of pyramidal horn/pickup horn/ dielectric horn/sectorial horn/ paraboloid disc antennas, study of Doppler effect, measurement of dielectric constant of solid and liquid, measurement of phase shift and 'Q' of a cavity, study of directional coupler, isolators, circulations and Magic Tee, measurement of characteristics of detector diode, study of attenuation measurement and return loss measurement. Gunn Oscillators and klystron tubes are being used as sources in the benches. For designing part it contains HFSS Antenna Simulation Software.

MICROPROCESSOR LAB:

Microprocessor Laboratory has various training kits like 8085/8086 microprocessors, 8051 micro controller, Student learns interfacing of various devices (LED, Seven segment Display and other peripheral devices)

ADVANCED INSTRUMENTATION LAB:

Advanced Instrumentation Lab has various training setup link to measure temperature using J type and K type thermocouple, RTD, to study characteristics of thermistor, strain gauge, acceleration transducer, Load cell, LVDT, Electromagnetic pick up, Photo electronic pick up.

EMBEDDED SYSTEM DESIGN LAB:

In this lab students learn interfacing of various devices (LEDs, LCD, Seven segment display, Keypad, ADC0808 etc) to microcontroller 8051/89C51 on bread board as well as on software proteus etc.

SYSTEM ENGINEERING LAB:

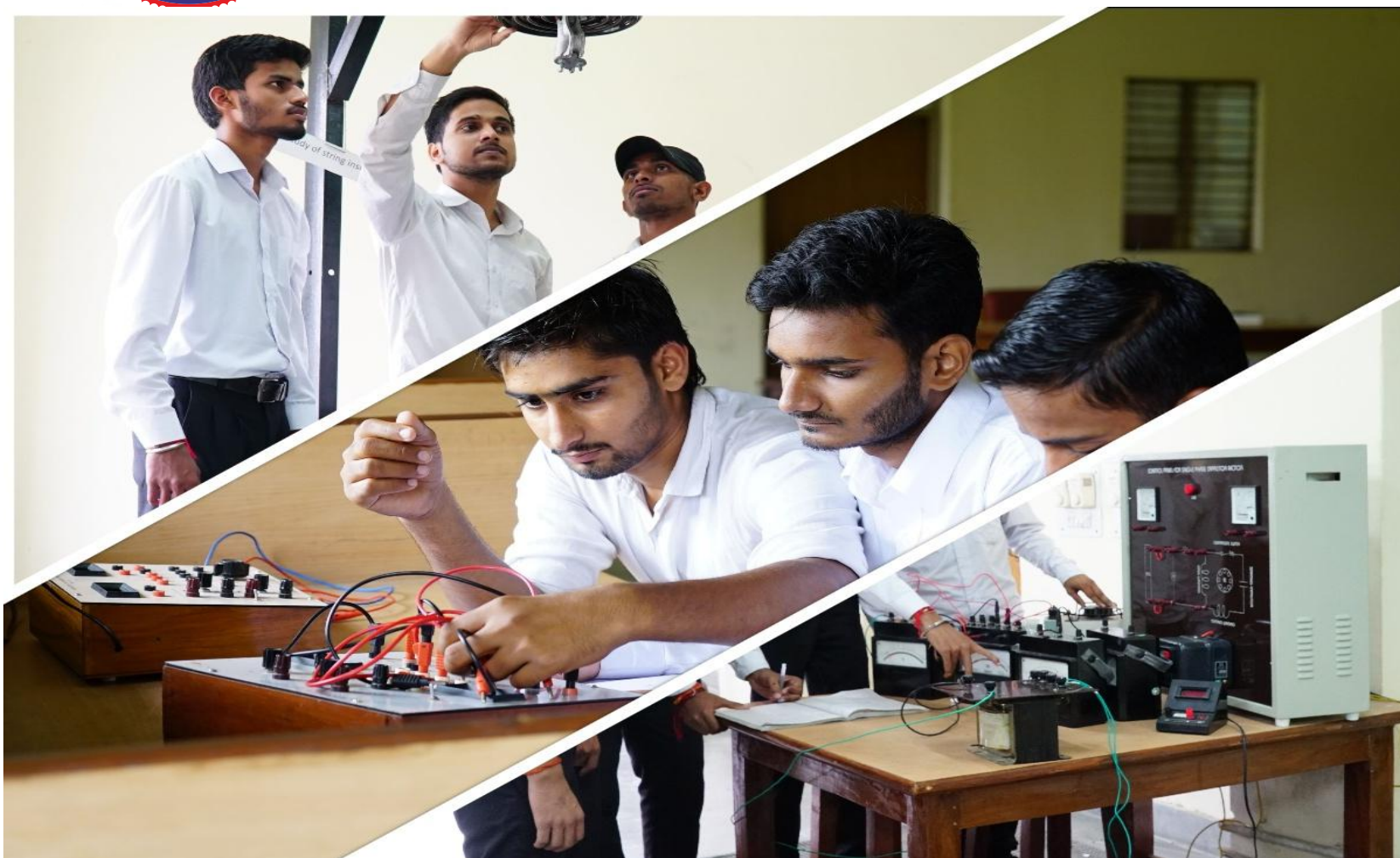
System Engineering Laboratory has time and frequency domain spectrum analyser with software interface. It also has sampling and reconstruction trainer. Reconstruction of signals can be done using fourier synthesis kit, All experiments can be practices on latest version of MATLAB.

DIGITAL SIGNAL PROCESSING LAB:

Digital Signal Processing Laboratory is well equipped with TMS320C6713 and code composer studio analysis and synthesis. In this lab we also design FIR and IIR filter with different techniques. It will help the students in depth knowledge of simulation of signal processing techniques.



Department of Electrical Engineering



Message from HOD

The Department of Electrical Engineering was established in the year 2002 and has produced 14 batches of eminent students in engineering field since beginning. The department offers a regular course for the award of the degree in Bachelor of Technology (B.Tech.) in Electrical Engineering. The curriculum provides strong base to the students in Electrical Engineering and provides exposure to the latest technologies. Collaboration with faculty members from other disciplines, both within and outside the institute, is encouraged. The department currently has laboratories equipped with latest equipment and software platforms, and classrooms with projectors to impart state-of-the art technical knowledge.

Electrical Engineering forms the base of various technical fields. Electrical Engineers can work with Government sectors, private companies, as consulting engineers or as entrepreneur in the field of research, design, projects, production, maintenance and testing etc. The department provides an excellent environment for its students and faculties to work with zeal and enthusiasm with an aim to give their best. Besides a strong base in the engineering field, the moral and ethical values are also developed in the campus.

Mr. Gajendra Singh Rawat

BASIC ELECTRICAL ENGINEERING LAB:

This lab is used by first year students of all the branches. In this lab several experimental kits are available for verifying DC network theorems Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum Power Transfer theorem and calibration of ammeter, voltmeter and energy meter etc. This laboratory is also well equipped with various electrical machines, such as single & three phase transformers, single & three phase induction motors, DC shunt motors, DC series motors and DC motor coupled with DC generator.

ELECTRICAL MACHINE LAB:

This lab is used by second year students of Electrical and Mechanical engineering. This lab is well equipped with all AC & DC electrical machines, like coupled 5 H.P DC Shunt motor with 2.5 Kilowatt DC generator. 1H. P single phase induction motor, 2 KVA transformers, 3 H.P synchronous motor, a set of 5 H.P DC shunt motor with 3 KVA alternators exciter and a set of parallel operation of alternators.

CONTROL & INSTRUMENTATION LAB:

This lab is used by third year students of electrical engineering. This lab consists of various technical equipment such as temperature control system, strain gauge, DC position control, Proportional control, PID Controller, Potentiometer Error Detector, Resistance Temperature Detector, LVDT, light intensity control, Static performance and Transient analysis etc.

CIRCUIT LAB:

This lab is used by second year students of electrical engineering. This lab is fully equipped with all experimental kits and other required instruments such as AC network theorem (Thevenin's theorem, Norton's theorem, Superposition theorem, Maximum Power Transfer theorem) kits, LCR series and parallel kit, cascade two port network kit, T and (pi) network kit, R L C circuit kit etc.

MEASUREMENT LAB:

This lab is used by second year students of electrical engineering. This lab is well equipped with all the bridges and other instruments for measuring electrical parameters, like resistance, inductance, capacitance etc. At present, this lab consists of several bridge like Owen's bridge, Hay's bridge, Maxwell's bridge, Schering bridge, Kelvin's double bridge and other equipment for measuring power factor using the watt-meter method and three voltmeter method and set up for Lissajous Pattern etc.

POWER SYSTEM LAB:

This lab is used by third year students of electrical engineering. It is well equipped with all the high power transmission and distribution kits like single L-G fault, L-L fault, transmission line trainer kit, cable fault locator, Earth tester, Radial configuration of DC distribution system, model of multiple layer cable, setup for string efficiency etc.

SWITCH GEAR & PROTECTION LAB:

This lab is used by final year students of electrical engineering. This lab consists the protective relays, such as Thermal relay, fuse set-up, over current relay set-up, I.D.M.T relay set-up, earth fault relay and percentage differential relay etc.

COMPUTER AIDED DESIGN LAB:

This lab is used by third and final year students of electrical engineering. It consists of 35 computers with proper network connection and Internet facility. Students can work on softwares like MATLAB and PSCAD LAB version 4.5 for designing electrical circuits, compiling computer programs and making projects in the lab.



Department of Mechanical Engineering



Message from HOD

The Department of Mechanical Engineering was established in the year 2009 and the first batch passed out in 2013. It is one of the richest departments in the faculty with over 350 undergraduate students enrolled. The department is comprising of the most talented faculties and equipped with wide range of hi-tech machineries, equipment and software to broaden the practical aspects to students.

The students are involved in the projects related to the problems faced by today's society. Students graduated from department are not only sound in technical knowledge but also equipped with the technological ethics for the society and are end up to the leading positions in industry, PSU, academia and Government Sector in India and abroad. The faculties from department evolved in various government schemes/ projects like PMKVY, to help the society in strengthen with skills.

Mr. Sanjeev Kumar Lambha

MATERIAL SCIENCE & TESTING LAB:

Material Science Lab has Shear test attachment, Torsion Testing Machine, Vibration test, Optical Microscope, Muffle Furnace, Belt Grinder Machine and Single Wheel Polishing Machine, Fatigue testing machine, creep testing machine and spring testing machine for spring index testing, Universal Testing Machine (UTM), etc.

FLUID MECHANICS LAB:

This Lab is comprising of various models such as the surface of liquids, Metacentric height Apparatus, Reynolds Apparatus, Flow through Orifice and Mouthpieces, Bernoulli's theorem apparatus, Discharge through venturi meter & Orifice meter, Discharge over notches, Impact of Jet on vanes, Losses due to pipe fitting and sudden bend Meter test Rig. Electrical Analogy apparatus

MANUFACTURING SCIENCE - I LAB:

This lab has tube Bending machine, Jigs & Fixtures & Holes, Trinocular Metallurgical Microscope (M4X, M10X, M40X, M100 (oil) Magnification (25x-100x)), Fly Pres (Screw size 75 mm dia.) O single slided. strip Rolling Machine (Rolling Capacity 20mmX5mm Strip) Ralle's length 4.5", Dias at Rolle's 2.5" wire drawing Machine (Drawing Capacity 3mm) Single die system, wire stand pull-intong havells make 5HP motor. Dies (die size 9mm, 8.5mm, 8mm, 7.5mm) Punching machine Capacity 5 Tox. Induction Furnace (capacity up to 1 kg.), Injection moulding machine (capacity 100 gm. plastic granual) and Power hammer.

MEASUREMENT METROLOGY AND CONTROL LAB:

This lab consists of various instruments such Dial Indicator, Limit Gauge (study of limit gauge range 12 mm), Surface Plate (1000x630mm) with stand, Filler gauge, 3 Wire Set, Micrometer, (Make Mitutoyo), Capacity 0-25 mm (a) Digital display (b) Standard LC 0.001 mm, Vernier Caliper, (Make Mitutoyo), Capacity 0-15 mm, (a) Digital display (b) Gear tooth Vernier, stroboscope, V-block, Slip gauges etc.

FLUID MACHINE LAB:

This lab consists of various experiments setup of like, Pelton turbine test Rig, Francis turbine test rig, Kaplan turbine test rig, hydraulic ram test rig, reciprocating pump test rig, centrifugal pump test rig, and gear pump test rig.

MANUFACTURING SCIENCE - II LAB:

Manufacturing science lab is comprising of surface grinding machine and 4" fully automatic torrent lathe, Surface grinder etc.

I.C. ENGINES LAB:

This lab consists of RIGS of Four-cylinder four-stroke Petrol Engine, Single-cylinder four-stroke Petrol Engine, and Single-cylinder four-stroke Diesel Engine. This lab also consists Ignition system of I.C. Engine and C.I. Engine test rig.

REFRIGERATION AND AIR CONDITIONING LAB:

This lab is comprising of Refrigeration test rig, cut section board of RAC Components, window type air conditioning test rig and Ice plant Trainer.

MECHANICAL WORKSHOP:

Mechanical Workshop is broadly divided into five shops such as Carpentry, Foundry, Fitting, Metal Joining and Machine Shop. Lathe machines, Shaper machine, Universal Milling machine, Gas welding and Arc welding set-ups are available in the workshop. CNC training lathe machine and VPL Infotech made CNC two-axis lathe machine are also available in the workshop .

ENGINEERING GRAPHICS LAB:

Engineering Graphics Lab consist of Interactive Board, Over Head Projector (OHP) and models , Transparent Wooden Model of Prism and Pyramid for demonstration purpose. It also has Drawing Boards, Drawing File Cabinet etc. It consists of a software Autocad for 2D designing also.

APPLIED THERMODYNAMICS LAB :

This lab consists Rigs of Four-cylinder four-stroke Petrol Engine, Single-cylinder four-stroke Petrol Engine, and Single-cylinder four-stroke Diesel Engine. There are some models of Refrigerator, Velocity Compounded Steam Turbine, Pressure Compounded Steam Turbine, Impulse & Reaction Turbine, Steam Engine, Two-Stroke Petrol Engine, Two-Stroke Diesel Engine, Four-Stroke Petrol Engine, Four-Stroke Diesel Engine, Ignition System of I.C. Engine, Breaking System, Gas Turbine etc.

MACHINE DESIGN LAB:

Lab comprising of 2D and 3D, software for designing and analysis on Autocad(perpetual) and ProE(Creo 2.0), MATLAB which the students are using in preparing their projects also.

MACHINE DRAWING LAB:

This lab consists of Models of Ball bearing, Roller bearing, Taper bearing, Thrust bearing, Open truck bearing, Simple bearing, Bush bearing, Plumber block, Foot step bearing, Keys, Rivets joints, Knuckle joints, Tie Rod joint, Cotter joint, Gib and Cotter joint, Sleeve and Cotter joint, Socket and Spigot joint, Universal coupling, Hook's coupling, Flexible coupling, Muff coupling, Oldham's coupling, Locking arrangement of Bolts. Autocad software.

HEAT AND MASS TRANSFER LAB:

Heat & mass transfer lab is well equipped with following setups like heat transfer through composit wall, heat transfer through lagged pipe, pool boiling apparatus, heat transfer in natural convection, heat transfer from pin-fin, Steffan Boltzman apparatus, Emissivity measurment apparatus, parallel/counter flow heat exchanger and thermal conductivity of insulating powder.

THEORY OF MACHINES LAB:

This lab has a Universal Governor Apparatus, whirling of shaft apparatus, motorized Gyroscope Apparatus, Static & Dynamic Balancing Apparatus, Cam Analysis Apparatus, and Journal Bearing Apparatus.

COMPUTER LAB:

The computer lab consists of computers with Windows 10 and latest softwares for designing and drafting softwares to be used by Mechanical Engineering Industries as AutoCad, Creo 2.0, MATLAB etc.



Department of Applied Science



Message from HOD

Department of Applied Science was established in the year 2000 and has been instrumental in achieving its purpose to deliver quality teaching and research.

The faculty of the department has been actively pursuing research in important areas of applied sciences. The environment at this department is highly conducive for preparing the technocrats well trained to handle the rigors of the job and society by virtue of their talent, sincerity, commitment, skill- attributes that are meticulously nurtured during their stay at the department of applied science.

Dr. Sunil Panwar

APPLIED PHYSICS LAB:

Faculty has a separate laboratory for catering to Engineering Physics for B.Tech first year students. This lab has experimental set up like Fresnel's Biprism, Hall effect, polarisation of laser light. Specific charge of an electron by magnetrons method, Helical Method and energy band gap of Germanium (ge) sample by four probe method, wavelength of monochromatic light source (i.e. sodium light) by Newton's Ring Method, Wavelength of visible light source (i.e. Mercury light) by diffraction grating method.

APPLIED CHEMISTRY LAB:

Chemistry lab serves Engineering Chemistry course of B. Tech first year students. Gas pipe-line is fitted with all safety devices in the lab. A section of chemistry lab has various modern equipments like conductivity meter, pH meter, turbidity meter, Abbe's refractometer, electronic balance, flame photometer and UV- Visible Spectrophotometer.

APPLIED MATHEMATICS:

Applied Mathematics is one of the key department of Engineering. Department teaches Engineering Mathematics, Numerical Analysis, fuzzy logic, Graph Theory, Optimization Techniques & Discrete Mathematics. These subjects have numerous applications in Engineering & Technology.



Activities in FET

We think that studies isn't enough for a good personality. It is required to be in touch with industry and various resource persons who mastered in specific area so that a student can enhance his knowledge.



Invited Lecture on Vedic Cosmology

Overnight Hash Code Competition



A Robotics Workshop

Activities in FET



**A Workshop on
Cyber Security**



**A Workshop on
Intellectual
Property Rights**



**An Invited
Lecture on Deep
Learning**

Alumni Meet 2019



“Jnanagni”

We think that studies isn't enough for a good personality. Jnanagni, A National Level Technical Festival organised by Faculty of Engineering and Technology Gurukula Kangri Vishwavidyalaya, Haridwar.



Facilities @ FET

- Hostel Facility
- Canteen
- ATM Facility
- Seminar Halls with Audio and Video Capability
- Open Gym in FET and other GYM and Sports Facility available at Dayanand Stadium in Vishwavidyalaya.
- Sports Facilities @ FET : FET has well developed facilities for playing Volleyball, Badminton, Cricket, Basketball, Lawn Tennis, Table Tennis & Athletics. Faculty organizes tournaments like GPL, ESL every year. For the physical & mental development of students faculty organizes yoga classes and physical fitness classes also.



Smartboards



Open GYM



Bus Service

Admission Procedure & Rules

S.No.	Branch	Duration	Seats*
1	Computer Science & Engineering	Four Years	115
2	Electronics and Communication Engineering	Four Years	115
3	Electrical Engineering	Four Years	115
4	Mechanical Engineering	Four Years	115

(*Total Seats Including EWS Category)

काउंसिलिंग शुल्क Rs 1000 (**Non refundable & Non Adjustable**) कुलसचिव, गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार के नाम बैंक ड्राफ्ट द्वारा स्वीकार्य।

Counseling Fee of Rs. 1000 (Non refundable & Non Adjustable) to be paid through Demand draft in favor of Registrar, Gurukula Kangri Vishwavidyalaya, Haridwar).

Note: Admissions against vacant seats

1. After upgradation of the already admitted students through JoSAA/CSAB Counselling the remaining vacant seats will be filled through candidates by applying through application form on the basis of All India Rank of JEE(Mains) 2020.
2. On the confirmation of admission the candidate has to submit the complete fee at the time of counseling. If candidate fail to submit the complete fee on the spot in that case his claim for the seat will stands cancel.
3. Candidates applying for the direct admission to the second year, needs to submit the counseling fee.

नोट: रिक्त स्थानों पर प्रवेश से संबंधित

1. रिक्त सीटों पर पहले से JoSAA/CSAB Counseling के द्वारा प्रवेश पाये हुए छात्रों की शाखाओं के उच्चीकरण के पश्चात जो अभ्यर्थी रिक्त स्थानों पर प्रवेश के लिये आवेदन करेंगे, उनको JEE-2020 मेन्स अखिल भारतीय वरीयता की मेरिट के आधार पर प्रवेश दिया जायेगा।
2. अभ्यर्थी को प्रवेश स्वीकृत किये जाने पर तत्काल पूर्ण शुल्क जमा करना होगा। यदि कोई अभ्यर्थी काउंसिलिंग के उपरान्त तत्काल पूर्ण शुल्क जमा नहीं करता है तो उसका प्रवेश स्वतः निरस्त समझा जायेगा।
3. बी.टेक. द्वितीय वर्ष में सीधे प्रवेश के लिए आवेदन करने वाले अभ्यर्थियों को भी काउंसिलिंग शुल्क जमा करना होगा।

ADMISSION PROCEDURE

B.TECH. I YEAR

Eligibility

- Passed 10+2 examination with Physics, Chemistry and Mathematics as compulsory subjects along with one of the Biotechnology/Biology/ Technical Vocational subject. from any recognized Board or University of India or foreign country or as per eligibility decided by JoSAA/CSAB-2020.
- CRL/AIR of JEE Mains - 2020 conducted by N.T. A., New Delhi.

Admission Procedure

- Admission shall be made strictly in accordance with rules and regulations made by C.S.A.B./JoSAA through CML/AIR of JEE Mains - 2020.
- Candidates allotted seat through Central Counselling held at different centres throughout country have to complete all formalities of admission (Fee and document deposition) during prescribed dates given by CSAB/JoSAA failing which their candidature shall stands cancelled.
- Candidates admitted through Central Counselling conducted by C.S.A.B./JoSAA can also avail the chance of upgradation in case of availability of seats by filling the same form.
- After upgradation of the already admitted students remaining vacant seats will be filled through candidates by applying through form on the basis of AIR of JEE(Mains).
- Application form for Direct Admission to B.Tech. I year (lateral entry) can be downloaded from university website www.gkv.ac.in and send along with **Demand Draft of Rs. 800/-** in favour of "**Registrar, Gurukula Kangri Vishwavidyalaya, Haridwar,**" payable at **Haridwar**.
- Application for B.Tech I year against vacant seats to be filled online on www.gkv.ac.in and print out of the same alongwith a DD of Rs 300/- in favour of Registrar, Gurukula Kangri Vishwavidyalaya, Haridwar if not paid online payable at Haridwar should be sent to the office of the **Dean, Faculty of Engineering & Technology, Gurukula Kangri Vishwavidyalaya, Haridwar**, on or before last date.
- Candidates allotted through JoSAA/CSAB. are also required to fill the application/verification form (attached in the Information Brochure).
- A category-wise merit list shall be prepared on the availability of seats in different categories.
- Candidates in the merit list have to come for counseling /admission along with the following original certificates /documents along with 4 photocopies & 8 Photographs.
 - High School Certificate & Marksheet
 - Intermediate (10+2) Certificate & Marksheet
 - Migration & TC from the institution last attended
 - Character certificate from the institution last attended
 - Reservation category certificate, if applicable
 - Score card & Admit card of JEE mains-2020

प्रवेश प्रक्रिया

बी.टेक. प्रथम वर्ष

योग्यता

- बी.टेक. प्रथम वर्ष में प्रवेश हेतु न्यूनतम योग्यता किसी भी भारतीय अथवा विदेशी मान्यता प्राप्त बोर्ड / विश्वविद्यालय से मुख्य विषय के रूप में भौतिकी, रसायन एवं गणित और साथ में एक बायोटेक्नोलॉजी/ बायोलॉजी/ट्रेकिंगल वोकेशनल विषय से इंटरमीडिएट उत्तीर्ण होना है। या जोसा / सी.एस.ए.बी द्वारा निर्धारित योग्यता के अनुसार।
- नेशनल टेस्टिंग एजेंसी, नई दिल्ली द्वारा आयोजित जेईई मेन्स 2020 पर आधारित प्रवेश परीक्षा के सी.आर.एल./ए.आई.आर. के आधार पर।

प्रवेश प्रक्रिया

- प्रवेश पूर्णतया सी.एस.ए.बी./जोसा द्वारा निर्धारित नियमों पर अखिल भारतीय जेईई मेन्स 2020 के सी.एम.एल./ए.आई.आर. के आधार पर होंगे।
- देश के विभिन्न केन्द्रों पर आयोजित केन्द्रीय काउंसिलिंग द्वारा आवंटित प्रवेश स्थानों पर अभ्यर्थियों को सी.एस.ए.बी./जोसा द्वारा निर्धारित तिथियों में प्रवेश सम्बंधी सभी औपचारिकताएं (शुल्क एवं प्रमाण पत्र जमा करना) पूरी करनी होंगी ऐसा न करने पर उनकी अभ्यर्थिता स्वतः निरस्त हो जायेगी।
- सी.एस.ए.बी./जोसा द्वारा आयोजित केन्द्रीय काउंसिलिंग से प्रवेश प्राप्त अभ्यर्थी भी इसी आवेदन पत्र को भरकर शाखा उच्चीकरण की सुविधा उपलब्धता के आधार पर पा सकते हैं।
- रिक्त स्थानों को पहले से प्रवेश पाये छात्रों की शाखाओं के उच्चीकरण के पश्चात जो अभ्यर्थी रिक्त स्थानों पर प्रवेश के लिये आवेदन करेंगे, उनको **JEE-2020** मेन्स अखिल भारतीय वरीयता की मेरिट के आधार पर प्रवेश दिया जायेगा।
- द्वितीय वर्ष में सीधे प्रवेश हेतु आवेदन पत्र विश्वविद्यालय की वेबसाइट www.gkv.ac.in से डाउनलोड कर रु० 800/- का कुलसचिव, गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार के पक्ष में देय डिमाण्ड ड्राफ्ट डाक के साथ भेजा जा सकता है।
- बी.टेक. प्रथम वर्ष (रिक्त स्थानों पर प्रवेश हेतु) का आवेदन www.gkv.ac.in ऑन लाइन भरकर उसके प्रिन्ट कापी के साथ रु० 300/- का बैंक ड्राफ्ट कुलसचिव, गुरुकुल कांगड़ी विश्वविद्यालय के नाम हरिद्वार में देय यदि शुल्क online जमा न किया हो, के साथ संकायाध्यक्ष अभियांत्रिकी एवं प्रौद्योगिकी संकाय, गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार के कार्यालय में अंतिम तिथि अथवा उससे पूर्व तक अवश्य जमा हो जाना चाहिए।
- जोसा/सी.एस.ए.बी. द्वारा आवंटित छात्रों को भी यही आवेदन पत्र/वैरिफिकेशन फार्म (विवरण पत्रिका में संलग्न) भरना होगा।
- विभिन्न वर्गों में प्रवेश स्थानों की उपलब्धता के आधार पर वर्गवार मेरिट सूची बनायी जायेगी।
- मेरिट सूची में आने वाले अभ्यर्थियों को 8 फोटो, निम्नलिखित मूल प्रमाण पत्र तथा चार छाया प्रति सहित काउंसिलिंग/प्रवेश हेतु आना होगा।
 - हाईस्कूल प्रमाण पत्र एवं अंक पत्र
 - इंटरमीडिएट (10+2) प्रमाण पत्र एवं अंक पत्र
 - अंतिम संस्थान द्वारा प्रदत्त माइग्रेशन – स्थानान्तरण प्रमाण पत्र
 - अंतिम संस्थान द्वारा प्रदत्त चरित्र प्रमाण पत्र
 - आरक्षण वर्ग प्रमाण पत्र (यदि लागू है)
 - जे.ई.ई. मेन्स 2020 परीक्षा का स्कोर कार्ड एवं प्रवेश पत्र।

DIRECT ADMISSION TO B.TECH. II YEAR

ELIGIBILITY

A candidate must have passed the Diploma in Engineering in the relevant branch with a minimum of 60% marks (55% for SC/ST) in aggregate.

OR

A candidate must have passed the Degree in Science (B.Sc.) with Mathematics as a subject and with a minimum of 60% marks (55% for SC/ST and GKV graduates) in aggregate.

Admission shall be made on the basis of merit of entrance examination to be conducted by Gurukula Kangri Vishwavidyalaya, Haridwar.

Note:- For Direct Admission to B.Tech II year candidates have to produce following certificates.

- (i) High School Certificate & Marksheet
- (ii) Intermediate (10+2) Certificate & Marksheet
- (iii) B.Sc./Diploma Certificate & Marksheet
- (iv) Migration & TC from the institution last attended
- (v) Character certificate from the institution last attended
- (vi) Reservation category certificate, if applicable
- (vii) Candidate has to bring 8 photo & 4 photocopies of High School Certificate & Marksheet, Intermediate (10+2) Certificate & Marksheet, B.Sc./Diploma Certificate & Marksheet.

Merit list of the selected candidates will be published on the notice boards at Registrar office and Faculty of Engineering & Technology. It will also be available on the university website. No communication will be done by post regarding the admission.

बी.टेक. द्वितीय वर्ष में सीधे प्रवेश

योग्यता

अभ्यर्थी ने अभियांत्रिकी की सम्बन्धित शाखा में डिप्लोमा न्यूनतम 60% अंक(अनुसूचित जाति/जनजाति के लिए 55%) के साथ उत्तीर्ण किया हो।

अथवा

अभ्यर्थी ने विज्ञान स्नातक (बी.एस सी.) गणित विषय के साथ न्यूनतम 60% अंक(अनुसूचित जाति/जनजाति एवं गु.का.वि.वि. स्नातकों के लिए 55%) के साथ उत्तीर्ण की हो।

प्रवेश गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार द्वारा आयोजित की जाने वाली प्रवेश परीक्षा की मेरिट के आधार पर किया जायेगा।

नोट:- बी.टेक. द्वितीय वर्ष में सीधे प्रवेश हेतु अभ्यर्थी को निम्न प्रमाण-पत्र प्रस्तुत करने होंगे।

- (i) हाईस्कूल प्रमाण पत्र एवं अंक पत्र
- (ii) इंटरमीडिएट (10+2) प्रमाण पत्र एवं अंक पत्र
- (iii) बीएस.सी./ डिप्लोमा प्रमाण पत्र एवं अंक पत्र
- (iv) अंतिम संस्थान द्वारा प्रदत्त माइग्रेशन एवं स्थानान्तरण प्रमाण पत्र
- (v) अंतिम संस्थान द्वारा प्रदत्त चरित्र प्रमाण पत्र
- (vi) आरक्षण वर्ग प्रमाण पत्र (यदि लागू है)
- (vii) छात्र को स्वयं की 8 फोटो तथा हाईस्कूल प्रमाण पत्र एवं अंक पत्र, इंटरमीडिएट (10+2) प्रमाण पत्र एवं अंक पत्र, बी.एससी./ डिप्लोमा प्रमाण पत्र एवं अंक पत्र प्रत्येक की 4 फोटो कॉपी साथ लानी होगी।

प्रवेश हेतु मेरिट सूची कुलसचिव कार्यालय तथा अभियांत्रिकी एवं प्रौद्योगिकी संकाय के नोटिस बोर्ड पर लगायी जायेगी। मेरिट सूची विश्वविद्यालय वेबसाईट पर भी उपलब्ध रहेगी। प्रवेश सम्बन्धी कोई भी सूचना डाक से नहीं भेजी जायेगी।

COUNSELING FOR ADMISSION

Candidates shall have to deposit a **demand draft** of **Rs. 1000/- (Non Refundable and Not Adjustable)** as counselling fee in favour of the **Registrar, Gurukula Kangri Vishwavidyalaya** payable at **Haridwar** at the time of counselling.

Candidates shall have to deposit full fee immediately after the admission is granted. If a candidate fails to deposit fee within the prescribed time, his admission shall be treated as cancelled. In case seats remain vacant after first **counselling**, **second counselling may be conducted only after the decision of the administration.**

ENTRANCE EXAMINATION CENTRE FOR DIRECT ADMISSION TO B.TECH. II YEAR

Faculty of Engineering & Technology, 10 Km Haridwar - Delhi Marg, Near Shani Dev Temple, Shraddhanandpuram, Bahadrapur, Haridwar (U.K.)

ISSUE OF ADMIT CARDS FOR ENTRANCE EXAM

Admit Cards can be downloaded from the university website (www.gkv.ac.in). Admit card will not be sent by post in any case.

USE OF UNFAIR MEANS

If a candidate uses unfair means in the examination and writes his name, roll number or marks any sign inside the answer sheet, his result may be cancelled.

If the use of unfair means proved at any stage of the admission procedure the entrance examination of the candidate shall be cancelled.

ANNOUNCEMENT OF RESULT

The merit list shall be declared by the Registrar and shall be displayed on the notice boards as well as Vishwavidyalaya website (www.gkv.ac.in)

Note : All Information regarding admission shall be displayed on the notice board. No information shall be sent by post in any case.

GENERAL INSTRUCTION FOR ENTRANCE EXAMINATION

Entrance examination will be conducted in English medium only.

Admit Cards can be downloaded from the university website (www.gkv.ac.in). Admit card will not be sent by post in any case.

Candidates are allowed to bring with them HB pencil, ball pen, eraser & sharpener only in the examination hall. Use of calculator, cellphone and watch with calculator shall not be allowed to carry in the examination hall.

Smoking, food articles and any type of drinks except drinking water are strictly prohibited.

प्रवेश हेतु काउंसिलिंग

अभ्यर्थियों को काउंसिलिंग के समय रु0 1000 /- (अपरिवर्तनीय तथा असंयोजनीय) का डिमांड ड्राफ्ट जो कि कुल सचिव, गुरुकुल कांगड़ी विश्वविद्यालय के पक्ष में हरिद्वार पर देय हो, काउंसिलिंग शुल्क के रूप में जमा करना होगा।

अभ्यर्थियों को प्रवेश स्वीकृत किये जाने पर तत्काल पूर्ण शुल्क जमा करना होगा। दिये गये समय के अर्न्तगत शुल्क जमा न करने की स्थिति में प्रवेश स्वतः निरस्त समझा जायेगा। प्रथम बार काउंसिलिंग के पश्चात स्थान रिक्त रहने पर दूसरी काउंसिलिंग प्रशासन के निर्णय के उपरांत ही की जा सकती है।

बी.टेक. द्वितीय वर्ष में सीधे प्रवेश हेतु परीक्षा केन्द्र

अभियांत्रिकी एवं प्रौद्योगिकी संकाय, 10 कि.मी. हरिद्वार-दिल्ली मार्ग, निकट शनिदेव मन्दिर, श्रद्धानन्दपुरम्, बहादुराबाद, हरिद्वार (उत्तराखण्ड)

प्रवेश परीक्षा के लिए प्रवेश पत्र

अभ्यर्थी प्रवेश पत्र विश्वविद्यालय वेब साइट www.gkv.ac.in से डाउनलोड कर सकते हैं।

अनुचित साधनों का प्रयोग

परीक्षा में अनुचित साधनों का प्रयोग करने पर या उत्तर पुस्तिका में अनुक्रमांक, नाम या किसी अन्य प्रकार का पहचान चिह्न बना हुआ मिलने पर अभ्यर्थी का परीक्षा परिणाम निरस्त किया जा सकता है।

अनुचित साधनों का प्रयोग, प्रवेश प्रक्रिया के किसी भी स्तर पर सिद्ध होने पर उस अभ्यर्थी की प्रवेश परीक्षा निरस्त कर दी जायेगी।

परीक्षा परिणाम की घोषणा

प्रवेश परीक्षा की मेरिट सूची कुलसचिव द्वारा जारी की जायेगी तथा सूचना पट्टों पर लगायी जायेगी तथा विश्वविद्यालय वेब साइट www.gkv.ac.in पर दी जायेगी।

नोट : प्रवेश सम्बन्धी सभी सूचनाएँ सूचना पट पर लगायी जायेंगी। कोई भी सूचना डाक द्वारा नहीं भेजी जायेगी।

प्रवेश परीक्षा के लिए सामान्य निर्देश

प्रवेश परीक्षा का माध्यम केवल अंग्रेजी रहेगा। अभ्यर्थी प्रवेश पत्र विश्वविद्यालय वेब साइट www.gkv.ac.in से डाउनलोड कर सकते हैं। परीक्षा भवन में अभ्यर्थी केवल पेंसिल, बालपेन, रबड़ व शार्पनर ही ले कर आयेंगे। केलकुलेटर, मोबाइल फोन तथा केलकुलेटर वाली घड़ी को परीक्षा भवन में लाना वर्जित होगा। परीक्षा भवन में शुद्ध जल के अतिरिक्त किसी भी प्रकार का पेय पदार्थ, खाद्य पदार्थ या धूम्रपान वर्जित है।

CANCELLATION OF ADMISSION

The Admission of the candidate shall be cancelled if the information given by the candidate is found false/incorrect or not fulfilling minimum eligibility at any stage, during or after admission.

Candidates appearing in the final year of qualifying examination shall have to produce their result upto 15 October, 2020 failing which their admission shall be treated as cancelled.

DIVISION AND PASS PERCENTAGE

I	60% and above	-	First Division
I	50% and above but below 60%	-	Second Division

ESSENTIAL RULES FOR STUDENTS

- Minimum 75% attendance is compulsory for the students in each subject/course.
- It shall be compulsory for the students to attend the Yajna/Prarthana and other functions. The uniform for summer is White Shirt and Black Pant. In winter uniform Navy Blue Blazer/Grey Swetar is also necessary. Black Shoes and white Socks are included in the uniform of each season.
- Normally, classes shall be held between 10:00 am to 5:00 pm.
- Saraswati Yatra (educational tour) shall be arranged during holidays only.
- On boycotting the examination, the result shall be declared by awarding zero marks in the concerned paper.
- In case of illness sessional examination can be conducted by paying Rs. 250/- per sessional per subject with prior permission from Registrar.
- Students involved in the activities of indiscipline, shall be rusticated with immediate effect.
- Ragging is totally banned in Gurukula Kangri Vishwavidyalaya. If any student is found guilty, he will be liable for punishment as per rules.
- Student has to submit an affidavit at the time of admission that he had never been indulged in Ragging.
- As per direction of Hon'ble Supreme Court of India, if any incident of ragging comes to the notice of the authority, the concerned student shall be given liberty to explain and if his/her explanation is not found satisfactory, the authority would expel him from the institution.**

JURISDICTION

- In case of any doubt regarding rules and regulations, only Hindi version will be valid.
- All matters of disputes during and after the admission shall be subject to the exclusive jurisdiction of Haridwar District Courts.

प्रवेश निरस्तीकरण

प्रवेश प्रक्रिया के किसी भी स्तर पर या प्रवेशोपरान्त अभ्यर्थी द्वारा दी गयी सूचना गलत पाये जाने पर या न्यूनतम अर्हताएँ पूरी न पाये जाने पर उसका आवेदन/प्रवेश निरस्त कर दिया जायेगा।

अन्तिम वर्ष की अर्हता परीक्षा दे रहे अभ्यर्थियों को 15 अक्टूबर, 2020 तक अपनी अर्हता परीक्षा का परिणाम प्रस्तुत करना होगा जिसके अभाव में प्रवेश स्वतः निरस्त हो जायेगा।

उत्तीर्णांक एवं श्रेणी प्रतिशत

- 60% व इससे अधिक – प्रथम श्रेणी
- 50% व इससे अधिक किन्तु 60% से कम – द्वितीय श्रेणी

छात्रों के लिए आवश्यक नियम

- छात्रों की प्रत्येक विषय/पाठ्यक्रम में न्यूनतम 75% उपस्थिति होनी अनिवार्य है।
- छात्रों के लिए यज्ञ/प्रार्थना तथा समारोहों में उपस्थित होना अनिवार्य होगा। ग्रीष्म ऋतु की वेशभूषा सफेद कमीज व काली पेन्ट है। शीतकालीन वेशभूषा में नेवी ब्लू कोट/ग्रे स्वेटर भी आवश्यक है। काले जूते एवं सफेद मौजे प्रत्येक ऋतु की वेशभूषा में सम्मिलित हैं।
- सामान्यतया कक्षाएं प्रातः 10.00 से सायं 5.00 बजे के बीच होंगी।
- सरस्वती यात्रा पर केवल लम्बे अवकाश के समय ही जाने की अनुमति होगी।
- परीक्षा से बहिष्कार करने पर उस प्रश्नपत्र में शून्य अंक देकर परीक्षा परिणाम घोषित किया जाएगा।
- बीमारी के कारण सत्रीय मूल्यांकन परीक्षा में अनुपस्थित होने की स्थिति में रुपया 250/- प्रति सेशनल प्रति विषय शुल्क जमा कर कुलसचिव की अनुमति से सत्रीय मूल्यांकन परीक्षा दे सकेगा।
- अनुशासनहीनता की गतिविधियों में संलिप्त पाये जाने पर सम्बंधित छात्र का प्रवेश तत्काल प्रभाव से निरस्त कर दिया जायेगा।
- गुरुकुल कांगड़ी विश्वविद्यालय में रैगिंग पूर्णतः निषेध है। यदि कोई छात्र रैगिंग में दोषी पाया जाता है तो उसके विरुद्ध नियमानुसार दण्डात्मक कार्यवाही की जायेगी।
- छात्र को प्रवेश के समय यह शपथ पत्र देना होगा कि वह इससे पूर्व कभी रैगिंग में लिप्त नहीं रहा है।
- माननीय उच्चतम न्यायालय के निर्देशानुसार यदि रैगिंग की कोई घटना विश्वविद्यालय प्रशासन के संज्ञान में आती है तो सम्बन्धित छात्र से स्पष्टीकरण देने को कहा जायेगा और यदि उसका स्पष्टीकरण संतोषजनक न पाया गया तो उसे विश्वविद्यालय से निष्कासित कर दिया जायेगा।

विवाद निर्धारण

नियमों व उपनियमों में संशय की स्थिति में केवल हिन्दी रूपान्तरण ही मान्य होगा।

प्रवेश व प्रवेशोपरान्त अन्य सभी प्रकरणों के लिए विवाद होने पर न्यायाधिकार क्षेत्र जिला न्यायालय हरिद्वार होगा।

Syllabus for Entrance Examination for Direct Admission to B.Tech. II Year

(द्वितीय वर्ष में सीधे प्रवेश के लिये प्रवेश परीक्षा का पाठ्यक्रम)

The Entrance examination paper will consist of 100 objective type questions. The paper shall have three sections. Section A is compulsory for all the candidates. Section B is to be attempted by Diploma Holders in Engineering while Section C is to be attempted by Science Graduates (B.Sc.).

SECTION A 30 Marks

General Aptitude. Compulsory for all the candidates

SECTION B 70 Marks

For Diploma Holders in Engineering

Algebra : Arithmetic progression, its n th term, sum of n terms with their applications to engineering problems. Geometrical progression, its n th term and sum of n terms and to infinity with application to engineering problems. Partial fractions (excluding repeated quadratic factors) formally introduction of permutations and combinations, applications of formulae for p , c . Binomial theorem (expansion without proof) for positive integral index (expansion and general term), Binomial theorem for any index (expansion without proof only). First and second binomial approximation with application to engineering problems.

Trigonometry : Concepts of angles, measurement of angles in degrees, grades and radians and their conversions. Trigonometrical ratios and their relations. Review of ratios of some standard angles ($0, 30, 45, 60, 90$ degrees), T-Ratios of allied angles (without proof), Sum, difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa). T-ratios of multiple angles, sub-multiple angles ($2A, 3A, A/2$), Area of a triangle, Hero's formula, solution of triangles with direct applications of cosine formula, sine formula, Napier's analogy only.

Co-ordinate Geometry: Cartesian coordinates (2D), Distance between two points, Internal and External division formulae, application of area formulae (without proof), Area of triangle when its vertices are given, coordinates of centroid, incentre of a triangle when the vertices are given using the formulae, simple problems on locus, General equation of a circle and its characteristics. To find the equation of a circle given (i) centre and radius (ii) three points on it (iii) Coordinates of end points of a diameter. Definition of conic section, Standard equation of parabola, to find equations of parabola when its focus and directrix are given, Given the equation of a parabola, determination of its focus, vertex, axis, directrix and latus rectum. Ellipse and hyperbola (standard equations without proof), given the equation in the standard form, determination of focus, directrix, latus rectum, axis, eccentricity, and centre. Concept of polar coordinates and their conversion to Cartesian coordinates and vice versa (in 2D only)

Differential Calculus: Concept of limits, Four standard limits, Differentiation by definition of X , $\sin x$, $\cos x$, $\tan x$, e , Differentiation of sum, product and quotient of functions, Differentiation of function of a function, Differentiation of trigonometric inverse function. Logarithmic differentiation, Successive differentiation (excluding n^{th} order)

Integral Calculus: Integration as inverse operation of differentiation, Simple integration by substitution, by parts and by partial fractions (for linear factors only), Evaluation of definite integrals (simple problems), Numerical integration : Applications of Simpson's rule and Trapezoidal rule (without proof) equations having e^x , $\sin ax$, $\cos ax$ and x on the right hand side.

SECTION C 70 Marks For Science Graduates (B.Sc.)

Calculus : Successive differentiation, expansion of functions, Maclaurin's and Taylor's theorems, Maxima and minima up to two independent variables, Indeterminate forms, Jacobian of three functions, Partial differentiation, Asymptotes, curvature, Envelopes, Double point and curve tracing (Polar and Cartesian), Standard reduction formulae, Integration as the limit of a sum, simple definite integrals

Abstract Algebra : Sets and Logic. The well-ordering principle, the division algorithm, The fundamental theorem of arithmetic, congruence modulo, Equivalence relations and Equivalence classes, Groups: Definition, example and properties, permutation and Permutation group, Subgroup and their properties, Cosets and Coset decomposition, Lagrange's theorem and its corollaries include Fermat's Theorem, Cyclic group, Normal subgroup, centre of a group, Quotient group, Homomorphism and Isomorphism, fundamental theorem of homomorphism, Cayley's theorems

3-D Coordinate Geometry & Trigonometry : System of coordinates, Direction, cosine, angle between two lines, Projections, Distance of a point from a line. The plane: General form, Normal form, intercept form, Reduction of the general form to normal form, Equation of plane through three points, angles between two planes, Parallel planes, perpendicular distance of a point from the planes. Pair of the planes, Area of a triangle and volume of a tetrahedron. The Straight Line; Equation of a line in general form, symmetric form, Two point form, reduction of the general equation to the symmetrical form, Straight line and the plane, Conditions of parallelism and perpendicularity of a line and a plane. Plane through a given line, perpendicular distance formula for the line, projection of a line on a given plane, Coplanar lines, Condition that two given lines may intersect and equation of the plane containing them. Equation of a straight line intersecting two given lines, Perpendicular distance formula for the line and coordinates of the foot of the perpendicular. Shortest distance between two lines. Sphere : General equation of a sphere, Plane section of a sphere, Intersection of two sphere, sphere through a given circle, Intersection of a straight line and a sphere, Equation of a tangent plane to sphere, condition of tangency, Plane of contact, Polar plane and pole of a given plane, Angle of intersection of two spheres, Length of tangent: Radical planes, axis and centre, Coaxial system of spheres, Cone: Equation of a cone whose vertex and its origin, equation of a cone with a given vertex and a given conic as base, condition that general equation of second degree represent a cone, equation of a tangent plane, condition of tangency of a plane and a cone, Reciprocal cone, Right circular cone.

Elementary Analysis and Differential Equations : Real- Valued functions, Equivalence, Countability, Real numbers, Least upper bound, Sequence of real number series of real numbers. Limits and metric spaces, Functions continuous at a point on the real line: Open sets, Closed sets, Discontinuous functions on \mathbb{R}^1 Derivatives, Rolle's theorem, The law of mean, Ordinary differential equation of the first order and first degree, Clairaut's form of differential equations

Mathematical Statistics: Definition of Probability, addition and multiplication theorems, conditional probability, Independent and dependent events, Mutually exclusive events, Mathematical expectation, Introduction to axiomatic approach.

Differential Equation : Concept of formation of Differential Equation and solution of I order differential equation (a) Variable separation (b) Homogeneous differential equation (c) Linear differential equation, Solution of linear differential.

गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार
GURUKUL KANGRI VISHWAVIDYALAYA, HARIDWAR
 अभियांत्रिकी एवं प्रौद्योगिकी संकाय
FACULTY OF ENGINEERING & TECHNOLOGY
www.gkv.ac.in

शुल्क तालिका (FEE STRUCTURE) 2020-21

मद (Head)	I Yr	II Yr.	III Yr.	IV Yr.
	20-21	21-22	22-23	23-24
वार्षिक शुल्क (Annual Fee)	90050	90000	90000	90000
सुरक्षाधन (Caution Money)	2000	-	-	-
		-	-	-
कुल योग रुपये में (Total in Rupees)	92050	90000	90000	90000

Note

- Fee will be deposited in single installment only preferably through demand draft at the time of admission.
- Candidates taking Direct Admission to B.Tech. II year will have to pay Rs.83950/- at the time of admission.
- No application shall be entertained for refund of security money after one year of completion of the course.

HOSTEL

Hostel facility is available in the main campus of Vishwavidyalaya for B.Tech. Ist Year students only against limited seats.

I	Hostel Fee	Rs. 12000/- (Annual)
I	Security	Rs. 5000/- (Refundable)
I	Bus Charges	Rs. 4000/- (Annual)
I	Mess charges*	Rs. 24000/- (Annual)

*Changeable

Note :-

- Annual hostel fee includes hostel rent, electricity & water charges.
- Mess charges will be adjusted on the basis of actual expenditure.

FEE OTHER HEADS
(FOR ALL COURSES)

Degree/Certificate fee on convocation	300/-
after convocation	400/-
Provisional Certificate fee	200/-
Recounting of marks fee per paper	200/-
Migration submission late fee (monthly)	200/-
Duplicate Certificate/Degree fee	400/-
Duplicate Mark-sheet fee	200/-
Migration Certificate fee	200/-
Duplicate Migration fee	400/-
Repeat Examination fee per paper	500/-
Character Certificate fee	50/-
Re-admission fee	200/-

नोट

- प्रवेश के समय शुल्क एक ही किस्त में अपेक्षित रूप से (Preferably) डिमाण्ड ड्राफ्ट द्वारा जमा किया जायेगा।
- द्वितीय वर्ष में सीधे प्रवेश पाने वाले अभ्यर्थियों को प्रवेश के समय रु० 83950/- जमा करने होंगे।
- पाठ्यक्रम पूरा होने के एक वर्ष उपरान्त सुरक्षाधन वापसी हेतु कोई आवेदन स्वीकार नहीं किया जायेगा।

छात्रावास

बी.टेक. प्रथम वर्ष के छात्रों के लिये विश्वविद्यालय के मुख्य परिसर में सीमित छात्रावास की सुविधा उपलब्ध है।

छात्रावास शुल्क	12000/- (वार्षिक)
सुरक्षा धन	5000/- (प्रत्यावर्तनीय)
बस शुल्क	4000/- (वार्षिक)
मैस शुल्क*	24000/- (वार्षिक)

*परिवर्तनीय

नोट:-

- वार्षिक छात्रावास शुल्क में छात्रावास किराया, विद्युत एवं पानी का व्यय शामिल है।
- मैस शुल्क वास्तविक व्यय के आधार पर समायोजित किया जाएगा।

अन्य मदों में लिया जाने वाला शुल्क
(सभी पाठ्यक्रमों के लिये)

उपाधि/प्रमाण पत्र शुल्क	
दीक्षान्तोत्सव पर	300/-
दीक्षान्त के बाद	400/-
प्रोविजनल प्रमाण पत्र शुल्क	200/-
पुनः अंकगणना शुल्क प्रति प्रश्न पत्र	200/-
माइग्रेशन विलम्ब शुल्क (मासिक)	200/-
डुप्लीकेट प्रमाण पत्र/उपाधि शुल्क	400/-
डुप्लीकेट अंक पत्र शुल्क	200/-
माइग्रेशन प्रमाण पत्र शुल्क	200/-
डुप्लीकेट माइग्रेशन शुल्क	400/-
पुनः परीक्षा शुल्क प्रति प्रश्न पत्र	500/-
चरित्र प्रमाण पत्र शुल्क	50/-
पुनः प्रवेश शुल्क	200/-



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Quick Links

Admissions

-<https://www.gkv.ac.in/admissions/ugadmissions/>

Corporate Affairs & Outreach Cell (Training and Placement related details)

-https://www.gkv.ac.in/important_bodies/placement-cell/

Departments

-<https://www.gkv.ac.in/departments/cse/>

-<https://www.gkv.ac.in/departments/ece/>

-<https://www.gkv.ac.in/departments/ee/>

-<https://www.gkv.ac.in/departments/me/>

-<https://www.gkv.ac.in/departments/applied-sciences/>

Grievance Portal

-https://www.gkv.ac.in/important_bodies/grievance-cell/

Important Contacts for Admission Queries

You can write us: admissions.fet@gkv.ac.in
deanfet@gkv.ac.in

You can reach us through phone between 10am to 5pm in working days.

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