

# PLACEMENT BROCHURE B. Tech 2012-16

INSTITUTE OF ENGINEERING AND TECHNOLOGY  
JK LAKSHMIPAT UNIVERSITY  
JAIPUR  
EDUCATION FOR LIFE





### **Vision**

To encourage a value based innovative learning environment that engages deep intellectual, spiritual and moral stimulation and to promote holistic personality development for nurturing leadership

### **Mission**

To practice a 'mentoring' based education system with intellectual, moral and spiritual culture of its own rooted in Indian ethos and in tune with the global vision of the times;

To inculcate learning through understanding, knowledge enhancement, skill development and positive attitude formation;

To encourage innovative thinking;

To develop a mind set for action without fear, with self-discipline and care for society.

### **Values**

Caring for people.

Integrity including intellectual honesty, openness, fairness & trust.

Commitment to excellence.



Microsoft® IT Academy  
Program Member



## Recognition

JKLU is empowered by UGC to award degrees as specified by the UGC under section 22 of the UGC Act 1956.

JK Lakshmipat University, Jaipur (Rajasthan) has been established by an Act No. 19 of 2011 – The J.K. Lakshmipat University, Jaipur Act, 2011 of State Legislature of Rajasthan as a State Private University.

## Accreditation

The International Accreditation Organisation (IAO) granted Candidacy Status to the University along with all the services and privileges of regional, national and international professional recognition in 2013.

## Collaborations :

JKLU is a registered member of the **Microsoft IT Academy**. Microsoft Certification is one of the most demanding and respected endorsements in the industry, stressing both technical knowledge and real-world experience.

**CISCO Networking Academy** is functioning at JKLU offering CCNA-RSE certification (Routing and switching essential).

Institute of Engineering & Technology has become the Member of **Bentley Network Community** by installing Bentley software tools for building planning in its Computing Lab.

JKLU is the institutional member of '**National Entrepreneurship Network (NEN)**' to develop and run exciting, high-impact entrepreneurship educational programmes on campus.

**Indian Society of Geomatics (ISG)** has opened its Jaipur Chapter at IET with its objective to promote interaction various professionals and also promote the advancement of technology and applications of Geomatics.

**Solar Energy Society of India (SESI)** has opened its chapter at IET to facilitate the institute to take part in all of its activities of renewable energy, including characteristics, effects and methods of use.

## Awards

**RSPC- Productivity Excellence Award** by Her Excellency Smt. Margaret Alva, Hon'ble Governor of Rajasthan in a function organized by Rajasthan State Productivity Council, Jaipur.

**Best Private University in Rajasthan** by Prime Time Research Media Private Limited under the 'Global Education Excellence Awards 2013'.

**Best Emerging Private University in North India** by One Planet Research under the 'Education Excellence Awards 2013

## Board of Management

### **Shri Bharat Hari Singhania**

Chancellor, JKLU & Industrialist

### **Dr. Raghupati Singhania**

Pro-Chancellor, JKLU & Industrialist

### **Dr. Roshan Lal Raina**

Vice Chancellor, JKLU

### **Dr. M.S. Ananth**

Visiting Professor, IIT Mumbai  
Former Director, IIT Madras

### **Dr. B.B. Bhattacharya**

Former Vice Chancellor  
JNU New Delhi

### **Shri H.P. Singhania**

Industrialist

### **Dr. Pritam Singh**

Former Director General, IMI  
Former Director, MDI & IIM Lucknow

### **Shri Pratip Chaudhuri**

Former Chairman, State Bank of India

### **Dr. Rajendra K Srivastava**

Provost & Dy. President,  
Singapore Management University

### **Shri S.K. Roongta**

Chairman, Bharat Aluminium Co. Ltd.  
Former CMD, Steel Authority of India

### **Shri Surendra Malhotra**

Corporate Director – JK Group

### **Shri S. A. Bidkar**

Corporate Executive - Finance, JK Group

### **Smt. Vinita Singhania**

Industrialist

### **Shri Vikram Kirloskar**

Industrialist

### **Nominee, Govt. of Rajasthan**

### **Dr. Swapan Kumar Majumdar**

Director-IM, JKLU

### **Dr. - Ing. Anupam K Singh**

Director-IET, JKLU

**Chairperson**

**Co-Chairperson**

**Member**

**Member**

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## Academic Council

The Academic Council has been constituted as the principal academic body of the University, which exercises general supervision over the curriculum and the academic policies of the university. It consists of Vice Chancellor (President) as its Chairman and other eminent educationists in the field of management, engineering and other disciplines as members.

### **Dr. Roshan Lal Raina**

Vice Chancellor, JKLU

### **Dr. G.S. Gupta**

Former Professor IIM, Ahmedabad

### **Dr. I. K. Bhat**

Director  
Malaviya National Institute of Technology, Jaipur

### **Dr. Mangesh G Korgaonker**

Director General, National Institute of  
Construction Management and Research, Pune

### **Dr. A. Sridharan**

IISc, Bangalore

### **Shri Sanjay Jain**

Company Secretary cum GM (Accounts)  
Mahindra World City Jaipur

### **Mr. Sanjeev Kumar Gupta**

Managing Director – Corporate Affairs  
M/s. Accenture, Gurgaon

### **Dr. Swapan Kumar Majumdar**

Director-IM, JKLU

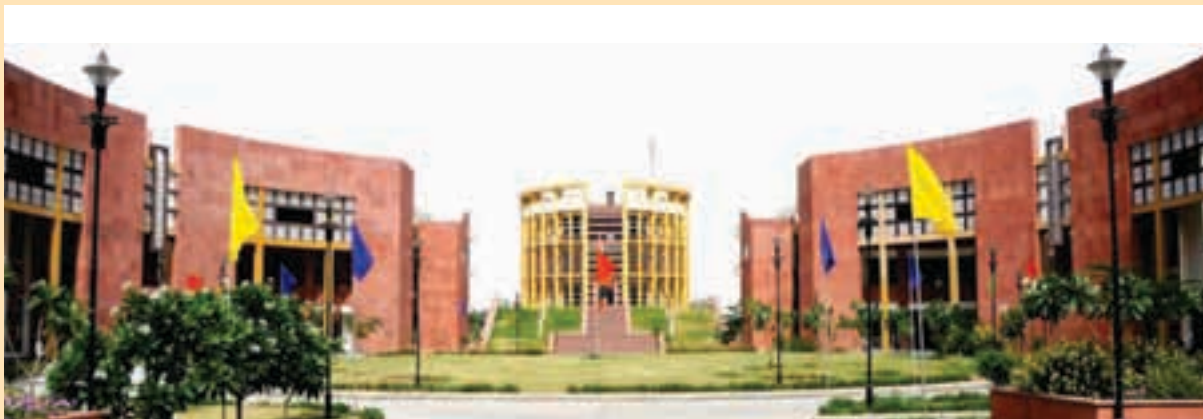
### **Dr. - Ing. Anupam K Singh**

Director-IET, JKLU

### **Dr. Sandeep Kumar Tomar**

Associate Professor-IET, JKLU





## About the University

JK Lakshmipat University (JKLU) has been promoted by the JK Organisation, one of the leading Indian Industrial Conglomerates of the country with a rich heritage of more than 100 years. It is recognized by Government of Rajasthan and covered u/s 2(f) of the UGC Act. The University presently offers Management and Engineering programmes matching world class standard of academic excellence. Besides Institute of Engineering & Technology, Institute of Management is another constituent institute of the University that offers various Management Programmes.

To cater the needs of various areas professional education, JKLU offers different degree programmes through two institutes, Institute of Management (IM) and Institute of Engineering and Technology (IET). The University does not focus only on providing education to students but it provides training to the corporate executives through Management Development Center. The University has recently established Institute of Skill Development (ISD) which is running various skill development and enhancement programmes.



## Overview of Programmes

**Engineering :** B. Tech , B.Tech + MBA, M. Tech, B. Tech + M. Tech and Ph. D  
**Management :** MBA, BBA + MBA, B. Com + MBA and Ph. D

## Overview of Future Programmes

**Engineering:** Biotechnology (technology-based, focusing on design aspect), Bio Informatics, Nano Technology, etc.

**Law:** LLB, LLM, LLD and Integrated Programme (BLM+LLB)

**Sciences:** M.Sc. and Ph. D in Pure & Applied Sciences, such as Biotechnology (science-based, focusing on fundamental aspects), Bio-chemistry, Nano Sciences, etc.

**Social Sciences:** Master's Degree (Integrated Programmes) and Ph.D. in Economics, Psychology, Sociology and Mass Communication

**Languages:** Master's Degree and Ph.D. in various languages

**Pharmacy:** B. Pharma, M. Pharma and Ph. D

## Academic Collaboration

The University has signed MoU with reputed universities in U.S., Europe and Asia Pacific regions for establishing alliances relating to :

- Exchange of faculty, students and researchers.
- Cooperation in joint research, lectures, symposia and country visit for students.
- Exchange of data, documentation and research material in the fields of mutual interest.
- Cooperative educational programmes.
- To evolve new courses with integrated multi-disciplinary approach offering multiple skills in the field of Management, Engineering and Technology besides other disciplines to follow.



## Placement

JK LakshmiPat University has a dynamic Placement Cell, which has a well-structured Placement Committee, at the Institute of Management and at the Institute of Engineering and Technology.

The Placement Committee for the Institute of Engineering & Technology consists of Head of the Department of all the branches of Engineering at JKL, faculty co-ordinator and two students from each branch with Director (Corporate Relations & Placement) and Director, Institute of Engineering & Technology as Advisor.

The Placement process aims at offering the recruiters, the students of desired profile and matching with the aspirations of the students. The process helps the students to pursue the career of their choice and the recruiters get the befitting profiles to select. The process involves summer internship and final placement at IM and PS-1, PS-2 and final placement at IET.

The Group Companies of JK Organisation, namely JK Paper Ltd, JK Tyre & Industries Ltd, JK Lakshmi Cement Ltd, JK Agri Genetics Ltd and JK Fenner (I) Ltd offer an added advantage of career opportunities to meritorious students.





## Institute of Engineering and Technology

Institute of Engineering and Technology (IET) is the high-tech constituent of the University. It has been established to nurture budding professionals into new age technocrats.

The Institute is well equipped in terms of world-class infrastructure as well as intellectual capital. With state-of-the-art facilities in terms of Wi-Fi enabled campus, amphitheater type classrooms equipped with all modern audio-visual equipment, rich library, well equipped labs, comfortable residential facilities for boys and girls on the campus, shopping complex, gymnasium, sports facilities for indoor and outdoor games and round-the-clock availability of faculty and staff on the campus, the Institute is all set to become one of the most sought-after engineering and technology Institutes in the country.

IET is positioned to cater to the needs of meritorious students by offering quality education in the field of Engineering and Technology. The Institute offers UG Programmes, 5-year Integrated Dual Degree Programme, PG Programmes and Doctoral Programmes in various Engineering Disciplines.

## UG Programmes

### **B.Tech**

Chemical Engineering  
Civil Engineering  
Computer Science Engineering  
Electronics & Communication Engineering  
Electrical Engineering  
Mechanical Engineering

**B.Tech + M.Tech (5 Years) -  
Integrated Dual Degree Programme**

**B.Tech + MBA (5 Years) -  
Integrated Dual Degree Programme**



## PG Programmes

### **M.Tech**

Computer Science Engineering  
Electronics & Communication Engineering



## Doctoral Programmes

### **Doctoral Programme**

Ph. D in Engineering  
Ph. D in Science  
Ph. D in English



## Pedagogy

### Group and Self-Learning

Free exchange of ideas among the group members through discussion and presentation not only leverage on time, idea exchange and effort but also enhances teaching and communication skills. Aptitude is developed for self-study and use of web resources and data banks to foster lifelong learning.



### Problem Solving Exercises

Problem solving is an integral part of the teaching-learning process. Lectures emphasize this aspect through carefully set, open-ended design problems. Students are organized in small groups where an opportunity is provided to carry out problem solving exercises, engage in design activities, and perform information search and processing.

### Foundation Courses

Emphasis on strong fundamentals in pure sciences as well as communication skills is an integral part of the course design that is developed in close coordination with the industry, keeping the requirements of the future in mind.

Engineers are expected to interact with their own professional community as well as with people from allied fields. The Professional Development programmes supplement engineering education with knowledge of social sciences and the inculcation of good communication skills.

In all the undergraduate engineering programmes, industrial training (Practice School) is made compulsory to combine the philosophy of working while learning.



### Expert Lectures & Seminars

Eminent professionals from the country and abroad drawn from academic institutions, research laboratories and industry are invited for delivering lectures and seminars and for interaction with the Institute's fraternity.

### Latest Curricula

Students are exposed to the latest techniques in their domains. Courses are flexible and are updated continuously.





## Post Graduate Programmes

Besides undergraduate programmes, the Institute also offers M.Tech (Post Graduate Programme) and Ph.D. M. Tech programmes are of two years duration and provide core courses, elective courses and intensive project work (dissertation) in the respective area of specialization.

The objective of M. Tech programme is to impart advanced level knowledge in the field of specialization making the students suited to better academia as well as industry and assume responsibilities requiring greater research, design and development aptitude.

For dissertation work, students are required to take up problems on a particular topic in the field of focus of their study and work. They are required to submit a dissertation report at the end of the project work compiling their study, findings and contributions. M.Tech dissertation work usually enables students to publish their results.

### M. Tech - Computer Science Engineering

The programme provides advanced level education in the areas, such as Algorithms, Data Structures, Software Engineering, Learning Sciences & Technology, High Performance Computer Architecture, Advanced Computer Networking, Complexities & Coding Theories, Information Security, Internet & Web Technologies, Computer Graphics, Image Processing, Information Systems, Data Warehousing & Mining, Data Base Management, Advanced Operating Systems, Computational Models, Cognitive Science, Soft Computing, and Human Computer Interaction.



### M. Tech - Electronics & Communication Engineering

The programme covers a number of areas at advanced level, such as Mobile, Wireless, Satellite and Optical Communication and Computer Communication Systems & Networks, Signal Spread Spectrum Communication, Error Control Coding Techniques, Microelectronics, VLSI Design, and Information & Communication.

## Doctoral Programme (Ph. D)

The Ph.D programme is offered in various specializations, such as Electronics & Communication Engineering, Computer Science Engineering, Information Technology, Electrical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Physics, Chemistry, and Mathematics and English. The scholars are required to take up intensive research work under the guidance of a supervisor on a specific problem for a minimum of two years in this programme.

The scholars are required to deliver seminars on their research progress regularly and publish their work in refereed journals. Finally, they are required to submit the thesis embodying their research findings for the award of the Ph.D. degree. They are also be required to take advanced level Ph.D course work before registration in this Program.



### Financial Assistance

A limited number of Teaching Assistantships are offered to candidates with a high GATE score at the commencement of the M.Tech programme. Partial financial support, in the form of Teaching Assistantships, is offered for the M.Tech students during their second year as well, which is based on their academic performance. Financial support is also offered for Ph.D students in the form of Research Assistantships.

**Eligibility for  
Undergraduate  
and  
Integrated  
Dual Degree  
Programmes**

**Eligibility for Undergraduate and Integrated Dual Degree Programmes**

10+2 with at least 50% aggregate and minimum 50% marks or equivalent in Physics, Mathematics and any one of the four optional courses (Biology, Bio-technology, Chemistry, Computer Science) from a recognized Central/State Board /University Examination in India or in any foreign country recognized as equivalent to 10+2 system by the Association of Indian Universities (AIU).

The applicants are required to appear in one of the National level Engineering admission tests, such as JEE, BITSAT, JKLU-EET (JK Lakshmipat University-Engineering Entrance Test) or any other equivalent state level engineering entrance examination. Foreign Nationals/Persons of Indian Origin/Non-Resident Indian candidates are also considered for admission on the basis of their marks in 10+2 or equivalent examination only.

The diploma holders (3-year Polytechnic programme by a recognized Institute) in any branch of Engineering (offered by JK Lakshmipat University, Jaipur) with minimum of 45% marks in aggregate are eligible for a lateral entry into 2<sup>nd</sup> year of B. Tech Programme.

**Selection Process**

Candidates shortlisted on the basis of their performance in the different components of Entrance Test are called for counseling. The final selection is made through counseling based on the candidate's performance in the written test and 10 + 2 examination and counseling.

**Evaluation Procedure**

The Institute follow the continuous evaluation approach at par with leading institutes in the country. Multiple inputs are obtained for evaluation of student performance through session assignments, quizzes, weekly tests, minor and major tests at the middle and end of each semester, and a holistic view is taken of all these inputs for awarding the final Grade. A dynamic system of weightages for the various academic components, such as project activity, presentations, group behavior, and leadership qualities has been put in place.

Credit based academic programmes, with modular structure offer flexibility to progress at one's own pace. A minimum level of performance is necessary for satisfactory progress



## Industrial Orientation

### Industrial Training

It is essential to link the theory learnt in the classroom of a University system with the professional world by infusing the reality of the world of work into the educational process. As a part of this process, IET offers two 'credit based structured courses' on Practice School (PS-I and PS-II) for its students.

**Practice School – I (PS-1)** is for 4-6 weeks after completion of 4<sup>th</sup> semester during summer term. The objective of this programme is to provide the students an understanding of working of corporate world in various functions associated with an Industry/Organization. During this programme, they will observe and learn various real world applications of their curricula and develop an understanding of vast engineering operations and its various facets such as inventory, productivity, management, information systems, human resource development, data analysis etc. The general nature of PS-1 assignments is of study and orientation.

**Practice School – II (PS - 2)** is for one semester in Final year. The objective of this programme is to provide the students, an opportunity to work on live projects of corporate world in various fields. During this programme, they will work on real world applications of their curricula through organizational function of their choice. The learning of PS-1 helps them in completing PS-2 successfully.

These practice schools are extremely beneficial in giving the students an understanding and in-fact an opportunity to apply their theoretical technical knowledge on real industry applications. This is also helpful in creating an industry-academia interface and these surely fills the existing gap between academics and industries.





## Department of Chemical Engineering

The department is offering B. Tech Programme since the year 2012. The Chemical Engineering Department is one of the premier engineering departments of IET. The instruction at the undergraduate level aims at providing the students a broad-based education with emphasis on theory and practice of Chemical Engineering, keeping in views the current and future requirements of the country. The students are taught the basic fundamentals of chemical engineering used in the industries and research organizations. The students also gain specialist knowledge and expertise as Chemical Engineer to produce finished products through processes, involving various physical or chemical changes in organic and inorganic materials and in renewable sources, like agricultural and biological materials or non-renewable materials, such as ores, coal and petroleum.

## Course Curriculum

### Semester I

- English Communication Skills
- Engineering Mathematics - I
- Engineering Physics – I
- Engineering Chemistry - I
- Computer Programming & IT
- Environmental Studies
- Workshop Practice
- Engineering Graphics

### Semester II

- Professional Communication Skills
- Engineering Mathematics - II
- Engineering Physics – II
- Engineering Chemistry -II
- Electrical & Electronics Engineering
- Engineering Mechanics
- Machine Drawing

### Semester III

- Chemical Process Calculations
- Fluid Flow Operations
- Heat Transfer Operations
- Unit Processes in Organic Synthesis
- Engineering Mathematics – III
- Principles of Management

### Semester IV

- Chemical Reaction Engineering
- Mass Transfer Operations
- Chemical Engineering Thermodynamics
- Elective – I
- Numerical & Statistical Analysis
- Principles of Economics

### Semester V

- Process Dynamics & Control
- Chemical System Modeling
- Separation Processes
- Mechanical Operations
- Chemical Engineering Materials
- Elective – II
- Practice School - I

### Semester VI

- Process Design Decisions
- Chemical Process Technology
- Process Equipment Design
- Transport Phenomena
- Elective – III
- Optimization Techniques

### Semester VII

- Elective – IV
- Elective – V
- Elective – VI
- Elective – VII
- Elective – VIII
- Seminar

### Semester VIII

- Practice School - II





### Elective Courses

#### Elective - I

- Energy Engineering
- Energy Conversion & Management

#### Elective - II

- Environmental Pollution Control
- Solid Waste Management

#### Elective - III

- Computational Fluid Dynamics
- Corrosion Engineering
- Biochemical Engineering

#### Elective - IV/V/VI/VII/VIII

- Process Plant Simulation
- Scale-up Studies
- Process Plant Safety
- Fertilizer Technology
- Pulp & Paper Technology
- Advanced Heat Transfer
- Energy Integration Analysis
- Process Intensification
- Computer Aided Design in Chemical Engineering
- Petroleum Refinery & Petrochemicals
- Fluidization Engineering
- Advanced Separation Processes
- Sugar Technology
- Pharmaceutical Engineering
- Chemical Vapor Deposition

### Industrial Visits

Rajasthan Drug and Pharmaceutical Limited, Jaipur

Sewage Treatment Plant (STP) Delawas Jaipur

### Lab Facilities

The Department of Chemical Engineering is aimed at design and commercial production (conversion of raw materials into various useful products by chemical, physical and biological transformations) of various organic & inorganic chemicals, petroleum products, petrochemicals, pharmaceuticals, metals, oil & natural gas, sugar, pulp & paper, etc. The Programme will help in developing the required skills to make qualified Chemical Engineers capable of facing the unknown situations and finding feasible alternate solutions. In this specialization students will understand the basic concepts and design aspects associated with various unit operations (fluid flow operations, mass transfer operations, heat transfer operations, and mechanical operations), unit processes, reaction engineering, process control, environmental pollution control, energy integration, optimization, modeling, simulation etc.

**Mass Transfer Lab** is setup to understand the basic principles of mass transfer operations and processing of the separation equipment. Students learn about Distillation column, Fluidized bed dryer, Liquid – liquid extraction unit, Absorption in wetted wall column, Vapor in air diffusion, mass transfer with/without chemical reaction, adsorption in packed bed, vapor- liquid equilibrium and batch crystallizer.



**Chemical Reaction Engineering Lab** is setup to understand the processing of basic reactors normally used in chemical industries. Students learn about different type of reactors, CSTR, RTD Studies in CSTR, RTD studies in plug flow reactor and in packed bed reactors.



**Heat Transfer Lab** is setup to understand the basic principles of heat transfer operation. Learning out comes of the labs friction in pipelines and fittings, flow through packed beds and fluidized beds, diffusion coefficient, Gas absorption, different types of heat exchanger and mass transfer with chemical reaction.

**Mechanical Operation Lab** provides chemical engineering students an opportunity to observe, analyze and apply their engineering knowledge and training to the operation of equipment and processes commonly found in many chemical industries like Rotary drum filtration, Froth filtration, Centrifugal pump characteristics, Forced draft tray dryer, Vacuum notch filter, Ball mill and jaw crusher.



**Process Dynamics and Control Lab** is setup to understand the basic principles involved in chemical process control industries. Students study different type of processes without controller to understand their dynamics, process connected in series in interacting and non-interacting mode, study of I/P and P/I converter and flapper nozzle system. They also understand the response of the controller in presence of feedback controllers, i.e. pressure control trainer, temperature control trainer.

## Department of Civil Engineering

The Department is offering B. Tech Programme since the year 2011. The Department actively promotes curriculum development activity by updating existing courses, developing new courses and preparing resource material for teaching. The Department has a number of ongoing research projects and sponsored research schemes from public and private sector organizations. It undertakes industrial consultancy works as a part of its interaction with industry and also organizes seminars/symposia for professional interaction. The Department contributes to the interdisciplinary academic and research activity of the Institute.

Goals of the Department are to prepare all students with a technical background anchored in the fundamental of civil engineering together with breath of related knowledge needed to follow diverse career path in civil engineering and also.

## Course Curriculum

### Semester I

- English Communication Skills
- Engineering Mathematics - I
- Engineering Physics – I
- Engineering Chemistry - I
- Computer Programming & IT
- Environmental Studies
- Workshop Practice
- Engineering Graphics

### Semester III

- Strength of Materials & Mechanics of Structures – I
- Fluid Mechanics & Applications
- Building Material & Construction
- Engineering Geology
- Engineering Mathematics – III
- Principles of Management

### Semester V

- Theory of Structure
- Concrete Structures – I
- Steel Structures – I
- Surveying - II
- Environmental Engineering
- Geotechnical Engineering
- Practice School - I

### Semester VII

- Elective – I
- Elective – II
- Elective – III
- Elective – IV
- Elective – V
- Seminar

### Semester II

- Professional Communication Skills
- Engineering Mathematics - II
- Engineering Physics – II
- Engineering Chemistry -II
- Electrical & Electronics Engineering
- Engineering Mechanics
- Machine Drawing

### Semester IV

- Strength of Materials & Mechanics of Structures – II
- Concrete & Construction Technology
- Surveying - I
- Building Construction Technology
- Numerical & Statistical Analysis
- Principles of Economics

### Semester VI

- Concrete Structures – II
- Steel Structures – II
- Water Resource & Irrigation Engineering
- Transportation Engineering
- Estimating and Costing
- Construction Project Management
- Optimization Techniques

### Semester VIII

- Practice School - II

### Elective Courses

#### Elective - I/II/III/IV/V

- Hydraulics
- Engineering Rock Mechanics
- Geographical Information System
- Solid Waste Management
- Repair & Rehabilitation of Structures
- Finite Element Analysis
- Disaster Management
- Design of Pre-stressed Concrete Structures
- Advanced Transportation Engineering
- Earthquake Engineering
- Design of Bridge Structures
- Water Power Engineering
- Rural Water Supply & Sanitation
- Earthquake Resistant Design & Techniques

### Departmental Activities

- A seminar on "Energy and Built-environment" conducted by Dr. David Mark Leifer (formerly Director at University of Sydney, Australia), Dr. Anil Kashyap (RICS School of Built Environment, Amity University Noida), Dr.-Ing. Anupam K Singh (Director-IET, JKLU) and Prof Keith McKinnell (University of Melbourne, Australia) on April 5, 2014.
- A workshop on "Bridge Design Fabrication and Testing" in association with Civil Simplified (a Venture of SkyfiLabs ) during September 13-14, 2014.
- A seminar was organized on "Utilization of AutoCAD and StaadPro in Drafting & Designing of Structure" during March 2, 2015.
- A workshop was organized on "Utilization of StaadPro in Drafting & Designing of Structure" during March 3-4, 2015.
- An expert Lecture by Prof. S. K. Tiwari of Department of Civil Engineering, MNIT Jaipur on various field tests related to Geotechnical Engineering during April 18, 2015
- A workshop on " Open source GIS and Its Application in Civil Engineering" by Dr.-Ing. Anupam K Singh (Director-IET, JKLU), Mr. Akshay O Jain, Dr. Kusum Lata (IIPA) and Mr. Sudhakar Sharma during July 24-26, 2015

### Industrial Visits

- Building Technology Park, Mansarovar, Jaipur
- Sewage Treatment Plant (STP) Delwas, Jaipur
- JK Lakshmi Cement, Sirohi
- Mahindra World City SEZ, Ajmer Road, Jaipur
- Tehri Dam, Uttarakhand
- Jai Vilas residential project, Sikar Road, Jaipur



### Student Activities and Achievements

- **Vanshika Bharadwaj** (B. Tech CE 4th year), Wi JK Business School, Gurgaon Sport Fest "Arn 2013.
- **Arsalan Obaidi** (B. Tech CE alumnus) and **Gourav Suthar** (B. Tech CE 4th year) were awarded second prize for their research paper titled "Treatment of Waste Water by Fresnel Lense and Small Scope of Electricity Generation" presented at Green Brain Contest 2015 held at MET University, Turkey.
- **Gourav Suthar, NamanSukhija and Shubhangi Jain** won the first prize in the University Challenge competition (IFAT-2015) hosted by German Water Association. They have been invited by the Wilo foundation to participate in the the First International University Challenge at the IFAT in Munich, Germany from May 30 to June 3, 2016 and Young Water Professionals Programme at Wilo factory, Pune, India. Total seven students participated in this event. The students were mentored by Dr. Ravi Kumar Ganti and Prof. Vinod Kr. Vishwakarma.



## Lab Facilities

### Surveying Lab

The planning and design of all Civil Engineering projects such as construction of highways, bridges, tunnels, dams etc are based upon surveying measurements. Thus, surveying is a basic requirement for all Civil Engineering projects. The lab is equipped with State of the art instruments like total station, Global Positioning System (GPS) and e-surveying.



### Concrete Lab

The Concrete Technology Laboratory in the department of Civil Engineering at JKLU is one of the best concrete technology laboratories currently existing. The laboratory serves a wide spectrum of activities covering those related to teaching, research, development and consultancy. The primary activities include experimental studies on different types of materials which are used in concrete and testing of concrete specimens in various exposure conditions. The Concrete technology Laboratory is equipped with Compression Testing Machine, Cement mortar vibrating machine, Cement mortar mixing machine, Rebound hammer, Concrete mixer, Different Mould cast, Facilities of other many more physical and chemical testing of cement concrete and aggregates, Flow table, Permeability apparatus, Flexure Testing machine, Abrasion resistance machine and Buoyancy balance.



### Environmental Engineering Lab

The laboratory is equipped with all the instruments for air quality, water quality and wastewater analysis, Environmental Engineering Division have organised various training programmes like certificate programme of 2 month duration “Environment Analysis and Monitoring (EAM)” for both industries and students every year. The Laboratory has sophisticated equipments to analyse pollution parameters in water and waste water, soil, Air. The sophisticated instrument list includes Bench top PH meter kit, Battery operated Portable Turbidity meter, Battery operated Portable Dissolved oxygen meter (DO-meter), Portable hand-held TSS-meter, UV-Visible Spectrophotometer, Bench top Conductivity Lab kit, COD Reactor, BOD Track apparatus, BOD incubator, Electronic precision balance, Electronic precision balance upto 2000gm capacity, Hot air oven with Thermo-static control, Microwave, TKN Analyzer, Distilled water Unit, Jar test equipment, Laminar flow setup, Scientific Refrigerator, Muffle Furnace, Respirable Dust Sampler (For PM10/SPM /Heavy Metals Monitoring), Fine Particulate Sampler (For PM2.5 Monitoring), Gaseous Pollutant Sampler, High Volume Sampler and Stack Monitoring Kit.



### Transportation Engineering Lab

The laboratory of transportation engineering in civil department is well equipped with all the required instruments and equipments that are helpful in the overall understanding and practical knowledge of a student. Institute have facilities of such as CBR, Los angles abrasion instrument, Aggregate Impact test; Buoyancy balance Specific Gravity, Water Absorption test and Bulk density test for Aggregate; Flakiness Index and Elongation Index Test etc.



### Engineering Geology Lab

The laboratory of Engineering Geology in Civil Department is well equipped with all the required sample minerals, ores, metals, non-metals and maps etc that are helpful in the overall understanding and practical knowledge of subject to the students.

### Fluid Mechanics Lab

This lab has basic fluid mechanics and hydraulics machine set-up. Fluid mechanics and Hydraulic machines laboratories have all comprehensive experimental set-ups catering to the requirements of course curriculum.



### Computing Lab

The Department offers state-of-the-art computing facilities to the graduate students, research scholars and faculty members. The major software packages available are 3D CAD Design and Modeling (Micro Station Power Draft V8i and MicroStation V8i), Transportation (Bentley MX Road Suite V8i and Bentley Power Civil for Country), Building Information Modeling (AECOSim, Building Designer V8i, AECOSim Energy Simulator V8i, Bentley Navigator and Bentley Connections

Passport), Offshore (Bentley Maxsurf Enterprise, SACS Marine Enterprise, SACS Offshore Structure), Structural (STAAD.Pro V8i, STAAD Foundation Advanced, STAAD Global Design Code, Bentley Power Rebar and RAM Concept V8i), Water and Waste water (SewerGEMS V8i, WaterGEMS V8i, StormCAD V8i, Civil Storm V8i and HAMMER V8i), 3D Imaging, Point Clouds and Mapping (Bentley Descartes V8i, Bentley MAP Enterprise and Bentley Pointools V8)

### Geotechnical Engineering Lab

Geotechnical Engineering laboratory is well equipped with all equipment required for identification and classification of soils. Some of those are Liquid limit device, Cone penetrometer, Shrinkage limit test, Pycnometer, Plastic Limit set, Direct shear apparatus, Core cutter, Compaction test apparatus both heavy and light compaction, Standard penetration set, Hydraulic jack, Sieve shaker (motorized), Hydrometer and Hot air oven.

## Department of Computer Science Engineering

### Department of Computer Science Engineering

The department of Computer Science Engineering has emerged as a Centre of Excellence. It has landscaped its academic programmes extensively with aim to train engineers at UG and PG levels, equip them with the fundamental concepts and techniques of computing and applications, relevant to emerging technological advancements. Department fosters a learning environment that produces high quality computer professionals readily employable by the industry and research organizations.

What sets Computer Science Engineering Department apart from the rest in its brigade is its approach for professional training, which is practical oriented, guided by technology, performance driven and interactive. The curriculum focuses on the fundamentals of theory, followed by practical, projects and industrial training. Department regularly upgrades its academic curriculum components to suit industry needs which assist students in getting appropriate placements for their bright future. There is widespread interaction between the Computer Science Engineering Department and corporate world in the field of teaching and research.

The department has initiated the process to become channel partners of some of the big software giants like IBM and Microsoft, to name a few. The department is equipped with state-of-the-art laboratories.

## Course Curriculum

### Semester I

- English Communication Skills
- Engineering Mathematics - I
- Engineering Physics – I
- Engineering Chemistry - I
- Computer Programming
- Environmental Studies
- Workshop Practice
- Engineering Graphics

### Semester III

- Data Structures
- Object Oriented Programming
- Electronic Device & Circuits
- Network Analysis & Synthesis
- Engineering Mathematics – III
- Principles of Management

### Semester V

- Operating System
- Computer Architecture & Organization
- Computer Networks
- Theory of Computation
- Web Technologies
- Elective – I
- Practice School - I

### Semester VII

- Elective – III
- Elective – IV
- Elective – V
- Elective – VI
- Elective – VII
- Seminar

### Semester II

- Professional Communication Skills
- Engineering Mathematics - II
- Engineering Physics – II
- Engineering Chemistry -II
- Electrical & Electronics Engineering
- Engineering Mechanics
- Machine Drawing

### Semester IV

- Digital Electronics
- Database Management Systems
- Discrete Structures
- Foundations of Computer Graphics
- Numerical & Statistical Analysis
- Principles of Economics

### Semester VI

- Design & Analysis of Algorithms
- Compiler Design
- Software Engineering
- Distributed Systems
- Elective – II
- Optimization Techniques

### Semester VIII

- Practice School - II

### Elective Courses

#### Elective - I

- Management Information System
- Information Technology & Project Management

#### Elective - II

- Network Security
- Mobile Computing
- Microprocessors & Interfacing

#### Elective - III/IV/V/VI/VII

- Robotics
- Artificial Neural Network
- Cryptography
- Network Management
- Wireless Networks
- Artificial Intelligence
- Data Mining & Data Warehousing
- Digital Image Processing
- Modeling & Simulation
- Cyber Laws and Intellectual Property Rights
- Object Oriented Analysis and Design
- Parallel Processing
- Soft Computing
- Computer Project

### Departmental Activities

- An expert lecture on "Network Securities" delivered by Mr. Uttam Sharma, Technical Director, RNS INFOTECH, Jaipur organized by Cisco Networking Academy
- A guest lecture by Mr. Rajat Sharma and Mr. Punit of Grass Root Technology & Solutions, Jaipur.
- A workshop on "Website Design and Development" in association with Mahayana Technologies, Jodhpur, Rajasthan.
- Sessions on "ERP Systems and their Role in Organisations", "ERP Insights", "ERP: Opportunities and Challenges" and "Enterprise Systems: Career Opportunities" by Mr Vinod Gupta, Ex. IT Head, JK Organisationon.
- One day talk on "FOSS Technologies" by Prof. G.T. Rao (Free Software Fundamentalist).
- A workshop on "Onpage & Off Page SEO" by Mr. Baldev Sharma, DzureInfoSoft, Jaipur.
- A workshop entitled 'Administration using REDHAT LINUX' by Grass Solution Pvt. Ltd. organized.
- A talk on "ERP Management at JK Papers" by Mr. Vinod Gupta, Ex. IT Head, JK Organisation.
- A talk on 'Game Development' by Ark Infosystems Pvt. Ltd.
- A Talk was delivered on 'ERP Technology: The Insight and Opportunity Ahead' by Cyret Technologies.
- Two full day hands on workshop on Mobile App Development (Anroid Platform) by Technolophillia, Mumbai.
- Two full day hands on workshop on Mobile Computing by Prof. Vijay Ukani, Nirma University, Ahmedabadon.
- A workshop in association with Rebel Station. org, on "Web Technologies" by Mr. Jitendra Joshi.
- 5 Weeks summer school on "Custom Android App. Disbersment" by Tech Bharat Consulting & AIESEC, IIT, Delhi.



## Student Activities and Achievements

- Students attended an International talk on “Free Software and your Freedom” by Dr. Richard Stallman at Maharana Pratap Auditorium, Jaipur on Dec., 15, 2014.
- **Ashruth Bharadwaj** selected as official photography partner for technical, cultural and sport fest of LNMIT, Jaipur.
- **Kumkum Gupta** won certificate of honour (Second Prize) in ROBOTRYST-2013 and certificate of merit (first prize) in Robo-Zest-2014 certificate of merit (First Prize) in Relay Mathematics at Tech-Ideate 2014 at Manipal University Jaipur. Certificate of merit for securing second position in zonal round of International Challenge for Android App Development held at JK Lakshmipat.
- **Payal Sharma** won certificate of honour (Second Prize) in ROBOTRYST-2013 and won certificate of merit (First Prize) in Robo-Zest-2014.
- **Rajat Kumawat** won certificate of honour (second prize) in ROBOTRYST-2013 and certificate of merit (First Prize) in Robo-Zest-2014.
- **Rishab Soni** secured Quarter Finalist position at TechFest, IIT Bombay for the 'IC Engine Car' developed as a part of the Full Throttle competition.
- **Rishu Agrawal** secured Quarter Finalist position at TechFest, IIT Bombay for the 'IC Engine Car' developed as a part of the Full Throttle competition.
- **Riya Choudhary** won certificate of honour (Second Prize) in ROBOTRYST-2013.
- **Ritu Sharma** won certificate of honour (Third Prize) in ROBOTRYST-2013.
- **Sparsh Agrawal** won certificate of merit (First Prize) in Robo-Zest-2014, a national level robotics championship held at JK Lakshmipat University, Jaipur.
- **Sparsh Agrawal** won certificate of merit (First Prize) in Relay Mathematics at Tech-Ideate 2014 at Manipal University Jaipur.
- **Shlok Ishan** secured second position in model presentation in Sabrang-2014, organized by JK Lakshmipat University.
- **Uday Gupta** was Runner up in Junkyard War in Sabrang 2012, JKLU.
- **Yash Jain** was honored with the “Sahityakar Samman” for efforts in spreading awareness on Hindi Language and literature.

## Industrial Visits

- Software Technology Parks of India, Jaipur
- Parle, Neemrana
- Omega Electronics, Jaipur

## Research and Development

With an emphasis on research, Department of Computer Science Engineering offers PhD and M.Tech programme from its founding year. Faculties, Doctoral students and Post graduate Students are pursuing research in areas of Brokerage in Federated Cloud Structures, Optimization in Routing in Ad-hoc Sensor Networks, Software Cost Estimation, Usages of Evolutionary Computation Techniques and Technology for Education etc. Undergraduate students are encouraged to be part of these research works in form of subjects under subjects integrated with curriculum.



## Lab Facilities

The Computer Science and Information & Communication Technologies has changed life bringing new economic and social opportunities to communities throughout the world and has increased the global demand for IT skills. Department of Computer Science Engineering ensures cutting edge laboratories with latest hardware and software bundle in each lab, where students gain the experience needed to help meet the growing demand of professionals. The lab also has adequate projection facilities for presentations.

**Programming Language Lab:** This lab is utilized by students to attain grip on development of programs using computer languages like C, C++, C#, Java, Python and Prolog. IDE's installed in the lab includes Eclipse, TurboC3, Visual Studio and Borland C++ including compilers for the required languages.

**Professional Communication Lab:** Special focus has been given in improvement in Communication skills of students by the department. Oréll Digital Language lab Suite is being installed on the systems.



**Linux Lab:** This lab facilitates familiarity of students with the Linux operating system. Students deal with fundamentals and explore the various tools and techniques commonly used by Linux users, programmers, and system administrators to do their day-to-day work.

**Networking Lab:** The Networking lab includes kits and modules designed to help students build 21st century skills such as collaboration and problem solving while encouraging practical application of knowledge through hands-on activities and network simulations. Kits include Benchmark Netsyst and I-Secureit.

**CISCO Network Academy:** Cisco Network Academy facilitates networking skills foundation. Through Networking Academy Courses students can earn Cisco career certifications and help fill gap in the networking jobs around the world. The online assessments provide personalized feedback to support the learning process.

**Web Technologies Lab:** Infrastructure of this lab is utilized by students to gain hand-on grips on web technologies. The machines are equipped with relevant software tools like Eclipse, Visual Studio 2010, 2012, 2013, PHP, Web server, XAMPP, WAMP, LAMP, and Net Beans to name a few.

**Database Technologies Lab:** This laboratory supports experimental work for the courses related to Database Systems. The machines are equipped with tools for designing databases likes MS SQL server 2010, 2012, MY Sql Server, Postgres as well as software for creating design diagrams like Microsoft Visio.



## Department of Electrical Engineering

### Department of Electrical Engineering

The department is offering B. Tech Programme since the year 2011. The Electrical Engineering (EE) Department started as part of the Institute of Technology. The department of electrical engineering has been playing a vital role in producing technologists of highest caliber ever since it was established. Historically, the field of electrical engineering is one of the most important engineering disciplines that have changed the course of the world. Some of our important areas of teaching are Electrical Machines, Industrial Electronics, Circuits and Systems, Engineering Materials, Linear and Non-linear Control Systems, Power System, Machines Drives, FACTs and High Voltage Engineering. The infrastructure and lab facilities are upgraded from time to time and provide adequate opportunities for students and researchers to learn and innovate. The department has distinguished faculty, all holding Master/Ph.D. degrees from renowned institutes in India. The faculty of the department has been constantly carrying out research on many cutting edge technologies.

## Course Curriculum

### Semester I

- English Communication Skills
- Engineering Mathematics - I
- Engineering Physics – I
- Engineering Chemistry - I
- Computer Programming & IT
- Environmental Studies
- Workshop Practice
- Engineering Graphics

### Semester III

- Network Analysis & Synthesis
- Electrical Machines – I
- Electronic Devices & Circuits
- Measurements & Instrumentation
- Engineering Mathematics – III
- Principles of Management

### Semester V

- Linear Control Systems
- Power System Switchgear & Protection
- MATLAB Programming
- Linear Integrated Circuits
- Engineering Signals & Systems
- Elective – I
- Practice School- I

### Semester VII

- Elective – III
- Elective – IV
- Elective – V
- Elective – VI
- Elective – VII
- Seminar

### Semester II

- Professional Communication Skills
- Engineering Mathematics - II
- Engineering Physics – II
- Engineering Chemistry -II
- Electrical & Electronics Engineering
- Engineering Mechanics
- Machine Drawing

### Semester IV

- Electrical Machines – II
- Transmission & Distribution of Electrical Power
- Digital Electronics
- Electromagnetic Field Theory
- Numerical & Statistical Analysis
- Principles of Economics

### Semester VI

- Generation of Electrical Power
- Power System Analysis
- Industrial Electronics
- Restructured Power System
- Optimization Techniques
- Elective – II

### Semester VIII

- Practice School - II

## Elective Courses

### Elective - I

- Electrical Material
- Advanced Distribution System
- Data Structures

### Elective - III/IV/V/VI/VII

- Power Quality & Utilization of Electrical Power
- Electrical Installation, Commissioning & Maintenance
- EHV AC & DC Transmission
- High Power Semiconductor devices
- Flexible AC Transmission System
- Advanced PID Control
- Communication Systems & Network
- Electrical Machine Design
- High Voltage Engineering

### Elective - II

- Microprocessors Interfacing
- Digital Communications
- Digital Signal Processing
- Digital Image Processing
- Artificial Neural Network
- Robotics
- IC Technology
- Verilog Hardware Description Language
- Biomedical Engineering
- Mechatronics
- Energy Management & Efficiency
- Total Quality Management
- Renewable Energy Resources

## Industrial Visits

- 220 KV Grid Substation, Mahindra SEZ-I Jaipur
- JK Lakshmi Cement Plant, Sirohi.
- Tehri Dam
- United Transformers, Jaipur.
- JK Tyre

## Departmental Activities

- An Expert Lecture on Renewable Energy Resources by Mr. Abhishek Kohli (AVP – Strategic Alliances at Ecosense) on January 19, 2015.
- A workshop on Industrial Automation by Sofcon India Pvt. Ltd on Sept. 15, 2014.
- A workshop on Motor Drive and HMI system by Sofcon India Pvt. Limited on Feb. 20, 2015.
- A workshop on house wiring was conducted on March 13, 2015.
- **Anurag Pandey** (B. Tech EE student) and Prof. Jagdish Sharma presented a paper entitled "Power generation and Automation System Designing for Highways" in the IEEE International Conference on Electrical, Computer & Communication Technologies on March 05-07, 2015.
- **Anurag Pandey** and Prof. Jagdish Sharma presented a paper entitled "A Review on power generation by ultra-supercritical technology" in the DST Sponsored National Conference on Science and Engineering on July 27-28, 2014.
- **Anurag Pandey** presented a paper entitled "Renewable Energy in India" in the National Conference on "Recent Advancements in Power System Engineering" on March 21-22, 2013.

## Student Activities and Achievement

## Lab Facilities

### Electrical and Electronics Engineering Lab

This is the basic lab for all branches of Engineering in first year. Here students interact with basic electrical / electronic components/equipments and machines. They acquire the basic skills to operate & control the electrical appliances. This lab is fully equipped with equipment like motors, generator (both A.C and D.C), and transformer, all measuring instruments (voltmeters, ammeters, wattmeter and energy meter), rheostats, capacitors and inductors, power supply, CRO, function generator for performing various experiments.





### Electrical Machines Lab

It is intended specifically to meet the needs of modern courses in electrical machines. There are equipment's like single / three phase transformers, dc shunt, series & compound motors / generators, single/three phase induction motor, three phase synchronous motors, three phase synchronous generators etc. for performing various tests related with the specific machine. This lab gives us the vast opportunities to get a hands on experience with machines and for developing perception.



### Circuit Analysis Lab

This laboratory is equipped with various electrical components i.e. rheostats, inductors, capacitors, power supplies and MATLAB software. In this lab students arrange the components to perform experiments and then simulate circuit problem on MATLAB. Some of experiments are: network theorems, R-L-C circuits, resonance, two port network, T and Pi network and filter circuits.

### Linear Control system Lab

The course introduces students to the fundamental control systems theory with an emphasis on design and implement. The lab focuses on technical implementation issues of classical control theory in the frequency domain and modern control theory in the state- space. Here students learn the various control methods, which are being used in the industries now a days. In this lab students learn the analysis and design of various controllers (i.e. proportional, PI, PD & PID), compensation networks.



### Power system switchgear & protection Lab

Protective relaying is a vital part of any electrical power system; unnecessary during normal operation but very important during emergencies, faults, and abnormal disturbances. Power system Laboratory comprises protection, simulation, high voltage and machine related experiments. Experimental setups are available for over current, over /under voltage, directional, differential, buchholz relay and microprocessor based relays.

### Modeling & Simulation Lab

In this Lab, students will be familiar with most versatile software like MATLAB. MATLAB provides a complete Learning Management System where the students can use the various tools for programming, modeling & simulation. In this lab students use MATLAB software for analysis the performance of electrical machines & power system by simulation.

### Renewable Energy Source Lab

This lab is dedicated to carry out experiments on energy generation from solar PV and windgenerator. Data acquisition from Solar panel and wind turbine, hybrid energy system is utilized for further research work.



## Department of Electronics & Communication Engineering

### Department of Electronics & Communication Engineering

The department offering B. Tech and M. Tech Programme This programme is aimed at producing high quality engineers in the field of Electronics and Communication Engineering (ECE), well equipped to take up the challenges in this highly upbeat branch. Students will be developing their foundation skills in basic sciences and engineering courses before moving on to take up the core courses in Electronics and Communication Engineering. They will also be taking up a number of concurrent professional development courses in various areas, such as Languages, Humanities, Social Sciences and Management, enabling them to excel in their branch of specialization.

Some of the important compulsory courses include Analog & Digital Electronics, Signals & Systems, Analog & Digital Communications, Digital Signal Processing, Electromagnetic Engineering, Telecommunication Networks and VLSI Design. Comprehensive design oriented laboratory practice in the core courses will augment the understanding of the intricacies of every course.

## Course Curriculum

### Semester I

- English Communication Skills
- Engineering Mathematics - I
- Engineering Physics – I
- Engineering Chemistry - I
- Computer Programming & IT
- Environmental Studies
- Workshop Practice
- Engineering Graphics

### Semester III

- Electronic Devices & Circuits
- Measurements & Instrumentation
- Network Analysis & Synthesis
- Object Oriented Programming
- Engineering Mathematics – III
- Principles of Management

### Semester V

- Linear Integrated Circuits
- Analog Communications
- Engineering Signals & Systems
- Microwave Engineering-I
- Linear Control Systems
- Elective–I
- Practice School - I

### Semester VII

- Antenna & Wave Propagation
- Elective – III
- Elective – IV
- Elective – V
- Elective – VI
- Seminar

### Semester II

- Professional Communication Skills
- Engineering Mathematics - II
- Engineering Physics – II
- Engineering Chemistry -II
- Electrical & Electronics Engineering
- Engineering Mechanics
- Machine Drawing

### Semester IV

- Analog Electronics
- Digital Electronics
- Electromagnetic Field Theory
- Engineering Materials & Processes
- Numerical & Statistical Analysis
- Principles of Economics

### Semester VI

- Microwave Engineering – II
- Digital Communications
- Digital Signal Processing
- Industrial Electronics
- Optimization Techniques
- Elective – II

### Semester VIII

- Practice School - II

## Elective Courses

### Elective - I

- Information Theory & Coding
- Artificial Intelligence

### Elective - II

- Computer Communication Networks
- Microprocessors & Interfacing
- Embedded Systems

### Elective - III/IV/V/VI

- Wireless Communication
- Biomedical Engineering
- Optical Fiber Communication
- Telecommunication Engineering
- IC Technology
- Verilog Hardware Description Language
- RADAR & Satellite Communication
- VLSI Design
- Robotics
- Artificial Neural Network
- Digital Image Processing

## Departmental Activities

- An expert lecture by Dr. Divyang Rawal (LNMIIT, Jaipur) on "Channel estimation in wireless Communication with MATLAB coding/simulations" held on July 27, 2015.
- An expert lecture by Dr. Lokesh Tharani (RTU, Kota) on "Practical aspects of various analog communication techniques" was held on August 17, 2015.
- A workshop on "Embedded System" was conducted by Dr. S. S. Sengar and Dr. Rajiv Ranjan Singh on September 04, 2015.
- Lab technicians Mr. Gajendra Singh and Mr. Anil Kumar made a project on "Obstacle avoiding Robot" using IR sensors and Logic gates.



## Student Activities

**Nitin Jain** (B.Tech ECE alumnus) presented a research paper titled "Monitoring a Water Efficient Irrigation System Through SCADA" in conference "ADMET-2014" held at Thapar University, Patiala from 19-21 February, 2014.

- Ericsson India Pvt. Limited, Kukas, Jaipur
- Aksh Optifiber Ltd., Reengus, Sikar
- ALTTC BSNL, Ghaziabad, UP



## Industrial Visits

## Lab Facilities

### Electronic Devices and Circuits Lab

This is the main lab where the basic experiments like device characteristics and basic analog circuits are done. The lab consists of oscilloscopes, function generators and power supplies. Here the students carry out different experiments which include the study of the characteristics of devices such as diodes, BJT, FET, Basic amplifiers, Oscillators and Waveform generators using electronic devices.

**Digital Electronics Lab :** This laboratory provides hands-on experience in designing and implementation of digital logic circuits and systems. The laboratory experiments involve the design and testing of digital systems using small and medium scale integrated circuits. Each standard setup in the lab has basic trainer kits and IC testers.





**Analog Electronics Lab :** This lab is in continuation of electronic device and circuits (EDC) lab. Here, students perform the practical on the different kind of amplifiers, oscillators, and frequency filters. There all are made using the properties of the components studied in EDC which are different transistors, diodes, inductors etc. Students also learn about uses of these devices according to requirements in real life situations.

**Analog Communication Lab :** The objective of this lab is to understand the basic communication techniques and perform them on kits/ Breadboard to consolidate basic knowledge in Analog Communication. This will cover the AM, FM, PM, Noise and various forms of these modulation methods.



**Digital Communication Lab :** The objective of this lab is to understand the advanced digital Communication techniques and perform them on kits/ Breadboard to consolidate basic knowledge in Digital Communication. This will cover the ASK, PSK, FSK, Probability of error, Noise, CDMA, FDMA and various other methods.



**Linear Integrated Circuits Lab :** The objective of this laboratory to learn the basic concepts in the design of electronic circuits using linear integrated circuits and their applications in the processing of analog signals. The standard setup in the lab contains basic and advanced trainer kits, oscilloscopes and function generators. In addition to these experiments, different applications of timers, DAC and ADC are performed.

**Measurement & Instrumentation Lab :** The objective of this laboratory is to learn about basic knowledge of electronic & electrical measurements and calibration of instruments. The laboratory experiments involve different types of transducers and calibration systems like LVDT, Strain Gauge, Temperature transducer and different types of Bridges.



**Microwave Engineering Lab :** The objective of this laboratory is to understand different Microwave components and learn to measure different terms of microwave. The laboratory involves experiments like klystron, couplers, GUNN diode, attenuators, Horn etc.



**Antenna & Wave Propagation Lab :** The objective of this laboratory is to learn about the different measurement of Antenna and also to design antennas using software. This laboratory also includes RADAR and Satellite systems. Students learn about these technologies and measure different parameters of these instruments.

**Digital Signal Processing Lab :** The purpose is to introduce the various digital signal processing techniques using MATLAB environment. The lab has more than 30 numbers of computers along with latest version of MATLAB which is a user friendly tool for the students. The knowledge of MATLAB software enables the students to design a digital filter of required specifications.



## Department of Mechanical Engineering

### Department of Mechanical Engineering

The department is offering B. Tech Programme since the year 2012. The Department of Mechanical Engineering has been established with the vision to train students who can pioneer techniques in the production of useful materials. The department has laboratory and workshop facilities with modern sophisticated equipments to carry out research in all areas related to Mechanical Engineering. The curricula of our undergraduate program has been designed to fill the existing gap between the industry and academia, so that we produce thorough professionals ready to face the challenges of the real world, including an understanding of the socio-economic, environmental, regulatory and ethical issues relevant to the engineering profession. To achieve this goal, the department is absorbing the best talent globally by hiring faculty members who have wide-ranging experience of academics and research as well as industry. In addition, we are focusing on collaborations with various industries to design relevant curricula and to provide students with an exposure to the real world.

## Course Curriculum

### Semester I

- English Communication Skills
- Engineering Mathematics - I
- Engineering Physics – I
- Engineering Chemistry - I
- Computer Programming & IT
- Environmental Studies
- Workshop Practice
- Engineering Graphics

### Semester III

- Engineering Thermodynamics
- Mechanics of Deformable Bodies
- Theory of Machines
- Material Science & Engineering
- Advanced Machine Drawing
- Engineering Mathematics – III
- Principles of Management

### Semester V

- Fluid Mechanics
- I.C. Engines & Gas Turbines
- Production Technology-II
- Design of Machine Elements – I
- Production Planning & Control
- Elective – I
- Practice School - I

### Semester VII

- Mechanical Vibrations & Control
- Elective – III
- Elective – IV
- Elective – V
- Elective – VI
- Seminar

### Semester II

- Professional Communication Skills
- Engineering Mathematics - II
- Engineering Physics – II
- Engineering Chemistry -II
- Electrical & Electronics Engineering
- Engineering Mechanics
- Machine Drawing

### Semester IV

- Applied Thermodynamics
- Industrial Engineering
- Production Technology-I
- Automobile Engineering
- Numerical & Statistical Analysis
- Principles of Economics

### Semester VI

- CAD – CAM
- Refrigeration & Air – Conditioning
- Hydraulic Machines
- Design of Machine Elements – II
- Elective – II
- Optimization Techniques

### Semester VIII

- Practice School - II

### Elective Courses

#### Elective - I

- Product Design & Development
- Computational Fluid Dynamics
- Principles of Robotics

#### Elective - III/IV/V/VI

- Fundamentals of Aerodynamics
- Flexible Manufacturing System
- Reliability Engineering & Maintenance Engineering
- Total Quality Management
- Industrial Pollution & Control
- Mechanical System Design
- Mechatronics

#### Elective - II

- Basics of Wind Energy
- Non-Conventional Machining Processes
- Waste Heat Recovery & Management

- Power Plant Engineering
- Heat & Mass Transfer
- Energy Management & Efficiency
- Industrial Combustion
- Metal Forming Analysis
- Renewable Energy Resources
- Tribology
- Finite Element Analysis

### Departmental Activities

A workshop on "Computational Fluid Dynamics" by Mr. Deepak and Mr. Sushant from Aerotrix on September 27-28, 2014.

A workshop on "Creo 2.0" by Bharat Auto Solutions on September 4-6, 2015.

A workshop on "Catia V5" by Bharat Auto Solutions on September 10-12, 2015.

### Industrial Visit

JK Lakshmi Cement Plant, Sirohi.

### Lab Facilities

The department has Strength of Material Laboratory, Dynamics of Machines Laboratory, Mechanical Vibration and Noise Control Laboratory, CAD Laboratory, IC Engine and Gas Turbine, Heat Transfer, Refrigeration and Air Conditioning, Fluid Mechanics and Fluid Machinery, Renewable Energy, Steam Power Engineering, Computational Fluid Dynamics (CFD), Machine Tool, Metrology and worksheet practice (Fitting, Welding, Forming Foundry and Forming and Welding).

#### Mechanical Workshop

All engineers must not only know how to design products but also have a basic knowledge of how to make them. Mechanical workshop helps students to understand the basic skills required for fitting, welding and machining. Students use various measuring instruments and tools to perform fitting and welding exercises. In foundry, the students are guided in preparing the mould cavities using moulding sand. This section also has the facility to test the moulding sand properties like grain fineness test, moisture content test, core hardness, mould hardness, etc.

#### Machine Tool Lab

Machine tool lab is incorporated specifically to meet the practical exposure on various machine tools like Lathe machines, Shaper machine, Milling machine, Drilling machine, Grinding machine, etc. This lab gives vast opportunities for hands on experience with machine tools making various jobs.



### Strength of Materials Lab

The objective of this lab is to understand and measure various mechanical properties of the materials. This lab includes experiments on Computerized Universal Testing machine, Torsion testing machine, Fatigue testing machine, Hardness testing machine and Izod & Charpy Impact testing machine.

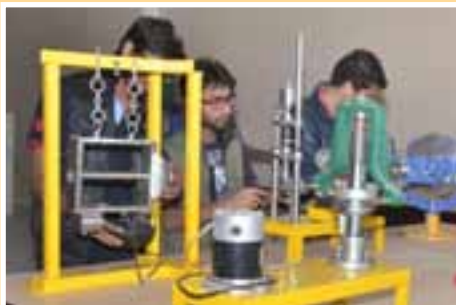


### CAD/CAM Lab

The course introduces students to the fundamental of CNC Machine programming with an emphasis on design and manufacturing. The CNC laboratory aims to enhance the student's knowledge in development of practical CAD models. Students understand basic machining processes, learn to set up and adjust the tools and fixtures and follow safety procedures.

### Hydraulic Machines Lab

This lab has different types of turbines and pumps where students can study the performance characteristics of those machines. Students can understand the working and applications of these machines. This lab is equipped with Pelton Wheel, Francis, Kaplan Turbine with Reciprocating, Centrifugal pump and Hydraulic Ram.



### Theory of Machine Lab

Objective of this lab is to impart knowledge on mechanisms for type of motion in machines. With the study of rigid bodies motions and forces for the transmission systems, machine kinematics and dynamics can be well understood. Various experiments with governors, gyroscopes, balancing machines and universal vibration facilities are available.

### I C Engine Lab

In this lab students perform and study with 2 & 4 stroke C.I. and S.I. engines. Studies are done to determine the calorific values, exhaust gas characteristics, etc. using various fuel.



### Automobile Lab

Objective of this lab is to understand the various components of an automobile and their functions and to gain the knowledge about transmission, suspension, steering and braking systems.

### Steam Power Engineering Lab

This lab is facilitated to carry out experiments on steam generation from Boiler and to produce mechanical power through steam turbine.

## INFRASTRUCTURE



**New Age Campus :** Set up in a new age high-tech campus in Jaipur, JKLU is differentiated by quality higher education with its unique pedagogy and world class infrastructure for tomorrow's front-runners - the youth.

The Institute of Engineering and Technology is situated on the campus of JK Lakshmipat University, approximately 19.5 kms from the State Road Transport Corporation Bus Stand (Sindhi Camp), 18.5 kms from the Jaipur Railway Station and 25 kms from Sanganer Airport on the Jaipur - Ajmer National Highway No. 8. This sprawling 30-acre campus set in picturesque surroundings provides a refreshing environment for stimulating intellectual alertness and creativity. The lush green yet Wi-Fi enabled ultra-modern campus has several amphitheatres and syndicates, a computer centre, a fully automated library, a Management Development Centre, modern sports facilities, academic and administrative blocks, conference rooms and other facilities. A thoughtful blend of modernity and tradition, aesthetics and grandeur characterize the building complex.

**Classrooms :** The classrooms are air-conditioned and have Multi-media and audio-visual equipments to facilitate effective learning. The classrooms are designed to optimize interaction between the faculty and the students. Each classroom has Internet connectivity through wireless local area network.



**Computing Facilities :** The department has well equipped computer laboratories with Multiprocessor servers and latest PCs, Networking equipments and devices. The software available includes various operating systems, compilers, simulation and modeling packages and development tools. These software packages and tools are useful for laboratory work as well as for professional development work.

**Internet/Intranet/Wi-Fi Facilities :** All the computer systems on Campus Area Network are connected to 25 Mbps exclusive leased line for Internet connectivity. All the computers/laptops are connected to Internet through a secure UTM Device using SSL security. The Firewall is connected to 25 Mbps exclusive leased line through Optical Fiber. Internet surfing, E-Mail Service is available round the clock. Hostel rooms have been provided Wi-Fi facility so as to enable the students to use Internet/Intranet round the clock. The institute has Campus wide Wi-Fi facility.





**Learning Resource Centre :** The University has a multi storey central library with all state of the art services & growing collection of books. Institute of Management subscribes to a large number of national and international journals and has subscribed to EBSCO and IEEE. The library is automated through KOHA (open source software) and is integrated to the University automation system.



**Hostel Facility :** The University has residential facility with separate hostel facilities for boys and girls. Both the hostels are located on the campus. The hostel rooms are spacious and well furnished. The hostels have sports and other recreational facilities, such as Dish TV, common room for interaction etc.

All the hostel rooms have Internet connectivity round the clock. Hygienic and healthy food is provided in a centrally located mess, adjacent to the hostels under the guidance of the Mess Committee having both students and faculty members. The hostels have open space around with greenery and plantation. Students' working on their laptops in the open lawns through Wi-Fi internet connectivity is a common sight in the evenings.

**Cafeteria :** The University has a well-furnished cafeteria to cater to the refreshment needs of the students, faculty, staff and guests. It serves as a formal and informal interaction point of the Institute.

**Bank :** IDBI Bank inside the campus with ATM facility exclusively for the University.

**Gymnasium :** A well-equipped modern gymnasium caters to the health needs of the students, faculty and staff under the guidance of a professionally qualified trainer.

**Healthcare Centre :** The University has a well - equipped Healthcare Centre with a full time nursing staff and a visiting doctor.

**Utility Store :** It caters to the daily needs of the students and the staff.



### Redefining Career Oriented Education

- Modern curriculum and teaching methodologies matching Global Standards with strong emphasis on not just 'learning' but 'understanding', and learning by doing.
- Highly experienced full-time / visiting faculty drawn from premier institutions across the country and abroad.
- JKLU Mentoring Programme is a unique one-on-one student mentoring programme for all-round personality development.
- Strong Industry Linkages impart rich hands-on experience with leading corporate and excellent placement opportunities.
- Research & Consultancy is the cutting edge of the Institute.
- World Class Learning Resource Centre spread over 2000 Sq. Meters area.
- State of the Art IT Infrastructure with a complete Wi Fi enabled campus.
- Strategic Alliance for interactive learning from foreign resources through Video Conferencing.
- Large Amphitheatre type class rooms.
- Facilities for extensive sports, recreation, team building and soft skills.

## Academic Leadership



**Shri Bharat Hari Singhania**  
Chancellor

Shri Bharat Hari Singhania, an industrialist, is President of JK Organisation. The 125 year old JK Organisation has multi-business, multi-product and multi-location operations, with its foot prints in 100 countries across the globe. Shri Bharat Hari Singhania is Chairman of JK Paper, JK Lakshmi Cement and other Group companies, apart from being on the Board of JK Tyres and other Companies and entities of the Organisation. His vision of creating enabling touch points at the societal and human level find expression in the CSR and HRD focus across Group companies. The mentoring legacy of his father, Lala Lakshmipat Singhania, resonates in his world-view and finds a uniquely individual expression that is always distinct and memorable. An avid proponent of the importance of creating knowledge capital and equitable development, Shri Bharat Hari Singhania is associated with the various philanthropic organisations and Academic Institutions run by JK Group.

Dr. Raghupati Singhania, an industrialist, has over 40 years experience in managing various industries including those engaged in the business of automotive tyres and tubes, power transmission, v-belts, conveyor belts, automotive belts, oil seals, industrial electronics, material handling systems, bulk drugs and hybrid seeds. Dr. Singhania is a Fellow of the Institute of Directors, London. He has been conferred with an Honorary Doctorate in Science by the Mohanlal Sukhadia University, Udaipur for his outstanding contribution in education, training and research in the field of elastomer, polymers and tyres. He is the third Asian who has been honored with "TIA Hall of Fame 2015" by the TIA - USA. Dr. Raghupati Singhania is managing number of companies of JK Organisation in various positions. He is the chairman and Managing Director of JK Tyre and Industries Ltd. He is also the President of Hari Shankar Singhania Elastomer & Tyre Research Institute (HASETRI) and Member of Managing Committee of Pushpawati Singhania Research Institute (PSRI).



**Dr. Raghupati Singhania**  
Pro-Chancellor



Dr. Roshan Lal Raina, a *Fulbrighter* and an *SIS Fellow*, is a seasoned academic and is recognized as an able institution builder. Before taking over as the Vice Chancellor of JK Lakshmipat University, Dr Raina was Professor in 'Communication' at the Indian Institute of Management, Lucknow (IIML). As Dean: Planning & Development at IIML, he was responsible for overseeing activities related to resource mobilization through industry – interface, training interventions, consulting, and research initiatives.

As Visiting Faculty on several overseas assignments, Dr. Raina has also been responsible for contributing to building academic collaborations (student – teacher exchange) and networking with benchmarked institutions abroad.

Contribution of Dr. Raina as Director, LBSIM-Delhi (2005-08) and his involvement in mentoring activities of recently established IIMs (at Kashipur and Sirmaur, in particular), and Central Universities at Jammu, Kashmir and Himachal Pradesh, have drawn appreciation of all concerned.

On academic front, besides teaching a variety of innovative courses in the areas of 'Communication for Management', he has successfully completed several prestigious assignments in educational institutes in US, UK, France, Germany, and Canada. Reputed organizations like the Fulbright Foundation (USA), the British Council (UK), the Max Mueller Bhawan (Germany), the ESCP-EAP (France), and the IDRC (Canada) sponsored these assignments.

Dr Raina's research contributions include 20 best selling books, 75 research papers in national and international level peer-reviewed journals and 125 papers presented in national/international conferences and seminars.

Dr. Raina's training interventions in corporate, government as well as public systems have been very well recognized. Concurrently, he has been involved in several consulting and research assignments awarded by reputed national and international agencies like the JSI, Deliver, USA, IDRC, Canada, The Johns Hopkins University/Centre for Communication Programmes, Baltimore, USA, the UP State Electricity Board (in connection with an injunction from the Apex Court), State Water and Sanitation Mission (GOUP), UP State Road Transport Corporation, DESIDOC, DRDO (GOI) and the MHRD (GOI).

In recognition of his distinctive academic and professional contributions, Dr. Raina is credited with bagging several top professional honours/awards.



**Dr. Roshan Lal Raina**  
Vice Chancellor



**Prof. Dr.-Ing. Anupam K Singh**  
Director  
Institute of Engineering  
and Technology

Prof. Dr. - Ing. Anupam Kumar Singh a staunch researcher and academician working as Director of Institute of Engineering and Technology (IET), has two-and-half decades of academic and industry experience. He has obtained Doktor-Ingenieur and MS degrees from Karlsruhe Institute of Technologie (KIT), Germany. Earlier, he was Professor & Head, Civil Engineering Department, Pandi Deendayal Petroleum University, Professor, Nirmal University, Research Engineer, Karlsruhe Institute of Technology, and Planner at Government of Madhya Pradesh. He has carried out several research projects and capacity development programmes for service engineers, industry professionals and academic fraternity in India and abroad. He was conferred with Indian Society of technical Education-Best Engineering college Teacher Award for Gujarat State (2009). Stockholm International Water Institute

Best Poster Paper Award (2002), and Association of Agronomists Best Paper Award (2008). He has been on the Board of Directors of Indian Centre on Climate and Societal Impact; Vice Chairman Indian Society of Remote Sensing, Ahmedabad Chapter (2009-11); Secretary - IEEE Geo Sciences and Remote Sensing, Gujarat Chapter (2013-14), Member - Water Management Forum of Institution of Engineers, India (2013-14). He was a member on Academic Council of PDU Gandhinagar, Chairman, Board of Studies at Nirma University, Ahmedabad; and he Maharaja Sayajirao University of Baroda University.



## Faculty Profiles

JKLU recruits faculty members as per UGC recommendations (revised 6th Pay Commission). The profile is as below;



### **Prof. Dr. - Ing. Anupam K Singh**

Professor & Director

M S (KIT Germany); PhD (KIT Germany) Research Areas: Urban Water System Engineering Hydrology, Surface Water and Ground Water Interaction Systems and Runoff Modeling. Reservoir and Canal Operations, Environmental Engineering, Water Quality Analysis Building Integrated Photovoltaic (BIPV), and Satellite Remote Sensing and GIS.



### **Dr. Devendra Kumar Punia**

Professor

(Computer Science)

Ph.D (Fellow of MDI Gurgaon), B.E

Research Areas : E-governance

Mobile Governance, E-commerce

Innovative use of IT, IT for

Development and Analytics.



### **Dr. Shishir Chandra Bhaduri**

Professor

(Mechanical)

Ph.D M.Tech (IIT, Roorkee)

Research Areas : Refrigeration

& Air-conditioning, Heat

Transfer, Sponge Iron using Coal

Gas Boiler, Fluidized Bed Boilers



### **Dr. Sonal Jain**

Associate Professor

(Computer Science)

Ph.D M.Sc., NET

Research Areas: Technology for Education, Information Retrieval and Natural Language Processing



### **Dr. S.S Sengar**

Associate Professor

(Electronics & Communication)

Ph. D ( IIT Roorkee), M. Tech, B. Tech

Research Areas: Soft Computing,

Digital Signal Processing, Image

Processing, Remote

Sensing and Disaster Mitigation.



### **Dr. Pushpendra Singh**

Associate Professor (Electrical)

Ph.D M.Tech.(MNIT Jaipur)

Research Areas: Power System

Restructuring, Power Quality

Integration of DERs, Demand Side

Management, Power System Stability

Smart Grid, Distributed Generators,

Climate Change Mitigation



### **Dr. Murari Lal Gupta**

Associate Professor (Mechanical)

Ph.D (Georgia Tech Univ., USA)

M.Tech (IIT Delhi)

Research Areas: Multifunctional

Polymer Carbon Nanotube Composites

and Functional Polymeric Coatings.



### **Dr. Kavita Choudhary**

Associate Professor

(Computer Science)

Ph. D M. Tech

Research Areas: Software Engg.,

Software Testing, Optimization

Techniques and Data Mining



### **Dr. Sandeep Kumar Tomar**

Associate Professor (Chemistry)

Ph. D M. Sc.

Research Areas : Chemistry

Polymer Electrolyte, Ion

Conducting Composite Electrolyte,

Solar Cells, Dye Sensitized Solar Cells

(DSSC), CNT and Nano Technology



**Dr. Vipin Kumar Jain**

Associate Professor (Physics)  
Ph. D M. Phil, M. Sc.  
Research Areas: Opto-electronic  
properties of thin films  
Transparent Conducting  
Oxides (TCO) Thin Films, Nano  
Science and Nano Technology

**Dr. Sanjay Kumar**

Associate Professor (English)  
Ph. D M. Phil.  
Research Areas : Literature and  
Communication Skills, Phonetics,  
Literature in English.

**Dr. Umesh Gupta**

Associate Professor (Mathematics)  
Ph. D M.Phil.  
Research Areas: Multi-objective  
Optimization Techniques  
Statistical Data Analysis,  
Fluid Mechanics

**Devendra Bhavsar**

Assistant Professor  
(Computer Science)  
M. Tech (IIT Bombay), B.E.  
Research Areas :  
Wireless Networks  
and Algorithms

**Jagdish Prasad Sharma**

Assistant Professor  
(Electrical)  
M. Tech. (MNIT Jaipur), B.Tech  
Research Areas: Power Distribution  
Systems, Energy Accounting &  
Auditing, Renewable Energy.

**Love Jain**

Assistant Professor  
(Electronics & Communication)  
M. Tech. (NIT Surat), B.E.  
Research Areas : Antenna Design  
and Body Centric Wireless  
Communication

**Divanshu Jain**

Assistant Professor  
(Electronics & Communication)  
ME (BITS Pilani), BE  
Research Areas : Wireless  
Communication, Microwave  
and Antenna Engineering

**Mohneesh K. Sharma**

Assistant Professor  
(Mechanical)  
M. Tech.  
Research Areas :  
Fluid Mechanics and  
Material Science

**Yogesh Rohilla**

Assistant Professor  
(Electrical)  
M. Tech  
Research Areas : Power Systems

**Chandramohan Singh**

Assistant Professor  
(Electronics & Communication)  
M. Tech  
Research Areas :  
Operations Research

**Gireesh Kumar**

Assistant Professor  
(Computer Science)  
M. Tech., B. Tech.  
Research Areas :  
Stochastic Modeling and  
Optimization

**Ramkumar Agrawal**

Assistant Professor  
(Mechanical)  
M. Tech (IIT Roorkee)  
Research Areas : Energy  
Engineering (Renewable Energy)  
Internal Combustion Engines

**Dr. Neha Sharma**

Assistant Professor  
(Chemical)  
Ph.D (MNIT Jaipur)  
Research Areas : Advance  
Process Control, Modelling  
and Simulation

**Shrinivas Rathod**

Assistant Professor  
(Mechanical)  
M. Tech. (Production Technology)  
B.E. (IPE)  
Research Areas : Production  
Technology, Material Science

**H.P. Agrawal**

Assistant Professor (Electrical)  
B. Tech, M. Tech (Power System)  
Research Areas : Performance  
Enhancement of Power System

**Dr. Rajiv Ranjan Singh**

Assistant Professor  
(Electronics & Communication)  
Ph.D  
Research Areas : Wearable  
Computing, Embedded Systems  
Biomedical Signal Analysis  
and Machine Learning

**Vishal Singhal**

Assistant Professor (Civil)  
M. Tech  
Research Areas : Structural  
Engineering, Concrete Technology

**Dr. Ravi Kumar Ganti**

Assistant Professor (Civil)  
Ph. D (IIT Kanpur), M.Tech (NITK)  
Research Areas : Hydraulics and  
Water Resources Engineering, GIS  
and Remote Sensing, Soil Mechanics,  
Machine Learning, Engineering  
Optimization, Concrete Technology  
and Design.

**Dr. Paras Jain**

Assistant Professor  
(Computer Science)  
Ph. D M.E.  
Research Areas : Image Processing  
and Computer Vision,  
Image Forensics

**Dr. Hemant Kumar Gupta**

Assistant Professor (Mechanical)  
Ph. D (MNIT Jaipur)  
Research Areas: Thermal and  
Refrigeration Engineering,  
Renewable Energy Systems  
and Nano Fluid Application in  
Solar Systems.

**Dr. Anurag Kumar Tiwari**

Assistant Professor (Chemical)  
Ph. D (IIT Kanpur)  
Research Areas: Non-Newtonian  
CFD, Micro-fluidic Adhesive, Micro-  
Scale Transport Phenomenon and  
Modelling and Simulation of  
Complex Fluids

**Vinod Vishwakarma**

Assistant Professor (Civil)  
M. Tech (MNIT Jaipur)  
Research Areas : Environmental  
Engineering, Biological Waste  
Treatment, Solid Waste Management,  
Composting and Waste Water  
Treatment.

**Amit Kumar**

Assistant Professor (Civil)  
M. Tech., B. Tech  
Research Areas : Water Resource  
Engineering, Irrigation Engineering  
Hydraulics Engineering, Remote  
Sensing and GIS, and Climate  
Change Study

**Dr. Mohd. Shahnawaz Khan**

Assistant Professor (Chemistry)  
Ph.D M.Sc.  
Research Areas :  
Green Chemistry Synthetic  
Organic and Medicinal Chemistry.

**Dr. Jaya Gupta**

Assistant Professor (Mathematics)  
Ph. D M.Sc.  
Research Areas :  
Special Functions, Integral  
Transforms, Fractional Calculus  
and Statistical Distribution  
Theory.

**Dr. Richa Sharma**

Assistant Professor (Mathematics)  
Ph.D M.Sc.  
Research Areas : Queueing Theory,  
Probability Theory, Stochastic  
Modeling and Optimization

**Sachin Gangwar**

Lecturer (Mechanical)  
M. Tech (NIT Silchar)  
Research Areas: Renewable Energy,  
Hybrid Energy Systems, Solar  
Thermal Systems, Thermoelectric  
Refrigeration.

**Narayan Sahoo**

Lecturer (Electrical)  
M. Tech (NIT Silchar)  
Research Areas: Energy Conversion  
Technique, Renewable Energy  
System, Process Control



## STUDENT PROFILE

### Chemical Engineering



**Gayasuddin Mansoori**  
**Industrial Training**  
 JK Lakshmi Cement Ltd., Banas, Sirohi  
**Areas of Interest**  
 Petroleum Refinery, Production  
 Design, Fertilizers & Agro Chemicals,  
 Chlor Alkali and Bulk Chemicals



**Mayur Rawlani**  
**Industrial Training**  
 TATA Chemicals, Haldia, W. Bengal  
**Areas of Interest**  
 Systems Design and Engineering  
 Polymers, Energy and  
 Environmental Engineering



**Rikesh Tanwar**  
**Industrial Training**  
 JK Paper Mill, Rayagada  
 Oddisha  
**Areas of Interest**  
 Chemical Process, Paper  
 Manufacturing



**Ritu Parashar**  
**Industrial Training**  
 Rashtriya Chemicals &  
 Fertilizers Ltd. Thal Unit,  
 Alibag (Mumbai)  
**Areas of Interest**  
 Petroleum, Fertilizer



**Suruchi Kumari**  
**Industrial Training**  
 Rashtriya Chemicals & Fertilizers Ltd.  
 Thal Unit, Alibag (Mumbai)  
**Areas of Interest**  
 Petroleum, Fertilizer



**Vijay Joshi**  
**Industrial Training**  
 KRIBHCO, Surat, Gujrat  
**Areas of Interest**  
 Process Design, Piping Design



**Yadvendra Singh**  
**Industrial Training**  
 Central Pulp Mill,  
 JK Paper Ltd., Tappi, Gujarat  
**Areas of Interest**  
 Production, Design



## STUDENT PROFILE

### Civil Engineering



**Akshay Sharma**  
**Industrial Training**  
L&T Faridabad Haryana  
**Areas of Interest**  
Building Construction



**Anil Singh Tomar**  
**Industrial Training**  
Krishna Build Estate  
Gurgaon, Haryana  
**Areas of Interest**  
Environment, Irrigation



**Avinash Godara**  
**Industrial Training**  
PWD, Hanumangarh  
Simplex Infrastructure LTD.  
**Areas of Interest**  
Highway Construction  
Bridge Construction  
Building Construction



**Chetan Mathur**  
**Industrial Training**  
NHAI, Faridabad  
**Areas of Interest**  
Highways Engineering  
Structural Engineering  
Architectural Engineering



**Gourav Suthar**  
**Industrial Training**  
Krishna Build Estate  
Gurgaon, Haryana  
**Areas of Interest**  
Water Treatment  
Building Construction  
and Sustainable Environment



**Imran Gouri**  
**Industrial Training**  
Apeksha housing Pvt Ltd.  
**Area of Interest**  
Building Construction



**Isha Bhatt**  
**Industrial Training**  
National Highway Authority  
of India, Jaipur  
**Areas of Interest**  
Highway Construction  
Project Management  
Solid Waste Management, GIS



**Jatin Jain**  
**Industrial Training**  
Vijay Tech Consultants  
**Areas of Interest**  
Highways & Transportation



**Jyotsna Goyal**  
**Industrial Training**  
Jaipur Metro, Jaipur  
**Areas of Interest**  
Green Building  
Construction Management



**Mandavi Bansal**  
**Industrial Training**  
National Highway Authority  
of India, Jaipur  
**Areas of Interest**  
Structure Designing  
Project Planning  
Highway Constructions

## STUDENT PROFILE



### **Naman Sukhija**

#### **Industrial Training**

L&T Building & Factories IC, Jaipur;  
Indian Green Bdg. Council, Hyderabad

#### **Areas of Interest**

Green Buildings, Sustainable  
Construction Environment  
JDA, Jaipur



### **Nayan Choudhary**

#### **Industrial Training**

JDA, Jaipur

#### **Areas of Interest**

Real Estate Development  
Building Construction



### **Pulkit Parnami**

#### **Industrial Training**

Anukampa Builder's Platina , Jaipur  
L&T Building & Factories IC, Jaipur

#### **Areas of Interest**

Project Execution, Construction  
Project Management, Transportation  
Engineering, Solid Waste Management



### **Ronit Sinha**

#### **Industrial Training**

Bihar Rajya Pul Nirman Nigam

#### **Areas of Interest**

Building Construction



### **Sachin Gupta**

#### **Industrial Training**

NHAI, Faridabad

#### **Areas of Interest**

Highway, Building Construction  
Geotechnical Engineering



### **Satyajeet Salam**

#### **Industrial Training**

L&T, Noida

#### **Areas of Interest**

Environmental Engineering  
Solid Waste Management



### **Saurabh Sharma**

#### **Industrial Training**

Vijay Tech Consultants, Jaipur

#### **Areas of Interest**

Building Construction,  
Transportation Engineering  
Sustainable Development



### **Shubham Nayak Jain**

#### **Industrial Training**

M.P. Housing & Infrastructure  
Development Board

#### **Areas of Interest**

Building Construction  
Highway Engineering  
Environmental Engineering



### **Vaibhav Sharma**

#### **Industrial Training**

IL&FS Transportation Ltd.  
Himachal Pradesh

#### **Areas of Interest**

Transportation Engineering



### **Vaibhav Trehan**

#### **Industrial Training**

Apeksha housing Pvt Ltd.

#### **Areas of Interest**

Highways & Transportation  
Project Execution

## STUDENT PROFILE



**Vanshika Bhardwaj**

**Industrial Training**

Ambuja Cements

**Areas of Interest**

Environment Engineering

Project Execution

Project Management



**Vishal Juneja**

**Industrial Training**

AECOM India Pvt. Ltd.

**Areas of Interest**

Building and Highway

Construction



## Computer Science



**Ayushi**

**Industrial Training**

Finesse Webtech, Patna

**Area of Interest**

web development and dbms



**Anurag Bhardwaj**

**Industrial Training**

Tata Tele Services Jaipur

**Area of Interest**

Android, Java, C, C++



**Arsh Vardhan**

**Industrial Training**

Finesse Webtech, Patna

**Area of Interest**

Web Development,

Database Management, Android



**Ashrut Bharadwaj**

**Industrial Training**

IRDE, Dehradun Cynoteck

Technology Pvt. Ltd. Dehradun

**Areas of Interest**

DBA, UX/UI, Web-Front-End Design

Developing, Software Engg., UML

Database Management Networking



**Chandrika Singh**

**Industrial Training**

Super Thermal Power Station

Suratgarh

**Areas of Interest**

Data Base Management System



**Chitra Dubey**

**Industrial Training**

Fiercehound, Gurgaon

**Area of Interest**

Networking, Web Development



**Deeksha Saini**  
**Industrial Training**  
 Cashkaro.com, Gurgaon  
**Area of Interest**  
 Web Development



**Garima Saxena**  
**Industrial Training**  
 Fierecehound , Gurgaon  
**Area of interest**  
 Console Application , Java , Android



**Harish Kumar**  
**Industrial Training**  
 ERP at JK Lakshmi Cement, Sirohi  
**Area of Interest**  
 PHP Web Development



**Hitesh Ranka**  
**Industrial Training**  
 Super Thermal Power  
 Station, Suratgarh  
**Areas of Interest**  
 Android App Development  
 Networking, Computer  
 Architecture & Organisation.



**Kanishka Singh Lalas**  
**Industrial Training**  
 JK Lakshmi Cement, Sirohi  
**Area of Interest**  
 Programmimg  
 DBMS, Designing.



**Kartikey Joshi**  
**Industrial Training**  
 JK Tyres and Industries Ltd, Kankroli  
**Areas of Interest**  
 Networking, Design & Analysis  
 of Algorithms, Java App  
 Development



**Kumkum Gupta**  
**Industrial Training**  
 Rajasthan Electronics and  
 Instruments Ltd., Jaipur  
**Areas of Interest**  
 Android Application Development  
 Algorithms, Database Management,  
 Networking



**Payal Sharma**  
**Industrial Training**  
 Jaipur Vidyut Vitran Nigam Ltd.  
 Jaipur, Project R-APDRP.  
**Area of Interest**  
 Android Development  
 Software Development  
 Web development, DBMS.



**Piyush Sain**  
**Industrial Training**  
 CashKaro.com, Gurgaon  
**Areas of Interest**  
 Android App Development  
 Networking, Design and  
 analysis of Algorithm.



**Rachit Agarwal**  
**Industrial Training**  
 National Informatics Centre,  
 Uttar Pradesh State Unit, Lucknow  
**Area of interest**  
 Databases and Networking



## STUDENT PROFILE



### **Rajat Kumawat**

#### **Industrial Training**

Jaipur Vidyut Vitran Nigam Ltd.,  
Jaipur, R-APDRP.

#### **Area of Interest**

Software Development &  
Maintenance, Android Application  
Development, Database, Networking



### **Rakesh Jha**

#### **Industrial Training**

CashKaro.com, Gurgaon

#### **Area of Interest**

App Development, Research &  
Development, Project Planning  
Front-end Development.



### **Ramesh Kumar**

#### **Industrial Training**

JK Lakshmi Cement Ltd., Sirohi

#### **Areas of Interest**

JAVA Developing and  
Networking



### **Rishabh Soni**

#### **Industrial Training**

JK Lakshmi Cement Ltd., Sirohi

#### **Areas of Interest**

Linux (Operating Systems)  
Networking, Programming.



### **Rishu Agarwal**

#### **Industrial Training**

Kamtech Associates Pvt. Ltd.  
Jaipur

#### **Areas of Interest**

Database Management  
System, Android Development



### **Ritu Sharma**

#### **Industrial Training**

Super Thermal Power Station  
Suratgarh

#### **Areas of Interest**

Web Development, Android App  
Development, Database  
Management



### **Riya Choudhary**

#### **Industrial Training**

Super Thermal Power Station  
Suratgarh

#### **Areas of Interest**

Data Base Management System



### **Saar Bhatt**

#### **Industrial Training**

CashKaro.com, Gurgaon

#### **Areas of Interest**

Java Web App Development  
Networking.



### **Shivam Maheshwari**

#### **Industrial Training**

Nokia Solutions & Networks, Mumbai

#### **Areas of Interest**

GIS  
Networking & Web Development



### **Shlok Ishan**

#### **Industrial Training**

JK Lakshmi Cement, Sirohi

#### **Area of interest**

Android and Networking.

## STUDENT PROFILE

**Sparsh Agrawal****Industrial Training**

Rajasthan Electronics and Instruments Ltd., Jaipur

**Areas of Interest**

Web Designing, Android Application Development, Algorithms, Database Management, Networking

**Swati****Industrial Training**

Fiercehound, Gurgaon

**Area of Interest**

Networking, Web Development

**Uday Gupta****Industrial Training**

JK Tyres & Industries Ltd., Kankroli

**Areas of Interest**

Java, Android Development, Networking, Design & Analysis of Algorithm

**Yash Jain****Industrial Training**

National Informatics Centre Lucknow

**Areas of Interest**

Website Development  
Software Development, RDBMS  
Java SE, Java EE



## ELECTRICAL ENGINEERING

**Anurag Pandey****Industrial Training**

NEI Ltd., Jaipur  
NTPC, Unchahar

**Areas of Interest**

Generation of electrical power  
Industrial automation  
Biomedical Engineering

**Arman Singh Shekhawat****Industrial Training**

NTPC, Unchahar

**Areas of Interest**

Control System  
Power generation

**Atul Kumar****Industrial Training**

NTPC, Kahalgaon

**Areas of Interest**

Power System  
Control System

**Bindesh Kumawat****Industrial Training**

NTPC, Unchahar

**Areas of Interest**

Control System  
Power generation



**Nitin Manglam**  
**Industrial Training**  
 Mahatma Gandhi Thermal  
 Power Plant, Jhajjar  
**Areas of Interest**  
 Power Quality, Generation of power



**Rohit Kumar**  
**Industrial Training**  
 NTPC, Kahalgaon  
**Areas of Interest**  
 Power System, Control System



**Satyam Srivastava**  
**Industrial Training**  
 GAIL, Auraiya  
**Areas of Interest**  
 Basic Electrical System,  
 Automobile



**Sunder Singh Shekhawat**  
**Industrial Training**  
 KSTPS, Kota  
 North Western Railway, Jaipur  
**Areas of Interest**  
 Energy Storage Status &  
 Evolution, Renewable Energy



## STUDENT PROFILE

### Electronics & Communication



**Alind Mishra**  
**Industrial Training**  
 Honeywell Peppers Pvt. Ltd.  
 Lucknow  
**Areas of Interest**  
 Sound Engineering, Electronics  
 and Telecommunication



**Ankur Kumar**  
**Industrial Training**  
 IGRUA (Indra Gandhi Rashtriya  
 Udan Akademi), Rae Bareilly.  
 Indian Space Station, Bangalore.  
**Areas of Interest** Aircraft  
 Maintenance UAV, MUAV, Aviation  
 Aircraft Production, Satellite Comm.  
 Navigation Aerospace App. Space Tech.



**Annsh Chawla**  
**Industrial Training**  
 Defence Laboratory (DRDO)  
 Jodhpur (Raj.), for 45 days Study of  
 PIC18XXX Micro controllers.  
 RASTASHARK for 30 days Study  
 Social Media Marketing.  
**Areas of Interest**  
 Electronics & Communication



**Avi Jain**  
**Industrial Training**  
 Technosys System Pvt. Ltd.,  
 Jaipur.  
**Areas of Interest**  
 Wireless Communication

**Harsha Heda****Industrial Training**

Technosys Systems Pvt Ltd.  
Jaipur.

**Areas of Interest**

IT(Coding),,Communication  
Digital Electronics, Embedded.

**Isha Baokar****Industrial Training**

NTPC Pvt. Ltd Talcher  
Kaniha.

**Areas of Interest**

Core Electronics  
Communication

**Megha Jain****Industrial Training**

NTPC Pvt. Ltd Talcher  
Kaniha.

**Areas of Interest**

IT(Coding),Communication  
Digital Electronics

**Nisha Singh****Industrial Training**

DRDO, Dehradun  
(Uttarakhand)

**Areas of Interest**

Production and Automobile  
Industry

**Shishir Kumar****Industrial Training**

Tata Teleservices Pvt. Ltd, Jaipur.

**Areas of Interest**

Electronics and  
Telecommunications

**Shubham Bohra****Industrial Training**

TATA Teleservices Ltd.

**Areas of Interest**

Telecommunication, Unmanned  
Aerial Vehicle(UAV), Optical Fibre

**Siddharth Dhakad****Industrial Training**

Sofcon, Jaipur  
Dell, Chennai.

**Areas of Interest**

Embedded System and  
Telecommunications.

**Vaibhav Goyal****Industrial Training**

North-Western Railway, Ajmer.  
Ericsson India PVT LTD  
(ESSJ), Jaipur.

**Areas of Interest**

Wireless & Digital Communication  
Antenna & Wave Propagation

**Yash Khandelwal****Industrial Training**

Electrolux, USA.

**Areas of Interest**

Basics Digital Electronics



## STUDENT PROFILE

### MECHANICAL ENGINEERING



#### **Abhishek Chakravarty**

**Industrial Training**  
Volvo Eicher,  
VEPT worked for 45 days

**Areas of Interest**  
Production, Preferably  
Automobile Industry.



#### **Akash Kumar**

**Industrial Training**  
HECL, Ranchi

**Areas of Interest**  
Production and  
Thermal Engineering



#### **Amit Goyal**

**Industrial Training**  
JBM Automobile Company

**Areas of Interest**  
Production & Maintenance Quality  
Prog.-HTML, CSS, PMP, MYSQL



#### **Amit Kushal Gandhi**

**Industrial Training**  
Ferromatik Milacron India Pvt. Ltd.  
Ahmedabad, GUJARAT

**Areas of Interest**  
Production, Automobile



#### **Anand Ojha**

**Industrial Training**  
Diesel Locomotive Works  
Varanasi

**Areas of Interest**  
Thermal and Production



#### **Bharat Sharma**

**Industrial Training**  
National Engineering  
Industries Limited, Jaipur

**Areas of Interest**  
Thermal Engineering



#### **Brijesh Kumar Pandey**

**Industrial Training**  
HECL, Ranchi

**Areas of Interest**  
Production



#### **Chirag Deora**

**Industrial Training**  
JBM Automobile Company

**Areas of Interest**  
Thermal, Designing,  
I.C Engine, Marketing



#### **Chandra Prakash**

**Industrial Training**  
Supersonic Turners Pvt. Ltd., Jaipur

**Areas of Interest**  
Thermal and Design  
IC Engine, Emission Reduction  
Science & Technology



#### **Deepak Khandelwal**

**Industrial Training**  
Supersonic Turner Pvt. Ltd, Jaipur

**Areas of Interest**  
Thermal (IC Engine), Production  
in Automobile Sector.

**Deepak Sharma****Industrial Training**

Diesel Locomotive Shed Indian Railways (NWR) Abu Road

**Areas of Interest :** Auto Mobile Engineering, Industrial Engg, Production Engg Product design & Development & Renewable Energy Applications.

**Devendra Nath Yadav****Industrial Training**

Heavy Engineering Corp. Ltd. Ranchi, Jharkhand

**Areas of Interest**  
Production

**Jatin Manghnani****Industrial Training**

JK Fenner (India) Limited Hyderabad

**Areas of Interest**  
Design (Research and Development, Aerodynamics FEA)

**Manjot Singh****Industrial Training**

BHEL, Jhansi (CNC Fabrication)

**Areas of Interest**  
Production Management  
Production (Core), Production Planning, Industrial Engineering

**Mayank Verma****Industrial Training**

Heavy Engineering Corp. Ltd (HECL), Ranchi

**Areas of Interest**  
Thermal and Hydraulic Machines

**Mohit Gupta****Industrial Training**

JBM Auto System, Chennai

**Areas of Interest**  
Design & Drawing

**Nirbhay Raj****Industrial Training**

Indian Oil Corporation New Delhi

**Areas of Interest**  
Production, Designing & Maintenance

**Prateek Kataria****Industrial Training**

Supersonic Turners Pvt. Ltd., Jaipur

**Areas of Interest**  
Production

**Rahul Kumar Singh****Industrial Training**

JK Lakshmi Cement Limited, Sirohi

**Areas of Interest**  
Production

**Rahul Ranjan****Industrial Training**

JK Fenner India Ltd., Hyderabad

**Areas of Interest**  
Machine Design and Structure  
Material Science

**Satyam****Industrial Training**

TATA Hitachi Construction Machinery  
Jamshedpur, Jharkhand

**Areas of Interest**

Production, Design

**Shivam Dixit****Industrial Training**

JK Tyre & Industries Ltd  
Kankroli Tyre Plant (KTP).

**Areas of Interest**

Design, Production & Assembly  
and Thermal ( IC Engine)

**Shivam Kant****Industrial Training**

NTPC, Bhagalpur

**Areas of Interest**

Thermal & Production

**Shubham Khuntamar****Industrial Training**

Minda Sai Limited  
Greater Noida (Spark Minda Group)

**Areas of Interest**

Thermal & Production

**Siva Sambhav****Industrial Training**

Eicher Tractors, Bhopal

**Areas of Interest**

Production & Assembly and  
Design in Automobile Industry

**Sumit****Industrial Training**

Supersonic Turners Pvt. Ltd., Jaipur

**Areas of Interest**

Thermal & Design

**Ujjwal Prakash****Industrial Training**

NTPC, Bhagalpur in Working  
of Steam Power Plant

**Areas of Interest**

Thermal & Production



## **JK LAKSHMIPAT UNIVERSITY**

**INSTITUTE OF ENGINEERING AND TECHNOLOGY**

Campus Near Mahindra SEZ, Mahapura, Ajmer Road, JAIPUR - 302 026 (Rajasthan) India  
Phone : 0141 - 7107500 / 504 / 512 / 544

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