



## Courses That Include Experiential Learning Through Project Work/Field work/Internship.

**BRANCH : Civil Engineering**

**ACADEMIC YEAR : 2020– 21**

Courses that include experiential learning through project work	Project domain	justification
Elements of Mechanical Engineering Engineering /Applied Physics Lab Engg. Workshop & IT Workshop Probability & Statistics Surveying Survey Field Work - I Survey Field Work - II	Basic Projects with Multidisciplinary & Planning Layouts	Basic Knowledge of Mathematics and science are needed to understand any engineering problem.
Strength of Materials-I Building Materials & Construction Strength of Materials Lab Building Planning & Drawing Strength of Materials - II Concrete Technology Structural Analysis - I Structural Analysis -II Design & Drawing of Reinforced Concrete Structures Design & Drawing of Steel Structures Concrete Technology Lab GIS & CAD Lab	Structural Engineering	These courses help the students to do Design in various types of Structures, Study various properties of ingredients of concrete.
Fluid Mechanics Hydraulics & Hydraulic Machinery FM & HM Lab Irrigation Design & Drawing  Engineering Geology	Hydraulics and Water Resources Engineering	These courses help the students to do Geometric design of design various hydraulics and water resources structures.
Geology Lab Geotechnical Engineering - I	Geotechnical Engineering	These courses help the students to do Geometric design of foundations in various types of soils for various structures.
Transportation Engineering - I Transportation Engineering - II Transportation Engineering Lab	Transportation Engineering	These courses help the students to plan and design Highways, Railways, Airports, Docks and harbours.
Environmental Engineering –I	Environmental Engineering	These courses help the students to plan and design water and waste water treatment system gaining expertise in subject knowledge

  
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**Courses That Include Experiential Learning Through Project Work/Field work/Internship.**

**BRANCH : EEE**

**ACADEMIC YEAR : 2020– 21**

Courses that include experiential learning through project work	Project domain	justification
Computer Programming Data Structures Through C Data Structures through C Lab Electrical Measurements & Instrumentation Digital Electronics Control Systems Laboratory Electrical Measurements Laboratory Power Electronic Controllers & Drives Pulse & Digital Circuits Power Electronics Micro Processors and Micro controllers Microprocessors & Microcontrollers Laboratory Data Structures Laboratory Microprocessor & Microcontrollers Lab Digital Control Systems	Industrial automation Coding measurements	These courses help the students to do programming/simulation/hardware implementations
Applied / Engineering Physics Laboratory Engineering Workshop& IT Workshop Engineering Drawing & Design Electrical Engineering Workshop Electrical Circuit Analysis -I Basic Civil and Mechanical Engineering Basic Civil and Mechanical Engineering Lab Electrical Circuit Analysis-II	Domain Subjects	Basic Knowledge of Mathematics and science are needed to understand any engineering problem Basic Engineering fundamentals and engineering specializations are needed to understand any engineering problem
Electrical Machines-I Electrical Machines-II Electrical Machines -I Laboratory Electrical Machines-II Laboratory Special Electrical Machines Renewable Energy Sources Renewable Energy Sources & Systems	Electric vehicle Solar applications	These courses help the students to do hard ware implementation gaining expert knowledge



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Basic Electronic Devices & Circuits  
Eletromagnetic Fields  
Electrical Circuits Laboratory  
Power Systems-I  
Electronic Devices & Circuits Laboratory  
Power Systems-II  
Power System Analysis  
Energy Audit and Conservation&Management  
Power Electronics Laboratory  
Utilization of Electrical Energy  
Linear IC Applications  
Power System Operation & Control  
Switchgear and Protection  
Electrical Simulation Laboratory  
Power Systems & Simulation Laboratory  
HVDC Transmission  
Electrical Distribution Systems  
Flexible Alternating Current Transmission Systems  
Seminar  
Project  
HVAC & DC Transmission  
Power System Operation and Control  
Electrical Distribution System  
Electrical Simulation Lab  
Power System Lab  
Flexible AC Transmission System  
Projects

Power  
generation,transmission,distribution,  
Smart grid  
Smart home  
Smart grid,  
Power generation, robots

  
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**Courses That Include Experiential Learning Through Project Work/Field work/Internship.**

**BRANCH : Mechanical Engineering**

**ACADEMIC YEAR : 2020 – 21**

<b>Courses that include experiential learning through project work</b>	<b>Project domain</b>	<b>justification</b>
Mechanics of Solids & Metallurgy Lab Design of Machine Members -I Machine Drawing Metallurgy & Mechanics of Solids Lab Kinematics of Machinery Dynamics of Machinery Design of Machine Members-II Theory of Machines Lab Computer Graphics Non-Destructive Evaluation Project Metrology Instrumentation & Control Systems Simulation Lab Metrology & Instrumentation Lab Design/Fabrication Project Project Work	They can design any machine part	They can solve the design problems which is facing, and they can give new design which is appropriate.
Thermal Engineering -I Applied Thermodynamics Fluid Mechanics & Hydraulic Machines Fluid Mechanics & Hydraulic Machines Lab Thermal Engineering -II Thermal Engineering Lab Refrigeration & Air-conditioning Heat Transfer Heat Transfer Lab Computational Fluid Dynamics Lab Power Plant Engineering Automobile Engineering Industrial hydraulics and pneumatics Green Engineering Systems	They can make new engines and new fuels	They can analysis the thermal properties and fluid flow in engines and boilers
Industrial Engineering and Management Production Technology Lab Metal Cutting & Machine Tools Machine Tools Lab Operations Research CAD/CAM Additive Manufacturing Advanced Materials CAD/CAM Lab Production Planning and Control	They can fabricate any type of machine parts	They can able to do machining and process planning for the production



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Unconventional Machining Processes		
Computer Programming Electrical & Electronics Engg. Lab Socially Relevant Project Mechatronics Mechatronics Lab	They can make electrical and automated vehicles	They can able to connect the circuits and program for vehicles automation

  
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## Courses That Include Experiential Learning Through Project Work/Field work/Internship.

**BRANCH : ECE**

**ACADEMIC YEAR : 2020 - 21**

Courses that include experiential learning through project work	Project Domain	Justification
Computer Programming Engineering Workshop & It Workshop Electronic Devices And Circuits Switching Theory And Logic Design Signals And Systems Network Analysis	Application Development	Basic Knowledge of Mathematics and science are needed to understand any engineering problem
Random Variables And Stochastic Processes Electronic Devices And Circuits Lab Networks & Electrical Technology Lab Management Science Electronic Circuit Analysis Control Systems	Design of Oscillators, Amplifiers etc	Basic Electronics fundamentals and engineering specializations are needed to understand any engineering problem
Electromagnetic Waves And Transmission Lines Analog Communications Pulse And Digital Circuits Electronic Circuit Analysis Lab Analog Communications Lab	Design of Transmitters, Receivers, Filters etc.	Basics of Electronics and communications Domain to be applied for Circuit designing.
Linear I C Applications Digital I C Applications Digital Communications Antenna And Wave Propagation Pulse And Digital Circuits Lab Linear I C Applications Lab Digital I C Applications Lab	Real-time applications involving automation	These courses help the students to apply the knowledge of electronics and communication to advanced concepts.  These courses help the students
Micro Processors & Micro Controllers Micro Wave Engineering Vlsi Design Micro Processors & Micro Controllers Lab Vlsi Lab	Real-time analysis of Environmental based applications	understand the necessary hardware for implementing real-time tasks.
Digital Communications Lab Bio-Medical Engineering Digital Image Processing Radar Systems Optical Communication Microwave Engineering Lab Cellular Mobile Communications	Security, Automation, Realtime behaviour of designed system	These courses help students to understand and analyse the surrounding environmental aspects.
Project Electronics Measurements And Instrumentation Embedded Systems Wireless Sensors & Networks	Basic projects with controlling and Monitoring	Helps student to design, implement and analyse any realtime application with electronics and communication concepts.

  
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## Courses That Include Experiential Learning Through Project Work/Field work/Internship.

**BRANCH : CSE**

**ACADEMIC YEAR : 2020 – 21**

Courses That Include Experiential Learning Through Project Work	Project Domain	Justification
Data Structures Through C++ Lab	Console Applications	This courses gives the knowledge of mathematics, science, computer fundamentals to create the solution to complex real-world problems.
Applied /Engg Physics Lab	Console Applications	This courses gives the knowledge of mathematics, science, computer fundamentals to create the solution to complex real-world problems
Engineering Mechanics	Desktop Applications	This courses provides knowledge to design solutions for complex problems and design software's or processes that meet the specified needs.
Advanced Data Structures	Desktop Applications	This courses provides knowledge to design solutions for complex problems and design software's or processes that meet the specified needs.
Design And Analysis of Algorithms	Android Applications	This courses provides knowledge to design solutions for complex problems and design software's or processes that meet the specified needs
Software Testing Methodologies	Data Science Applications	IT tools including prediction and modelling to complex problems with an understanding.
Network Programming Lab	Data Science Applications	IT tools including prediction and modelling to complex problems with an understanding.
Data warehousing And Mining Lab	Data ware housing and Data Mining	This courses provides knowledge to design and develop scientific applications.
Cryptography And Network Security	Digital Image Processing	It demonstrate knowledge and understanding of project management and finance activities
Software Architecture & Design Pattern	Digital Image Processing	It demonstrate knowledge and understanding of project management and finance activities
Web Technologies	Network Security	It demonstrate knowledge and understanding of project management and finance activities
Big Data Analytics	Data Science Applications	IT tools including prediction and modelling to complex problems



		with an understanding.
Software Project Management	Data Science Applications	This courses provides knowledge to design solutions for complex problems and design software's or processes that meet the specified needs.
Software Architecture & Design Pattern Lab	Data Science Applications	This courses provides knowledge to design solutions for complex problems and design software's or processes that meet the specified needs.
Web Technologies Lab	Network Security	It demonstrate knowledge and understanding of project management and finance activities
Artificial Neural Networks	Network Security	It demonstrate knowledge and understanding of project management and finance activities
Seminars	Console Applications	This courses provides knowledge to design solutions for complex problems and design software's or processes that meet the specified needs.

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**Courses That Include Experiential Learning Through Project Work/Field work/Internship.**

**BRANCH : IT**

**ACADEMIC YEAR : 2020– 21**

<b>Courses that include experimental learning through project work</b>	<b>Project domain</b>	<b>justification</b>
C Programming Lab Object Oriented Programming through C++ English-Communication Skills Lab-II Applied/Engineering Chemistry Laboratory Object Oriented Programming Lab Principles of software engineering Object Oriented Programming Through C++ Python Programming Lab Data Structures through C++ Lab Java Programming Operating System Advanced Java Programming Lab Unix and Operating System Lab Distributed Systems Open Elective: Artificial Intelligence Management Information System Seminar Project	Using these programming language to develop computer software	Basic Knowledge on computer programming language are needed to understand and solve the programming problems
Database Management Systems Lab Data Mining Data Mining Lab	Oracle, SQL	Used to create and maintain Database
Discrete Mathematical Structures Probability and Statistics	Mathematic Calculation	Use to develop mathematic models for computer problems.
Web Technologies Lab Web Technologies	Web Engineering	Deals with developing websites, management, deployment and maintenance.
Cryptography and Network Security Mobile Computing Lab Cryptography and Network Security Lab Elective-III: Cyber Security	Information Security	Basics on cyber attacks and protocols that protect the data on the internet.
Software Testing Methodologies Software Testing Lab	Software Development and Testing	It focus on analysing the requirement of users to design deploy and test new software.

  
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**Courses That Include Experiential Learning Through Project Work/Field work/Internship.**

Name of the Program : MBA

ACADEMIC YEAR : 2020– 21

<b>Courses that include experiential learning through project work</b>	<b>Project domain</b>	<b>Justification</b>
Management And Organizational Behaviour	Strategic alternatives for corporate issues and suggest best strategy for solving business problems.	This course provides basic knowledge on management, communication, and specialized knowledge in all specializations.
Managerial Economics	Optimize economic decisions by using operations research, mathematical programming, strategic decision making, game theory and other computational methods	This course provides the knowledge to better se of economic modes of thoughts to analyze business situations.
Legal And Business Environment	Helps to handle legal contracts and agreements, To relate the impact of environment on business in an integrated manner	This course provides the knowledge about business laws and regulations, issues of domestic and global environment in which business has to operate
Business Communication And Soft Skills	Knowing how to present fresh ideas and cooperate with others can prove just as important as technical ability to your success in the workplace.	This course provides the knowledge to discover the means to cultivate the essential skills like leadership, communication, critical thinking, team work etc.
Cross Cultural Management	They will gain the analytical skills to map cultural differences and similarities and to diagnose their implications	The course takes a culture-general perspective: to learn systematic frameworks, analytical approaches, self-awareness, and behaviors that are related to effective interaction across cultures and in multicultural settings
Business Communication And Soft Skills Lab	Practically knowing how to present fresh ideas and cooperate with others can prove just as important as technical ability to your success in the workplace.	This course provides the knowledge to discover the means to cultivate the essential skills like team work, interpersonal skills, leadership, communication, critical thinking etc. practically.
INFORMATION TECHNOLOGY LAB -1( Spreadsheet And Tally)	This applications are dedicated to manage and process financial data in business	This course helps in maintaining accounts in manual books, we write accounting entries as debit and credit.
Financial Management	Finance management provides an opportunity to invest further and creating plans that are in-line with the long-term financial goals for their organization	This course is beneficial as it involves management, control, and review of the collection, investment and resources of money as a capital required for an industrial building, plant, and management.



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Human Resource Management	HRM within an organization primarily concerned with the recruitment of and management of the people who work for the organization.	This course provides direction for the people who work in an organization and also seek to aid in their satisfaction.
IT Lab- 2 (Programming R)	Helps in analyzing large amounts of data quickly; it can produce business ready reports.	This course can help to minimize the risk in investing portfolios in practical.

  
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