



# VIGNAN's

**INSTITUTE OF INFORMATION TECHNOLOGY**  
(AUTONOMOUS)

(Approved by AICTE - New Delhi & Affiliated to JNTUK, Kakinada)  
Beside VSEZ, Duvvada, Vadlapudi Post, Gajuwaka, Visakhapatnam - 530 049.

## Experiential Learning Methods adopted in Teaching-Learning during 2020-21

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PRINCIPAL  
VIGNAN'S INSTITUTE OF  
Information Technology (A)  
Beside: VSEZ, Duvvada, Visakhapatnam-49



## Software used in Labs

- Softwares used in laboratories increase the efficiency and productivity of a laboratory, and provide better analysis. Furthermore, their usage guarantees the traceability of processes and data security.

Dept.	Name of the Lab	Reg.	Software	Type
CIVIL	GIS and Remote Sensing Applications Laboratory	VR19	ArcMap	OPEN SOURCE
CSE	Python Programming Lab	VR19	TURBO C	OPEN SOURCE
CSE	Data Structures through C Lab	VR17	TURBO C	OPEN SOURCE
CSE	Java Programming Lab	VR17	JDK 1.8, WEKA,XAMPP	OPEN SOURCE
CSE	Advanced Data Structures Lab	VR17	TURBO C++	OPEN SOURCE
CSE	Database Management Systems Lab	VR17	MY SQL, ORACLE 10G	OPEN SOURCE
CSE	Data Mining with R Lab	VR17	WEKA-3.8,R- STUDIO-4.1	OPEN SOURCE
CSE	Python Programming Lab	VR17	PYTHON V 3.8	OPEN SOURCE
CSE	Operating Systems and Compiler Design Lab	VR17	UBUNTU PUTTY	OPEN SOURCE
CSE	Computer Networks Lab	VR17	CISCO PACKET TRACER	OPEN SOURCE
CSE	Web Technologies Lab	VR17	NOTEPAD++.XA MPP	OPEN SOURCE
CSE	Unified Modelling Lab	VR17	RATIONAL ROSE	OPEN SOURCE
CSE	Cryptography and Network Security Lab	VR17	PYTHON V-3.8	OPEN SOURCE
CSE	Big Data Analytics Lab	VR17	VMVARE	OPEN SOURCE



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Dept.	Name of the Lab	Regulation	Software Tool	Type
CSE	Java Programming Lab	VR20	JDK 1.8, WEKA, XAMPP	OPEN SOURCE
CSE	Data Structures Lab	VR20	TURBO C++	OPEN SOURCE
CSE	Operating Systems Lab	VR20	TURBO C++	OPEN SOURCE
CSE	Database Management Systems Lab	VR20	MY SQL, ORACLE 10G	OPEN SOURCE
CSE	Advanced Data Structures Lab	VR20	TURBO C++	OPEN SOURCE
EEE	Control Systems Lab	VR17, VR19	Matlab	Licensed
EEE	Electrical Simulation Lab	VR17, VR19	Matlab, PSPICE 9.1	Licensed
EEE	Python Programming Lab	VR19	Python V-3.8	OPEN SOURCE
EEE	Power Systems Lab	VR17, VR19	Matlab	Licensed
EEE	Programmable Logic Controller Lab	VR19	WPLSoft	OPEN SOURCE



## **Skill Development Labs**

- They are initiatives to develop practical and vocational skills to make them job ready.
- Skill development includes multiple fields that are made available to students through 6 Skill development Labs established on Campus:

<b>S.No.</b>	<b>Name of the Lab</b>	<b>Location</b>
1.	Engineering Exploration Laboratory	Dharitri Block
2.	APSSDC Laboratory	Dharitri Block
3.	Dassault Systems 3D Experience COE	A-22, Main Block
4.	Advanced Metal Forming Laboratory	A-03, Main Block
5.	Vibration and Acoustics laboratory	A-03, Main Block
6.	IDEA Lab	E-02, Main Block



### **Engineering Exploration Laboratory**

#### **Objectives:**

- To gain knowledge about multidisciplinary or multi knowledge course
- To develop application oriented prototype.

#### **Key areas covered:**

- Design of basic and completed circuits.
- Selection and installation of wiring as per the programming of Arduino C language.
- Study and application of suitable protective devices for circuit protection
- Safety precautions for followed by a electronic circuits.
- Arduino software for demonstration of electronic application through tutorials.

#### **List of Equipment's available:**

- Arduino devices
- Sensors (IR, Ultrasonic & DHT)
- 3D printing machine

#### **Skills Acquired:**

- Rewinding home appliances like mixer, washing machine etc. using Arduino
- Simulation in Tinker cad software for testing purpose.

#### **Impact:**

- Students developed real-time application projects like washing machine, password based door lock system. Hand controlled robotic car, bottle filling machine.





## **Dassault Systems 3D Experience COE**

- Dassault Systems and Andhra Pradesh State Skill Development Corporation (APSSDC) have collaboratively set up a 3DEXPERIENCE Center on 03<sup>rd</sup> October 2018 in VIIT.
- This state-of-the-art facility specializes in creating designs for industrial heat exchangers, reboilers, compressor suction knockout drums (CSKD), and compressor inter-stage knockout drums (CIKD). These components play vital roles in various industrial processes and require precise engineering for optimal performance.

### **Objectives**

- To impart fundamental knowledge to students in the latest technological topics on CAD/CAM/CAE and to prepare them for taking up further research in the areas.
- To improve the employability skill in research for engineering Graduates.
- To make students industry ready in the field of Aerospace, Defense, Automotive, and Shipbuilding on the 3DEXPERIENCE platform with built-in industry solution experiences.



**Students working with Dassault high end systems**



**Collaborative work of students and Trainer from APSSDC**





## **Key Areas Covered**

- Mechanical Design
- Surface Design
- Sheet Metal Design
- Equipment Library
- Piping / Cabling Reports
- Concepts of Finite Element Theory
- Linear Analysis
- Frequency Analysis Dynamic Analysis and Introduction to Manufacturing

## **Facilities available:**

- No. of computers: 36 (high end configuration work-stations)
- 36 cloud Licenses worth approximately Rs. 3.5crores.
- Area: 1000sft.

## **Impact:**

- Number of students trained for Level A – CATIA Training using Dassaults 3D Experience 2020-21: **147**
- Students developed 2D & 3D designs of Industrial equipment used in Powerplants.
- Slow learners were also benefitted by design and detailed drawings which helped them acquire good jobs.
- 18 students from Mechanical Engineering who were trained in Dassaults Labs successfully secured placements in renowned UAE-based companies, namely Sanmax Robotics and Sanmax Mercado with highly competitive annual pay packages amounting to 13.4 LPA (Lakhs Per Annum).



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## SANMAX PERFORMANCE & MERCADO



### EMPLOYMENT OFFER

Date: 21<sup>st</sup> April 2023

Attention:

**Mr. LANKA SAI SAMPATH**

Further to your recent employment application, it gives us a great pleasure to present you this Offer of Employment with the below details.

#### 1. General Terms

Subject to the terms, conditions and stipulations herein contained, the Company shall employ the Employee and the Employee shall serve the Company in the capacity of:

a. Position:	<b>Research Associate</b>
b. Property:	SANMAX Group of Companies
c. Repatriations :	India
d. Probation:	6 Months from Commencement
e. Notice Period:	30 Days
f. Employment Date:	Immediate
g. Work Location:	Commercity, Dubai

The Employee must ensure that he/she is familiar with the provisions of any applicable taxation laws worldwide and he/she hereby acknowledges that the responsibility for compliance with any such laws rests with him. The Company shall have no liability for the Employee personal income tax in respect of any other country in which he may be deemed to be resident or where income is deemed to be earned.

#### 2. Remuneration

- In consideration of his service in the Company under and in accordance with the terms of this Agreement, the Employee shall be paid and shall receive a monthly basic salary of AED 5000/- (Dirhams Five Thousand Only) during the probationary period of first 6 months. On completion of probationary period employee is entitled other allowances cost of AED 5000/- (Dirhams Five Thousand Only), Total Net Salary of AED 10,000/- (Dirhams Ten Thousand Only) payable at the end of each month via WPS (Wages Protection System) as per CBUE Law. The Employee's Remuneration and other Employment Conditions is a matter between the Company and the Employee and should not be disclosed or discussed externally.
- The Employee will be provided with suitable shared accommodation near to site for which the Company will bear the cost of the rent and utilities.
- Where applicable, the Employee will be providing with shared transportation by the Company between Property at which the Employee is employed, and the Company's employee accommodation complex where the Employee is residing.

**Sanmax Group of Companies**  
Corporate Office  
Cusat, Kalamassery, Kochi, India  
Seaport Airport Road, Kerala- 682022  
Mob : +91 9496050964, +971-585896602  
Web : [www.sanmaxinc.com](http://www.sanmaxinc.com)  
Email : [sanmaxkochi@gmail.com](mailto:sanmaxkochi@gmail.com), [sanmaxdsb@gmail.com](mailto:sanmaxdsb@gmail.com)

### Placement Offer Letter





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## SANMAX PERFORMANCE & MERCADO



### 3. Benefits

- In accordance with UAE Labor Law, you will be covered for comprehensive medical insurance for self through the SANMAX Group designated Insurance Company for its employees.
- Upon completion of 12 months service in the company, the Employee will be entitled to home leave benefits consisting of a return economy class excursion air ticket to his country of repatriation via the most economical carrier or to an alternative geographic location up to the same cost equivalent.
- You are entitled to annual leave in accordance with the UAE Labour Law for a total of 30 Calendar days per year after completion of one year of service.
- Your working hours will be from 10 am to 4 pm and weekly 3 days of work.

### 4. Probation

- The employment shall start with a six (6) months probationary period as provided by UAE Labour Law and after which your performance on the job will be assessed and salary will be reviewed. During this time, the employee has the right to terminate the Employment Agreement with thirty (30) days' notice or compensation in lieu of notice. The employer has the right to terminate the Employment Agreement without cause and without any advance notice or compensation in lieu of notice.

We trust this covers all the pertinent details of our offer. Should you have any further questions, please do not hesitate to contact us.

We would appreciate your response to this offer as soon as possible. Alternatively, the company has the right to retract this offer.

In the meantime, may we take this opportunity to congratulate you on your successful application, and on behalf of SANMAX Group of companies, we are looking forward to welcoming you to being part of our team.

Yours Sincerely,

**Adel Aswin Sanoj Thankappan**  
Founder & Owner

**SANMAX Group of Companies Asia/Europe/North America/Africa**

I hereby confirm that I have read and fully understand the above specified offer conditions and would like to confirm my acceptance of this offer.

Name :

Date :

Signature :

**Sanmax Group of Companies**  
Corporate Office  
Cusat, Kalamassery, Kochi, India  
Seaport Airport Road, Kerala- 682022  
Mob : +91 9496050964, +971-585896602  
Web : [www.sanmaxinc.com](http://www.sanmaxinc.com)  
Email : [sanmaxkochi@gmail.com](mailto:sanmaxkochi@gmail.com) [sanmaxdxb@gmail.com](mailto:sanmaxdxb@gmail.com)



### **Advanced Metal Forming Laboratory (CNC Vertical Milling Machine)**

- This lab consists of CNC Vertical Milling Machine (VMC), CAD controller used for programming to enhance student's interest towards research and development, micro components such as laparoscopic and surgical tools, hydrogen fuel type cells and denture plates has been developed by using CNC Vertical Milling Machine.

#### **Objectives**

- To analyse CNC Mill applications in different fields like aerospace, shipping, automobiles, oil drilling/pumping and refining, to medical, FMC manufacturing and precision engineering sectors.
- To understand advanced capabilities of CNC.
- To use G-codes and M-codes effectively to develop a CNC program.

#### **Key areas covered**

- Single Point Incremental Forming
- CAD Control for the development of various components
- CAD Software, CAM, POD Software, SINUMERIC 828D/828D Basic training simulation modules.



**CNC Vertical Milling Machine**



**CNC Vertical Milling Machine**

**Skills Acquired:**

- Milling and drilling operations
- Enhanced CNC programming

**Impact:**

- Students acquired self-programming skills for machine elements.
- Students performed milling and drilling operations by using various materials.



## Vibration and Acoustics laboratory

Vibration and Acoustics research laboratory is concerned with the analysis, design and synthesis of passive noise control techniques in cavities; broadband noise control in buildings and industrial zones using architectural ceiling designs.

### Objectives:

- To determine natural frequency of beams and plates.
- To evaluate vibration measuring techniques.
- To evaluate methods in reducing vibration and noise.

### Key areas covered:

- Determination of natural frequencies of different beams, plates and cavities
- Evaluation of the effect of damping with various materials
- Determine the structure borne noise

### List of Equipment's available :

- Accelerometer set (2 Uni axial)
- IEPE type triaxial accelerometer
- Impact Hammer
- Force sensor
- Data acquisition system Sound Book MK2\_Expander\_8 Channel; 2ch Trigger expn / sync. Connector
- SAMURAI DAQ Software 8ch SLM / Analyzer;
- ME SCOPE VT 550 – Modelling & Simulation
- Microtech Gefell 3D Sound Intensity Probe
- Microphone set
- Sound Level meter



Students testing Microphone set



**Spacious Lab open for research work**

### **Skills acquired:**

- Operation of different equipment like Accelerometers, Microphones, DAQ and software etc.,
- Measurement of natural frequency, damping coefficient and Noise
- Testing of Vibration behavior of beams, plates

### **Impact:**

- Approximately 150 students were trained.
- Students gained operation of different equipment like Accelerometers, Microphones, DAQ and software etc.,
- Students understood measurement of natural frequency, damping coefficient and Noise, testing of Vibration behaviour of beams, plates.
- Students developed prototypes for testing.
- Slow learners were also benefitted by gaining the basics skills and hands on experience.





## IDEA Lab



All India Council for Technical Education (AICTE) had established the AICTE IDEA (Innovation, Design and Entrepreneurship Assistance) Lab in VIIT campus in September 2021 for encouraging students for application of Science, Technologies, Engineering and Mathematics (STEM) fundamentals towards enhanced hands-on experience and learning.

### Objectives:

- To promote innovation and entrepreneurship among students and faculty in technical institutions across India.
- To provide necessary infrastructure, resources, and mentorship to transform ideas of students and faculty into reality.

### Key areas covered: Hands-on training on

- Lazer cutting & Engraving machine
- PCB Prototyping
- 3D Printing
- CNC Wood router
- AI&ML

### List of equipment available:

- Lazer cutting & Engraving machine
- PCB Prototyping
- 3D Printing
- CNC Wood router
- High end workstation to support Artificial Intelligence & Machine Learning
- Sublimation Printer





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**Students learning PCB Printing from Expert**



**Students performing 3D Printing**



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## Impact:

- Students designed and engraved on acrylic sheets, wood.
- Students designed and printed circuits.
- Students developed software programmes using AI & ML.









### జెన్మాహికులకు చక్కని వేదిక

● ఎక్స్పోలో ఆకట్టుకుంటున్న స్టూడెంట్స్

జెన్మాహికులకు: ఆటోనగర్లోని సరిపట్టి గ్రాండ్లో నిర్వహిస్తున్న ఇండస్ట్రియల్ రం రిజిస్ట్రేషన్ - ఎక్స్పోలో జెన్మాహికులకు చక్కని వేదికగా నిలిచింది. ఎక్స్పోలో రెండో రోజు శుభ్రవారం మిల్లిటరీ, ప్లడ్ ప్రోవెన్స్, ఆయుర్వేద ఉత్పత్తులు, రెడర్, స్టీల్, రాంబర్ ఉత్పత్తులు, పారిశ్రామిక ఉత్పత్తులు, ఎలక్ట్రానిక్స్లో పాటు, బ్యాంక్ల స్టాంపు ఎర్నాటు రూపు, మూడో రోజు శనివారం ఇంటి వద్దనే దిద్దుదన్న పరిశ్రమలు ఏర్పాటు చేసుకునే వారి కోసం మువ్వు శిక్షణలతో ఆచూకాచ కార్యక్రమం.

#### విద్యార్థులకు ప్రయోజనకరం

పారిశ్రామిక ప్రాంతంలో ఇలాంటి ఎక్స్పోలు నిర్వహించడం వల్ల చదవ, పారిశ్రామిక, ఇంజనీరింగ్ విద్యార్థులకు ఎంతో ప్రయోజనకరంగా ఉంటుంది. జెన్మాహికుల పారిశ్రామిక వేత్తలకు స్వయం, వ్యాపార, పరిశ్రమల ఏర్పాటులో భాగంగా ఉపాధి రంగాల వైపు దృష్టి సారించే అవకాశం లభిస్తాయి.

- డి.వి.ఎస్. ప్లాంట్ క్రియేషన్ అధినేత

#### మంచి ప్లాట్‌ఫాం

ఎక్స్ పో జెన్మాహికుల పారిశ్రామిక వేత్తలకు మంచి ప్లాట్‌ఫాం. వ్యాపార, పరిశ్రమల ఏర్పాటుకు సులభం నలకు ఆస్కారం ఎర్నాటు తుంది. జెన్మాహికుల పారిశ్రామిక వేత్తలకు ఇది ఎంతో ఉపయోగకరం.

- ఆశోక్ రాజు, ఆశోక్ ఇండస్ట్రి, ఆటోనగర్ డి.బ్ల్యూ.మెంటర్

#### మూలాంటి వారికి మంచి అవకాశం

ఎక్స్పోలో విజ్ఞాన్ కళాశాల నుండి మూడు అవకాశం లభించింది. ఇక్కడికి వచ్చిన మువ్వురు పారిశ్రామిక వేత్తలకు మా ఆలోచనలను ప్రయోగాత్మకంగా నివరించాం. ఇది మాకు మంచి ఎక్స్‌పీరియన్స్.

- బి.మోహన్ వై.మోహన్ రామ్, విజ్ఞాన్ కళాశాల విద్యార్థులు

## Participation at MSME Expo with products developed in IDEA Lab



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**All India Council for Technical Education**  
(A Statutory body under Ministry of Education, Govt. of India)  
Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: [www.aicte-india.org](http://www.aicte-india.org)  
AICTE-IDEA Lab Scheme - Sanction Letter

F No AICTE/IDEA20200084/2021  
2021 Date: 17th September

To:  
The Drawing and Disbursing Officer,  
All India Council for Technical  
Education, Nelson Mandela Marg,  
Vasant Kunj, New Delhi - 110070

Sub: Release of a sum of **Rs. 4400000/- (Rupees Forty Four Lakh Only)** being the 1<sup>st</sup> installment Grant-in-Aid under the scheme AICTE-IDEA Lab for the year 2020-21 payable during the current financial year 2021-22- reg

Sir/ Madam,  
With reference to the proposal submitted by the institute, this is to convey that the sanction of the Council for payment of **Rs. 4400000/- (Rupees Forty Four Lakh Only)** as sanctioned Grant-in-Aid under the AICTE-IDEA Lab scheme, as per details given below:

1	Name and address of the Beneficiary Institution:	Director/ Principal/ Registrar, VIGNAN'S INSTITUTE OF INFORMATION TECHNOLOGY, VIGNAN'S INSTITUTE OF INFORMATION TECHNOLOGY, BESIDE VSEZ, DUVVADA, VEPZ (POST), GAJUWAKA, VISAKHAPATNAM-530049, Andhra Pradesh
2	Title of Project	AICTE-IDEA LAB
3	Name of Chief Mentor:	ARUNDHATI BARATAM
4	Duration of the project	2 years
4	Total Budget of this project	Rs. 19878000/- (Rupees One Crore Ninety Eight Lakh Seventy Eight Thousand Only) (Non-Recurring: Rs. 13606000/-, Recurring: Rs. 6272000/-)
5	Total Institute/Industry Contribution	Rs. 14378000/- (Non-Recurring: Rs. 9606000/- Recurring: Rs. 4772000/-)
6	Total AICTE Contribution (1 <sup>st</sup> installment as 80% in advance and 2 <sup>nd</sup> installment of 20% will be released based on the: a) performance b) utilization of AICTE's first installment c) deposition of 20% amount from non-AICTE sources and any other funds committed in the sanctioned project, besides other documents stipulated for fund release)	Rs. 5500000/- (Non-Recurring: Rs. 4000000/- Recurring: Rs. 1500000/-) 1 <sup>st</sup> installment: Rs. 4400000/- (Rupees Forty Four Lakh Only) (Non-Recurring: Rs. 3200000/- Recurring: Rs. 1200000/-)
7	Financial Contribution beyond the Project Duration	Rs. 1515000/- (Rupees Fifteen Lakh Fifteen Thousand Only) Based on the commitment
6	Sanctioned grant-in-aid is	

602.24(a)

## Sanction Letter of IDEA Lab to VIIT

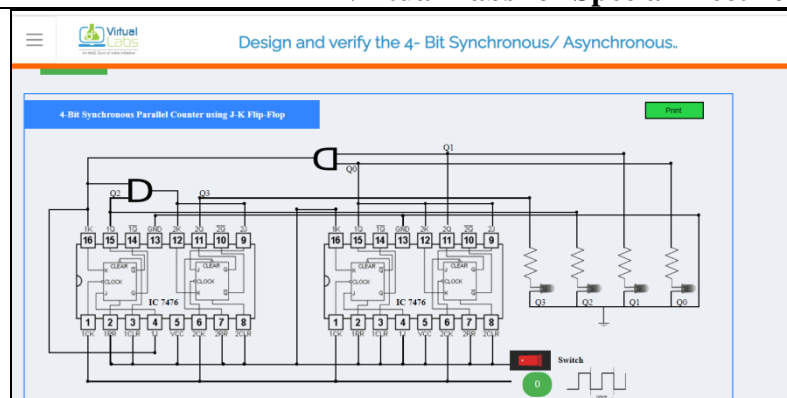


## Virtual Labs

Virtual Labs provide remote-access to simulation-based Labs in various disciplines of Engineering. Objectives are:

- To enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.
- To provide a complete Learning Management System around the Virtual Labs where the students/ teachers can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation.

### Virtual Labs for Special Electrical Machines



**Course:**

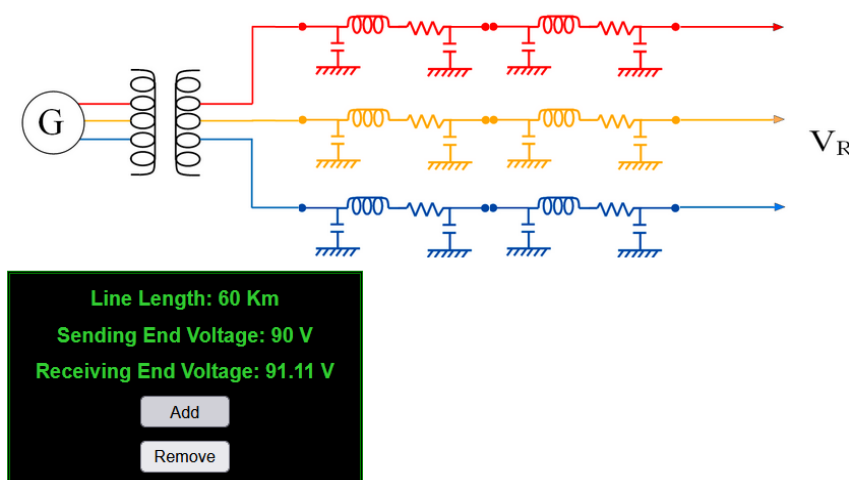
Special Electrical Machines

**Year:** III EEE

**Topic:**

Open loop control of single phase stepper motor

### Virtual Labs for Power transmission Engineering



**Course:**

Power transmission Engineering

**Year:** III EEE

**Topic:**

Ferranti Effect in Transmission Line






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## Technical Extension Activities

- One of the visions of the Institute is to develop socially conscious students and faculty to match the current and future industrial requirements, towards the development of the nation.
- Objectives of technical extension activities are to transfer knowledge in the nearby socio-economic regions, by sensitising people on the social issues and provide technical solutions through multiple outreach programs.

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DUVVADA, VISAKHAPATNAM


**National Consciousness Day for the Elimination of Violence Against Women and Children**

**Compact Women Safety Device**

**25 November 2020**

**Organized by:**  
**Department of Mechanical Engineering**  
**(In association with JCI Gajuwaka)**

*Women Safety*



**Development and Demonstration of Women Safety Device**



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Beside VSEZ, Duvvada, Vadlapudi Post, Gajuwaka, Visakhapatnam - 530 049.



## **VIGNAN's** INSTITUTE OF INFORMATION TECHNOLOGY (AUTONOMOUS)

(Approved by AICTE & Affiliated to JNTUK, Kakinada)  
DUVVADA, VISAKHAPATNAM

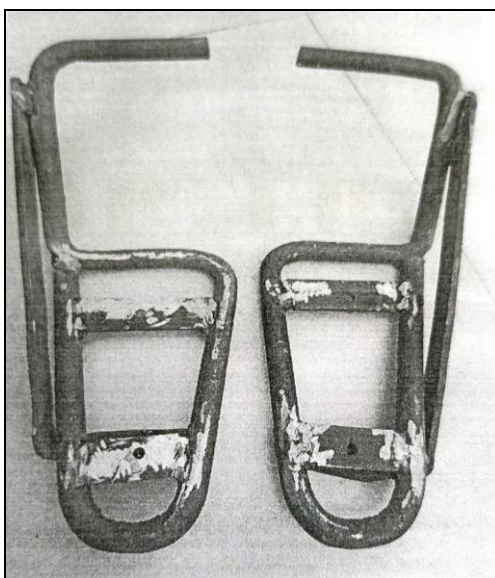
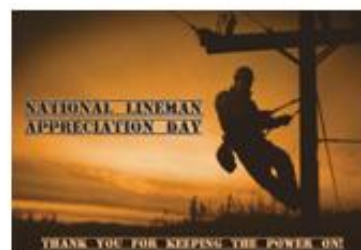
### **National Lineman Appreciation Day**

#### **Electric Pole Climbing Shoes**

**18 April 2021**

**Organized by:**

**Department of Mechanical Engineering**



**Development and demonstration of Electrical Pole Climbing shoe**





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## Impact:

- Substantial improvement in the mindsets of students and their approach to problems.
- Increased employment.
- Appreciation received to the models developed from innovative ideas.



Visakhapatnam.

To

The superintending engineer(GVMC),

Visakhapatnam.

Sub: Request for approval of student project.

Respected sir/madam,

We the students of vignan's institute of information technology (VIIT) from electronics and computer engineering (ECM) branch are working on a project that is "smart waste management system" under the guidance of Dr.R. umamaheswari.

This project is all about the optimization of the dustbin in which the dumpsters will receive the notification when dustbin gets filled and can also observe the status of the dustbin .

Kindly, allow us to work on it which could influence lives in better way.Hope you would give us a positive response.

Thanking you sir/madam.

Yours sincerely,

Vishnu Vardhan (20L31A1901),

Lakshmi sivani (20L31A1907),

Varsha (20L31A1933),

Bhanu saiprakash (20L31A1945),

Electronics and computer engineering,

Vignan's institute of information technology,

Smart waste management system.

*This project can be first implemented in your college as a model.*  
*[Signature]*  
THE SUPERINTENDING ENGINEER (GVMC)  
SUPERINTENDING ENGINEER (MECH)  
GREATER VISAKHAPATNAM  
MUNICIPAL CORPORATION  
VISAKHAPATNAM

**Smart waste management system** was demonstrated on 5<sup>th</sup> July, 2021 at GVMC, Visakhapatnam by students of II ECM to create awareness among the workers, management and the administration of the GVMC. This model was appreciated.

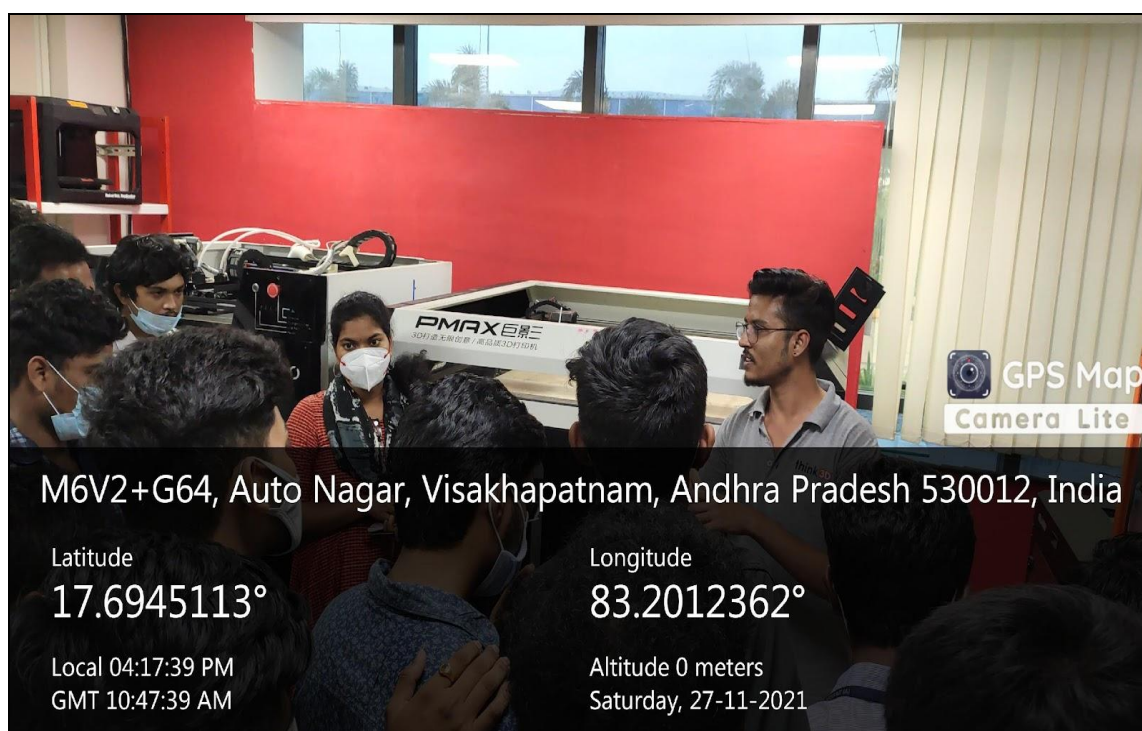


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## Industry Visit

- With an intention to go beyond classroom learning and bridge the gap between Industry and Academia, core engineering departments in VIIT arrange industrial visits at least once in every semester.
- Industry visit provided a holistic student development by enabling students to learn about current market scenario, new technologies implemented and future requirements of the industry.



**A visit to Think 3D industry, Auto Nagar, Visakhapatnam  
by IV Mechanical Engineering Students**



## Internships

- Internship is offered for the students in the 8<sup>th</sup> semester to develop industry interactions, to analyse, design and develop solutions to relevant projects, and improve both technical and communication skills. Departments have MOU with Industries.
- **617** Students were allowed to undergo internship at Research Organizations/ Government Training Institutes/ Public Sector Units/Reputed Academic Institutions/ Reputed Industries/ Industry during 2020-21. Some of the companies where students completed internship are TCS, Hitachi, AMAZON Internet Services Pvt Ltd, NSTL, AMTZ, Hindustan Shipyard Limited, Signitive, CANDELA TECH, UNIPARTS Pvt. India Limited, ELECTROPRO, Robo Coupler Pvt. Ltd. Garuda 7G Engineering Solutions, Hobel Bellows, Think -3D.
- Interns spend their time working on relevant projects, learning about the field, making industry connections and developing both hard and soft skills.
- There are two types of internships - paid and unpaid. 116 students of VIIT received stipend during the internship. Students get internships through Internshala, through Placement Cell and also from Employer.

Name of the Department	Internships allotted	No. of Organizations
Civil Engineering	118	23
Electronics and Communication Engineering	109	13
Mechanical Engineering	134	14
Electrical and Electronics Engineering	144	9
Electronics and Computer Engineering	28	1
Computer Science and Engineering	59	18
Information Technology	23	5
MCA	2	2
<b>Total</b>	<b>617</b>	<b>85</b>





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Internships in Robo coupler Company



National Thermal Power Corporation  
SIMHADRI

PARAWADA, VISAKHAPATNAM-531020.

DATE: 22-07-2021

## CERTIFICATE

This is to certify that Mr P KUSHAL SAI KUMAR S/o Mr P T V S RAVI KUMAR studying B. Tech in "Vignan's Institute of Information Technology", Visakhapatnam has completed his Technical Internship for a time period of FOUR months i.e., from 08-03-2021 to 08-07-21 and still continue to be a Technical Trainee until 28-02-2022.

During the above period his CONDUCT & CHARACTER were found to be Satisfactory and we wish him a bright future.

  
P K JENA 23/7/21

(HOD ELECTRICAL MAINT...)  
NTPC, SIMHADRI

प्रशांत कुमार जेना / PRASANTA KUMAR JENA  
अवर प्रिंसिपल एम एल सी (विद्युत मंत्र.)  
Addl. General Manager - HOD (EMO)  
राष्ट्रीय विद्युत निगम / NTPC Limited - Simhadri  
विभाग - VISAKHAPATNAM - 531 020

Internship Certificate at NPTC, Simhadri, Visakhapatnam



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- Paid Internships

Amazon Development Center India Pvt. Ltd

Payslip For : JAN-2021  
Amount in INR

Employee Code	109179585	EMPLOYEE NAME	Divya Akkireddy
Bank	SBI	Bank A/c No	62429958160
DOJ	18 Jan 2021	LOP days	0
PF A/c No		STD Days	31
PF UAN		No. of Days Paid	14
Department		Designation	Support Engineer Intern
Location	HYDERABAD	Previous Month LOP	0
ESI No			

Earnings	No of Units	Earned	Deductions	Amount
STIPEND		9,032.00		
GROSS EARNING		9,032.00	GROSS DEDUCTIONS	0.00
		NET PAY	9,032.00	

Amazon Development Center India Pvt. Ltd

Payslip For : FEB-2021  
Amount in INR

Ms. A.Divya, 17L31A0565 received stipend of Rs. 9000/- during internship at Amazon.



## **Value Added Courses**

It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

### **Objectives:**

- To inculcate fundamental problem solving skills to encourage the students and make them understand the use of modern research tools.
- To augment aptitude skills, technical knowledge, ability to think and innovate.

**39** wide varieties of short term and also long term Value Added Courses (VAC) were conducted.

These courses are conducted by professionals and/or industry experts.

### **Impact:**

- An urge to acquire technical skills was developed amongst students.
- Students were transformed to stand apart from the rest in the job market by adding further value to their carriers.
- Students and faculty kept pace with the latest technologies pertaining to their chosen field of studies.





### Certificate/Value added courses offered during 2020-21

3D Modeling of Structures by using SketchUp	Hands on jenkins
Simulation of RCC structures	Programming using ruby
Engineering rock mass classification system, core logging applications in civil engineering	IBM blockchain foundation developer
Blogging for a living: How to build a successful blog in 2022	Red hat linux essentials
Artificial neural network (ANN)	Introduction to pega systems
Additive Manufacturing	Impact of ai & ml on social relevant issues
Problem Solving using Data Structures	UI/UX development
AutoCAD for Electrical and Automation Engineering	WEB 3.0
Fundamentals of Arduino Programming and Hardware	Block chain Technology
MATLAB for Electrical Engineers	Internet of things and it's protocol design
Printed Circuit Board Design	Competitive Programming using C
IoT Development with RaspberryPi	AWS Cloud Foundations
Problem solving using Python Language	AZURE SC 900
Industrial Automation Using PLC	Essential for Competitive Programming-I
Appilcation of Optimization Techniques in Power System Using MATLAB	Essential for Competitive Programming-II
Advanced IC engines for future generation green energy.	Parallel Computing
Design and intergation of industrial plant equipments and piping.	Programming Essentials Using Java
AutoCAD - Mechanical parts design and drafting.	Waste to weatlth
Electrical vehicles - Technology update.	Inferential statistics
Fundementals of part design using Pro Engineering Creo .	Optimization techniques
Thermal Analysis of machine components by ANSYS software.	Creative writing



**Practical sessions integrated with theory courses**

An active learning environment where students gain both conceptual understanding and practical skills is developed by delivering theoretical and practical contents in lab. This is achieved when students perform experiments immediately after the study of theory courses. In this regard, labs of the courses are conducted in the same semester.

**Academic Regulations  
Program structure & Detailed Syllabus  
2017**

**For**

Under Graduate Programme (B.Tech)

**ELECTRICAL AND ELECTRONICS  
ENGINEERING**

(Applicable For Batches Admitted From 2017 – 2018)



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**VIGNAN'S INSTITUTE OF INFORMATION TECHNOLOGY**



**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING  
PROGRAM STRUCTURE (VR 17)**

**I Year- I Semester**

S. No	Course Code	Course Title	L	T	P	Credits
1	1000171101	English- I	3	0	0	3
2	1000171102	Engineering Mathematics-I	3	1	0	3
3	1000171105	Computer Programming using C	3	1	0	3
4	1000171106	Engineering Drawing	3	1	0	3
5	1000171107	Applied Physics	3	1	0	3
6	1000171112	Environmental Studies	3	0	0	3
7	1000171121	English-Communication Skills Laboratory -I	0	0	3	2
8	1000171122	Engineering Physics Laboratory	0	0	3	2
9	1000171128	Computer Programming Laboratory	0	0	3	2
Total Credits						24

**I Year – II Semester**

S. No	Course Code	Course Title	L	T	P	Credits
1	1000171201	English-II	3	0	0	3
2	1000171202	Engineering Mathematics-II	3	1	0	3
3	1000171203	Engineering Mathematics-III	3	1	0	3
4	1000171208	Electrical Circuit Analysis - I	3	1	0	3
5	1000171211	Applied Chemistry	3	1	0	3
6	1000171216	Engineering Mechanics	3	1	0	3
7	1000171221	English Communication Skills Lab-2	0	0	3	2
8	1000171224	Engineering Workshop	0	0	3	2
9	1000171227	Engineering Chemistry Laboratory	0	0	3	2
Total Credits						24





## II B.Tech I Semester

S.No	Course Code	Course Title	L	T	P	Credits
1	1002172101	Electrical Circuit Analysis – II	3	1	0	3
2	1002172102	Electrical Machines-I	3	1	0	3
3	1002172103	Basic Electronic Devices & Circuits	3	1	0	3
4	1002172104	Electro Magnetic Fields	3	1	0	3
5	1002172105	Thermal and Hydro Prime movers	3	1	0	3
6	1002172121	Electrical Circuits Laboratory	0	0	3	2
7	1002172122	Electrical Machines -I Laboratory	0	0	3	2
8	1002172123	Hydraulic Machinery lab	0	0	3	2
Total Credits:						21

## II B.Tech II Semester

S.No	Course Code	Course Title	L	T	P	Credits
1	1002172201	Electrical Machines-II	3	1	0	3
2	1002172202	Control Systems	3	1	0	3
3	1002172203	Power Generation Engineering & Economics	3	1	0	3
4	1002172204	Analog Electronics	3	1	0	3
5	1002172205	Data Structures	3	1	0	3
6	1099172106	Managerial Economics & Financial Analysis	3	1	0	3
7	1002172221	Electrical Machines –II Laboratory	0	0	3	2
8	1002172222	Electronic Devices & Circuits Laboratory	0	0	3	2
9	1002172231	Industrial visit	0	0	0	2
Total Credits:						24



## Class: III B.Tech I Semester

S.No	Course Code	Course Title	L	T	P	Credits
1	1002173101	Power transmission Engineering	3	1*	0	3
2	1002173102	Signals and Systems	3	1*	0	3
3	1002173104	Electrical Measurements	3	1*	0	3
4	1099172203	Management Science	3	1*	0	3
5	1002173105	Power Electronics	3	1*	0	3
6	1002173106	Digital Electronics	3	1*	0	3
7	1002173121	Power Electronics Lab	0	0	3	2
8	1002173122	Control Systems Lab	0	0	3	2
9	1002173123	Data Structures Lab	0	0	3	2
Total Credits:						24

## Class: III B.Tech II Semester

S.No	Course Code	Course Title	L	T	P	Credits
1	1002173201	Power Electronic Controllers & Drives	3	1*	0	3
2	1002173202	Power System Analysis	3	1*	0	3
3	1002173203	Renewable Energy Systems	3	1*	0	3
4	1002173204	Microprocessors and Microcontrollers (MPMC)	3	1*	0	3
5	Elective – I:		3	1*	0	3
	1002173205	1. Electric Vehicles				
	1002173206	2. Optimization Techniques				
	1002173207	3. Instrumentation				
	1002173208	4. Special Electrical Machines				
6	Open Elective – I:		3	1*	0	3
	1005173207	1. Introduction to Python Programming				
	1003173203	2. Robotics				
	1002173209	3. Neural Networks & Fuzzy Logic				





	1002173210	4. Energy Audit and conservation & Management				
7	1002173221	Electrical Measurements Lab	0		3	2
8	1002173222	Microprocessors and Microcontrollers (MPMC) Lab	0		3	2
9	1099172103	Professional Ethics & Human Values	2		0	0
<b>Total Credits:</b>						<b>22</b>

S. No	Course Code	Course Title	L	T	P	Credits
1	1002173241	Industry Oriented Mini Project	0		0	2

#### IV B.Tech I-Semester

S. No	Course Code	Course Title	L	T	P	Credits
1	1002174101	Utilization of Electrical Energy	3	1	0	3
2	1002174102	Programmable Logic Controller	3	1	0	3
3	1002174103	Power System Operation & Control	3	1	0	3
4	1002174104	Switchgear and Protection	3	1	0	3
5	<b>Elective – II:</b>		3	1	0	3
	1002174105	1. Distributed Generation and Micro grids				
	1002174106	2. Advanced Control Systems				
	1004174105	3. IoT & its Applications				
6	<b>Open Elective-II: /MOOCs</b>		3	1	0	3
	1005172104	1. Java Programming				
	1005172201	2. Data Base Management Systems				
	1004173203	3. VLSI Design				
	1099173201	4. Entrepreneurship Development				
7	1002174121	Electrical Simulation Lab	0	0	3	2
8	1002174122	Power Systems & Simulation Lab	0	0	3	2
9	1099173101	IPR & Patents	2	0	0	0
<b>Total Credits :</b>						<b>22</b>





## IV B.Tech II- Semester

S. No	Course Code	Course Title	L	T	P	Credits
1	1002174201	Digital Control Systems	3	1	0	3
2	1002174202	HVDC Transmission	3	1	0	3
3	1002174203	Electrical Distribution Systems	3	1	0	3
4	<b>Elective – III:</b>		3	1	0	3
	1002174204	1. Smart Grid Technologies				
	1002174205	2. Flexible Alternating Current Transmission Systems				
	1002174206	3. Power System Reforms				
	1002174207	4. Condition Monitoring of Electrical Equipments				
(or)			0	0	0	12
	1002174281	Internship	0	3	0	2
5	1002174251	Technical Seminar	0	0	0	2
6	1002174261	Comprehensive Exam	0	0	0	10
7	1002174231	Main Project				26
Total Credits :						

Grand Total of credits= 24+24+21+24+24+24+22+26=189



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**Academic Regulations**  
**Program Structure & Detailed Syllabus**  
**2019**

**For**  
**Under Graduate Programme (B.Tech)**  
**COMPUTER SCIENCE AND ENGINEERING**  
(Applicable For Batches Admitted From 2019 – 2020)



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**DUVVADA - VISAKHAPATNAM – 530 049**

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Academic Regulations, Program Structure & Detailed Syllabus - VR19

VIGNAN'S INSTITUTE OF INFORMATION TECHNOLOGY: VISAKHAPATNAM

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM STRUCTURE (VR-19)

**I Year- I Semester**

S. No	Course Code	Name of the Course	L	T	P	Credits
1.	1000191100	Mathematics-I	3	1*	0	3
2.	1000191123	Applied Chemistry	3	1*	3	4.5
3.	1003191101	Engineering Drawing	1	0	4	3
4.	1000191121	Technical English Communication	2	0	3	3.5
5.	1005191120	Problem Solving & Programming using C	3	1*	3	4.5
6.	1000191110	Engineering Exploration	0	0	4	2
7.	1000191131	Extra Curricular Activities, Sports and Games	0	0	4	0
Total Credits						20.5

**I Year – II Semester**

S. No	Course Code	Name of the Course	L	T	P	Credits
1.	1000191202	Probability and Statistics	3	1*	0	3
2.	1000191221	Applied Physics	3	1*	3	4.5
3.	1005191222	Object Oriented Programming through C++	3	1*	3	4.5
4.	1004191200	Basic Electronics	3	0	0	3
5.	1000191101	Mathematics-II	3	1*	0	3
6.	1005191210	IT Workshop	0	0	3	1.5
7.	1000191130	Constitution of India	2	0	0	0
Total Credits						19.5

$$\text{Total Credits} = 20.5 + 19.5 = 40$$





## Academic Regulations, Program Structure & Detailed Syllabus - VR19

### II Year- I Semester

S. No.	Course Code	Course Title	L	T	P	C
1	1005192100	Discrete Mathematical Structures	3	1*	0	3
2	1005192101	Digital Logic Design	3	1*	0	3
3	1005192120	Data Structures through C	3	1*	3	4.5
4	1005192121	Java Programming	3	0	3	4.5
5	1099192100	Managerial Economics And Financial Analysis	3	0	0	3
6	1020192100-1020192102	Open Elective-I	3	0	0	3
7	1005192170	Mini Project-I (EPICS/Societal Relevant Project)	0	0	2	1
8	1000192130	Environmental Science (AUDIT Course)	2	0	0	0
Total Credits						22

### Open Elective-I

S. No.	Course Code	Course Title
1	1020192100	Employability Readiness Program-I
2	1020192101	Public Administration
3	1020192102	Foreign Linguistic - French

### II Year- II Semester

S.No	Course Code	Name of the Course	L	T	P	Credits
1	1005192220	Advanced Data structures	3	0	3	4.5
2	1005192200	Computer Organization and Architecture	3	1*	0	3
3	1005192221	Database Management Systems	3	0	3	4.5
4	1005192202	Formal Languages and Automata Theory	3	1*	0	3
5	1005192201	Software Engineering	3	0	0	3
6	1000192110	Communication Skills Lab	0	0	2	1
Total Credits :						19





Academic Regulations, Program Structure & Detailed Syllabus - VR19

## III Year- I Semester

S. No.	Course Code	Course Title	L	T	P	C
1	1005193120	Web Technologies	3	0	3	4.5
2	1005193100	Design and Analysis of Algorithms	3	0	0	3
3	1005193101	Data Warehousing and Data Mining	3	0	0	3
4	1005193102	Operating Systems	3	0	0	3
5	Professional Elective-I					
	1005193150	Programming Essentials in Python	3	0	0	3
	1005193151	Industrial Oriented Python Programming				
	1005193152	Unix and Shell Programming				
	1005193153	Computer Graphics				
	1005193154	Advanced Computer Architecture				
6	Open Elective-II					
	1001193160	Industrial Waste and Waste Water Engineering	3	0	0	3
	1002193151	Energy Audit Conservation and Management				
	1003193160	Industrial Robotics				
	1004193160	Data Communications				
7	1005193110	Python Programming Lab	0	0	3	1.5
8	1099193130	Professional Ethics and Human Values	2	0	0	0
Total Credits						21



Academic Regulations, Program Structure & Detailed Syllabus - VR19

## III Year- II Semester

S. No.	Course Code	Course Title	L	T	P	C
1	1012193120	Computer Networks	3	0	3	4.5
2	1005193200	Compiler Design	3	0	0	3
3	1099192200	Management Science	2	0	0	2
4	Professional Elective-II					
	1005193250	Basics of Mathematics for Security	3	0	0	3
	1005193251	Artificial Intelligence				
	1005193252	Concurrent and Parallel Programming				
	1005193253	Software Project Management				
	1005193254	Advanced Databases				
5	Open Elective-III					
	1001193260	Environmental Impact Assessment and Management	3	0	0	3
	1004193161	Signal Processing				
	1019193261	Embedded System Design				
	1020193200	Employability Readiness Program-III				
6	1005193210	Algorithms Lab	0	0	3	1.5
7	1005193270	Mini Project-II	0	0	2	1
8	1005193280	Technical Seminar	0	0	2	1
Total Credits						19