

INTERNSHIP DETAILS

The duration of this Internship will be for 2 weeks (August 07-21, 2023 as per RTU calendar) & time will be 9AM to 3 PM. A certificate regarding successful completion of internship (Submission of work report) shall be issued to the participants by the PIET AICTE IDEA LAB, Jaipur.

IMPORTANT DATES

Registration form submission start from July 12, 2023
Registration form with fee deposit deadline date
July 20, 2023
Notification of Confirmation of the Internship
July 25, 2023
Endorsement cum No Objection Certificate deposit
deadline July 30, 2023
Internship Starting & ending date 7-21 August 2023
(As per RTU calendar)

CONSUMABLE CHARGES

Consumable Charges Rs. 3000/-
*Applicable for kit & consumables only
Top 10% students will be awarded prize money equal to their respective consumable fee, subject to grant of IPR of the project.

INTERNSHIP ORGANIZING COMMITTEE

Dr. Dinesh Goyal, Principal & Director, Chief Mentor, PIET-AICTE, IDEA lab
Mr. Udit Mamodiya, Coordinator & HoD, PIET-AICTE, IDEA lab
Mrityunjai Kumar, Founder, Sincgrid, Delhi
Mr. Arun Kumar, Co-Founder, Sincgrid, Delhi
Mrs. Alka Rani, Assistant Professor, PIET
Mr. Indra Kishor, Assistant Professor, PIET
Mr. Abhishek Dadhich, Assistant Professor, PIET
Mr. Satish Kumar, Production Head, Sincgrid, Delhi
Mr. Nitin Mukesh Mathur, Co-Coordinator, PIET-AICTE, IDEA lab
Mrs. Reshma Kala, Assistant Professor, PIET
Mr. Rajendra Singh, Assistant Professor, PIET
Mr. Pradeep Kumar, Assistant Professor, PIET
Mr. Laxman Singh Chauhan, Technical Officer, PIET
Mr. Sumit Lunia, Technical Assistant, PIET

REGISTRATION PROCESS

- Interested UG Students of Science and Engineering Stream can apply for the Internship through Internship Organizers (EOs) only.
- The applicant should send the following documents i.e.
(i) Registration form
(ii) Endorsement cum No Objection Certificate for allowing the student to participate in internship, if selected, for "INTERNSHIP" in physical mode
(iii) UG mark sheet or College ID card
(iv) Copy of Aadhar card
- E-mail the scanned copy of the documents listed above to the internship organizer aicte.idealab@poornima.org on July 30, 2023

ELIGIBILITY

Interested FIRST YRAR UG Students of Science and Engineering Stream can apply for the Internship. All private University & RTU affiliated College students are eligible for the summer internship in the domain of CS/ IT/ EC/ EE/ AI&DS/ CS(AI)/ ME/ CIVIL.

NATURE OF SUPPORT

Necessary expenses such as, stationery, consumables, project accessories etc. (related to project) for the participating students will be borne by PIET IDEA LAB through AICTE, ISTE, CSI, Jaipur Chapter funding support for the whole internship period.

SELECTION PROCEDURE

The selection of the eligible students for the INTERNSHIP will be done based on the recommendations of the Selection Committee constituted for this purpose by the PIET AICTE IDEA LAB, Jaipur.

Note: IPR registration fee provided by PIET AICTE IDEA Lab after successful completion of the internship.

TERMS AND CONDITION

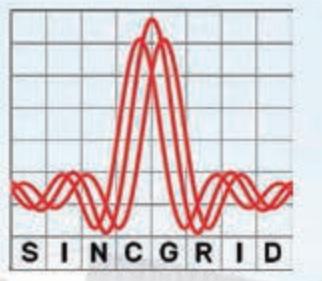
- The interns would be assigned tasks /assignment as per the designed research program by the supervisor.
- The selected interns should work accordingly and submit work report to the supervisor after successful completion of the internship failing which no certificate will be issued.
- The IP rights of the research work shall be reserved by the institute which cannot be used by the intern without prior permission from the supervisor.
- The interns shall abide by the rules and regulations of the institutions and laboratory protocols.

FOR FURTHER INFORMATION

Mr. Udit Mamodiya
(Coordinator & HoD, PIET-AICTE, IDEA lab)
Call : +91-9694802324
Write to us: aicte.idealab@poornima.org
Address:
ISI-2, RIICO Institutional Area, Sitapura,
Jaipur - 302022 (Raj.)

**FREE OF COST**
Advanced Internship Program
on
IoT BASED PRODUCT DEVELOPMENT
WITH DATA ANALYTICS
(using Advanced Digital Manufacturing Equipment, Tools and Resources)
First Year: II Sem (As per RTU Curriculum)


August 07-21, 2023

In Association with

Co-Sponsored by

Organized by

PIET AICTE IDEA Lab
POORNIMA
INSTITUTE OF ENGINEERING & TECHNOLOGY
Affiliated to RTU, Kota • Approved by AICTE & UGC under 2(f) • Accredited by NAAC and NBA

ABOUT POORNIMA INSTITUTE OF ENGINEERING & TECHNOLOGY

Poornima Institute of Engineering & Technology, Jaipur (PIET) is a premier institution in Engineering Education, established in the academic year 2007; it is affiliated to Rajasthan Technical University, approved by AICTE and is recognised under UGC 2(f). PIET has been providing world-class technical and scientific education that has been able to develop professional outlook in every walk of life of our students. PIET has been ranked 3rd in annual RTU-QIV ranking and has been able to maintain this position for the last 03 years amongst 98 affiliated colleges under RTU. Some of the notable achievements are that PIET has been the 1st Institution across India to offer B. Tech CSE in Regional language under NEP 2020. Our Institute has been accredited by National Assessment and Accreditation Council (NAAC) since 2019. One of our programs B. Tech in Computer Engineering has been accredited by the National Board of Accreditation (NBA) for the last 06 years. We achieved NBA Accreditation of one of our program B.Tech Civil Engineering in 2019-20 and were the 1st one across Rajasthan to achieve the same. PIET has been rated PLATINUM by AICTE-CII Survey for strong Industry Linked Technical Institutes. PIET is the only institute in Rajasthan to be funded by AICTE with a fund of Rs. 50.39 Lakh for establishing IDEA Lab, aiming for skill development and nurturing innovation amongst its students. Our Institute has established Neural Network & Deep Learning Lab under MODROB Scheme with granted in aid of Rs. 12.84 lac and we have also received research grants for more than 50 Lakh in the last 3 years from agencies like TEQIP III, AICTE, NITTR etc. PIET has achieved more than 100 SCI/Scopus Publications and has also published/granted more than 30 IPR in the last 03 Years.

ABOUT PIET-AICTE IDEA LAB

The AICTE has launched a scheme with a huge funding of Rs. 50 lakhs to establish IDEA labs across India, and over 200 institutions have applied for it & it is proud moment to Poornima Institute of Engineering & Technology to receive this grant, as well as the only institution in Rajasthan to establish an AICTE-sponsored IDEA Lab for the training and development of students and society through hands-on learning on the latest technologies.

This lab is an Industry 4.0 Hi-tech lab facility available 24x7 on campus, encouraging more students and faculty to take on creative work and, in the process, receive training on creative thinking, problem solving, collaboration, and other skills that traditional labs do not focus on, in the domains of robotics, 3D printing, IoT, GIS, and bio-manufacturing!!

IDEA LAB is a R & D wing of PIET to cater to the various research needs of industries and would provide a great opportunity for industries and academia to use the advanced facilities. The major objectives of the PIET: AICTE IDEALAB are to carryout research and development activities in the areas of IoT-based product development, Advanced Digital Manufacturing, testing and evaluation, product development and commercialization, along with facilitating research scholars and scientists to pursue research programs. The IDEA LAB has a full-fledged materials characterization facility with broad specialisation in product development and simulation. The centre will coordinate and provide centralised support and service to various academic and industrial institutions for their research needs.

Vision

IDEA Lab will be dedicated for up-gradation of the science & engineering education among students, faculty, Industry & its workforce, with the latest industry trends and practices, rendering the requirements of the rural population & upgrading skill-based learning of faculty, engineering students, schools in above said domains.

Mission

- To have Industry oriented Training & skill development and creativity.
- To increase more Innovative practices and creative research trend in all domains to generate more entrepreneurs from the Institution.
- To render Consultancies to Industry and develop this lab as small Manufacturing unit for the Industries.
- To facilitate Research and Social projects with the Industries & government agencies.

SCOPE OF THE SUMMER INTERNSHIP PROGRAM

IDEA LAB is the call for initiation and practise in science through summer internships. This summer internship aims to provide opportunities to promising PG, UG students from universities and colleges to get exposure and hands-on research experience. The scheme is meant to support regular UG/PG level students who have a strong orientation and potential towards scientific and engineering research, but do not have the requisite infrastructure or expertise in their institutions, to get such exposure and motivation.

The Internet of Things (IoT) conceptualises the idea of remotely connecting and monitoring real world objects (things) through the Internet. When it comes to our house, this concept can be aptly incorporated to make it smarter, safer, and more automated. This type of project focuses on building a "SMART HOME AUTOMATION SYSTEM", which is mainly concerned with designing a system that allows users, upon authentication, to remotely control and monitor multiple home appliances using a cell-phone based interface. This type of IoT based project will be covered in summer internship.

INTERNSHIP OBJECTIVES

The objectives of the proposed internship are as follows:

- To introduce students to the field of engineering materials and their applications with respect to 3D printing & IoT
- To enable students in learning about advanced prototyping and manufacturing techniques such as 3D printing, 3D Scanner, Laser Cutter, IoT automation etc.
- Providing a platform for research-oriented candidates to kick-start their research career with innovative skill development.

TENTATIVE LIST OF PROJECTS (But not limited to)

S. No.	PROJECT NAME	OBJECTIVE
1	Smart Plug with usage monitoring using data analytics	Google Home/Alexa and phone application based smart plug which monitors use of the plug portrays the usage over any time period
2	Bike Monitor with data analysis for performance review	Smart bike monitor which records speed, distance and other information captured from the bicycle
3	Advanced weather station with multi node application & data analysis	Weather station to monitor a range of parameters and display on webpage along with pluggable sensor connectors. Multi-node data can be relayed on a central dashboard
4	Smart City Smart Streetlight with central dashboard for data analytics	Automation and maintenance of streetlights with IoT. Data analysis to monitor the power consumption along with the status of the streetlight.
5	Smart City Smart Metering with central dashboard for data analytics	Implement local RF communication protocol to receive data and monitor power meters. Assess the power consumption of multiple points at various points throughout the day.
6	Agriculture enhancement with IoT & sensor featuring multi node data analysis	Use of sensors and imaging technology to monitor and assess crops. Multiple nodes in multiple fields can be used to track the moisture, important nutrients in the soil.
7	Smart Doorbell with Door Lock and security system	Mobile notification when doorbell is used and remote control of door lock from any place
8	Smart Attendance system with data analytics	Fingerprint and Face recognition based attendance system
9	Smart City Smart Displays to convey information of various parameters	Smart display which can be controlled remotely are beneficial in conveying important news and advertisements
10	Microcontroller based Smart Garden	This project involves creating a system that allows you to monitor and control the conditions in your garden, such as temperature, humidity, and light levels. This can be done using sensors and actuators, which can be connected to a Raspberry Pi or other microcontroller.
11	IoT-based Pet Tracker	This project involves creating a system that allows you to track the location of your pet using a GPS-enabled device. This can be done using a variety of technologies, such as Wi-Fi, Bluetooth, and cellular networks.
12	IoT based Vehicle Number Plate Recognition	This is very useful for automating toll booths, automated signal breakers identification and finding out traffic rule breakers. The system uses a camera along with LCD display circuit interfaced to a Raspberry pi.