

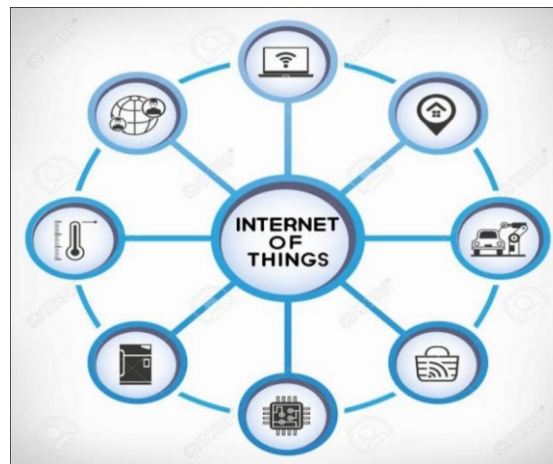


SPHOORTHY ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUH, NAAC Accredited, ISO 9001:2015 Certified Institution) Nadargul (V),
Sagar Road, Near L.B. Nagar, Balapur (M), R.R.(Dist.), T.S.-501510.

Undergraduate Program in Internet of Things (IoT) - Course Introduction, Scope and Career Opportunities

Evolution of IoT: The **Internet of things (IoT)** is a system of interrelated computing devices, mechanical and digital machines provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.



Internet of things has evolved due to the convergence of multiple technologies, real-time analytics, machine learning, commodity sensors, and embedded systems. Traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), and others all contribute to enabling the Internet of things. In the consumer market, IoT technology is most synonymous with products pertaining to the concept of the "smart home", covering devices and appliances (such as lighting fixtures, thermostats, home security systems and cameras, and other home appliances) that support one or more common ecosystems, and can be controlled via devices associated with that ecosystem, such as smartphones and smart speakers.



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Prerequisites to take up IoT engineering course:

- Intermediate students with good mathematics background, inclination towards programming and passion towards smart devices.

Career Opportunities and Certifications in IoT:

- 1. Entrepreneur:** Scope of IoT is unlimited. Many day to day human activities, tasks can be automated with systematic application of IoT based solutions. Any one such innovation can bring in disruption and foster entrepreneurship in the young innovators. One such example is agriculture. IoT is widely used in smart farming ensuring high returns and ease of farming.
- 2. Consumer Electronics:** Application of IoT in electronic appliances are enabling them to become smart, reliable, fault tolerant, self diagnosing and interactive. An IoT engineer can contribute significantly in the field of consumer electronics with a special focus and scope in HVAC (Heating, Ventilation, Air Conditioning) technologies.
- 3. Platform Application Engineer:** Enabling software and hardware platforms for IoT customers. IoT application engineers can also develop portals to enable gathering, storing and analysis of data collected from field devices.
- 4. Industrial automation and Industrial Data Scientist:** Industries use sensor to record or measure various activities for monitoring, performance improvement, alerts, disaster management, event detection etc. An expert IoT engineer can become an Industrial Data Scientist.



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Infra Structure requirements to offer IoT UG Program:

Most **IoT devices**, whether they are sensors, actuators, or both, consist of **hardware and software**. Examples of sensors include cameras, motion detectors, carbon monoxide sensors, light sensors, and other such **devices** that monitor their surrounding environments.

Human Resource requirements to offer IoT UG Program:

To develop IoT based applications or prototypes one should be aware of sensor programming, signaling, database, middleware servers. Hence IoT is an inherent segment of Computer Science and Engineering program, Electronics and Communication Engineering, faculty from both the departments will be the key contributors.

Why to Choose IoT Program at Sphoorthy Engineering College:

1. Faculty competency is the key to quality education. In this regard, Sphoorthy Engineering College is a one stop solution for all IoT aspirants because of its faculty strength. Our Faculty have certified skill set and with rich experience, expertise.
2. A separate Robotics Laboratory infrastructure is in place, with capability of developing IoT based prototypes.
3. Continuous support of the management in skill development of faculty on latest advancements in technology, infrastructure procurement and performance based incentives for faculty.



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4. Our College has very strong industry and societal connect which can help students in taking up real time and community service projects which will facilitate in experiential learning and quality project work.
5. Our training department is competent enough to offer training on cutting edge technologies and ensure the student's learning is in line with the industry needs.
6. Our placements team is capable of reaching out to industry leading to domain specific placement opportunities for the students.

Hence overall development, career and professional accomplishment for an IoT aspirant is guaranteed at Sphoorthy Engineering College.