



SAINTGITS COLLEGE OF APPLIED SCIENCES

VALUE ADDED COURSES 2020-21

INTERNET OF THINGS



ABOUT THE COURSE

An Introduction to Internet and things enables the participants to understand the basic IoT architecture It also includes the protocols and applications of IoT

THE COURSE IS TO **EQUP THE** STUDENTS WITH **LATEST TECHNOLOGY**

TRENDS IN INTERNET OF THINGS

OBJECTIVES

- The learner will understand key terms and concepts in IoT
- Understand the protocols and working
- Understand the applications and challenges of loT

E XPECTED OUTCOMES

Students will be able to define the various concepts of IoT, architecture and working, and to list different technologies and protocols in IoT

DURATION

30 Hrs.



FEATURES

We provide practical sessions for this course





This course is designed to equip the students with the IoT concepts.

ADVANTAGES

Internet of Things is a technology where physical devices are interconnected to each other and are given a set of commands to be executed. Students by enrolling in this course will be able to know the architecture of IoT.

CONTENTS

Module-1: IoT Introduction -

Definition, Features, Advantages, Disadvantages, standard devices, Sensors- Different types, various forms of sensor data, Introduction to Big Data and cloud Computing.

Module-2: IoT Architecture and working -

IOT hardware – sensors, wearable electronics and standard devices. Software – data collection, integration, real time analysis

Module-3: IoT Technology and Protocols -

RFID, NFC, low-energy Bluetooth, low-energy wireless, low-energy radio protocols, LTE-A, and Wi-Fi-Direct.

Module-4: IoT Applications, Challenges and Security Issues -

Government, Healthcare, Industry, Environmental Monitoring, Transportation, Smart Home, Smart

Security Issues- Privacy, Authentication, Hardware, Software.







PRINCIPAL
Saintgits College of Applied Sciences
Kottukulam Hills, Pathamuttom P. O.
Kottayam-686 532, Kerala

SAINTGITS COLLEGE OF APPLIED SCIENCES

Pathamuttom, Kottayam - 686532 Phone: 0481 - 2433787

e-mail: scas@saintgits.org, Web: www.saintgits.org



SAINTGITS COLLEGE OF APPLIED SCIENCES PATHAMUTTOM, KOTTAYAM

Internet of Things

Course Code:VCIOT013

Course objective: The learner will understand key terms and concepts in IoT, IoT sensors and its applications.

Module-I: IoT Introduction -

Definition, Features, Advantages, Disadvantages, standard devices, Sensors- Different types, various forms of sensor data, Introduction to Big Data and cloud Computing.

Module-2: IoT Architecture and working -

IOT hardware – sensors, wearable electronics and standard devices. Software – data collection, integration, real time analysis

Module-3: IoT Technology and Protocols -

RFID, NFC, low-energy Bluetooth, low-energy wireless, low-energy radio protocols, LTE-A, and Wi-Fi-Direct.

Module-4: IoT Applications, Challenges and Security Issues -

Government, Healthcare, Industry, Environmental Monitoring, Transportation, Smart Home, Smart Grid.

Security Issues- Privacy, Authentication, Hardware, Software.

References:

I. Title - Designing the Internet of Things

Author - Adrian McEwen & Hakim Cassimally

Publishers - John Wiley and Sons Ltd

2. Title - INTERNET OF THINGS, A Hands-On Approach

Author - Arshdeep Bahga and Vijay Madisetti
Publisher - Arshdeep Bahga and Vijay Madisetti

PRINCIPAL
Saintgits College of Applied Sciences
Kottukulam Hills, Pathamuttom P. O.
Kottayam-686 832, Kerala

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