KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
Re-accredited by NAAC with A+ Grade - 4th cycle,
College of Excellence – UGC
52nd Rank among Colleges in NIRF 2024
Coimbatore - 641 029, Tamil Nadu, India

DEPARTMENT OF COMPUTER SCIENCE (AIDED)
Supported by
DBT STAR COLLEGE SCHEME
REPORT

Name of The Event	**Hands On Training Programme on "IoT & Robotics"**
Date	20.02.2025
Time	10.00AM-4.00PM
Venue of The Programme	Lab VI
Resource Person	Dr.T.Kalaiselvi, Associate Professor, Computer Science & Applications, Gandhigram Rural Institute, Gandhigram,
Objectives of the Programme	It is to equip participants with practical knowledge and skills in designing and developing smart, automated systems. The program will provide a comprehensive understanding of **IoT and Robotics**, covering key concepts such as sensors, actuators, microcontrollers, and communication protocols.
Outcome of the Programme	This Programme successfully enhanced participants' understanding of IoT and robotics concepts. They gained practical experience in working with microcontrollers, sensors, and communication protocols. The training provided hands-on exposure to designing and implementing IoT-based smart applications such as home automation and industrial monitoring. Participants also developed and controlled robotic systems for real-world applications.

Number of Beneficiaries with class **(Both students and faculty)**	**II-B.Sc Computer Science - 41** **Faculty – 4** **Dr.A.Kavitha** **Ms.K.Deekshana** **Dr.M.Jagadeeswari** **Mrs.S.Vishalini** **Total No of Beneficiaries : 45**

Report in Detail:

The training programme spanned multiple sessions, covering both theoretical insights and practical demonstrations.

Dr.T.Kalaiselvi has explained about Basics of IoT, architecture, components, communication protocols, and an overview of robotics. How it is integrated with Arduino, Raspberry Pi, ESP8266, and ESP32 for IoT and robotics applications has been explained briefly. Hands-on experience with various sensors (temperature, humidity, motion, etc.) and data transmission using Wi-Fi, Bluetooth, and MQTT protocols.

Introduction to cloud computing, data storage, and real-time monitoring using platforms like ThingSpeak, Blynk, and Firebase. She has explained about working with servo motors, stepper motors, and DC motors, along with robotic motion control techniques.

Developing real-time IoT and robotic applications such as home automation, smart agriculture, and autonomous robots. Basics of integrating AI and machine learning models with IoT devices for intelligent automation.

The Hands-On Training Programme on IoT & Robotics was a great success, offering participants a deep understanding of emerging technologies and their practical applications. The programme encouraged innovation and problem-solving, equipping attendees with essential skills for future advancements in IoT and robotics. The feedback received was overwhelmingly positive, with many participants expressing interest in further advanced sessions and research opportunities.

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