

KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY



(An Autonomous Institution - Affiliated to Anna University, Chennai)

S.P.G. Chidambara Nadar - C, Nagammal Campus

S.P.G.C. Nagar, K. Vellakulam - 626 701, (Near Virudhunagar), Madurai District.

Submitted to the SECRETARY for approval through the PRINCIPAL

Book No.

ECE

Date 11/2/2022

SL.No. 29

Approval may Please be given to organize a Value Added Course on "Integrated Full Stack Web Development with IOT Networks" for II ECE Students for 5 days from 22/2/2022 to 26/2/2022 offered by Incix Techlutions LL (Detailed Agenda Attached)

Fee Per Student : Rs. 1500/- (Inc. all tax)

Duration of Course: 30 hrs (5 days)

Total Amount (Rs. 1500 x 61 Students) = Rs. 91500

UNB
Signature of Faculty 11/2/2022

R.S. — Bal
HOD 11/2/2022

[Signature]
PRINCIPAL 11/2/2022

OFFICE USE

- 1) Account Head
- 2) Budget allotted
- 3) Amount committed / Spent so far
- 4) Balance available

Fee for Course materials etc
Arrange to conduct Negotiation
Meeting with Secretary

OM

Treasurer

[Signature]
Secretary



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	Course Name	L	T	P	C
Value Added Course	Integrated Full Stack Web Development with IoT Networks	5	0	25	2

a. Preamble

Integrated courses are built in a way to provide multidisciplinary knowledge about various fields. Here the core domains must be integrated with each other and ensures a proper understanding of the topic which leads to a great learning experience which is required in industry.

b. Course Outcomes

Upon successful completion of course, the students will be able to

CO. No.	Course Outcome	Knowledge Level
CO1	Understand Embedded system and IoT architecture	K3
CO2	Design and develop IoT based monitoring system connected over internet.	K3
CO3	Build and develop Responsive web design by integrating web app and IoT	K4

Introduction

2 Hours

Introduction to the course module-Importance of Application Development and IoT Sectors-Career Opportunities in this field-Why do we need to learn this?

Embedded System

5 Hours

Introduction to Embedded System & IoT - Architecture of Node MCU-Input Devices & ADC - Communication Protocols, PWM - Sensor Interface with MCU

Internet of Things

3 Hours

Introduction to IoT-Internet Protocol, Communication-Connecting MCU to the Internet -Http request from MCU-Blynk app to control the Iot Device- Monitoring Physical things over Internet - Controlling device State using IoT

6 Hours

Front – end Part –I

Introduction to web development - Internet to design Thinking – The Architecture of Internet and HTTP – Explore development tools in Browser – Introduction to HTML and CSS – Different tags in html and their architecture – Style the Document with CSS – Design Websites with CSS libraries (Bootstrap, JQuery etc.,)

4 Hours

Front – end Part –II

Introduction to Java Script – Fundamentals of JS – OOPs in JS – Connecting Java Script with HTML & CSS – Manipulating DOM with JS – Developing Responsive web design Introduction to server environment and C- Panel

6 Hours

Back – end

Introduction to PHP – Understand PHP Architecture – Data handling with PHP – introduction to Database & MYSQL – Creating and Manipulating data's in DB – CRUD operation on MySQL and PHP – Builds API's with PHP

2 Hours

Combining Front – end & Back – end

Fetch Data using API with Java script – Send Web request using Js – Handling Data- Test & Development

2 Hours

Integrating Web App &IoT

Send and receive Data;s from IoT devices with API – Displaying sensor data's through a dashboard – Control IoT devices using the dashboard buttons

Project & Assessment

Controlling Physical devices with web application - monitoring Sensor Data – Project Completion and Evaluation