Swarnandhra College of Engineering & Technology

Autonomous and recognized under 2(F) and 12(B) by UGC

Recognized by AICTE, permanently affiliated to JNTUK Kakinada

Accredited by NAAC with 'A' Grade (2nd Cycle)

Seetharamapurm, Narsapur – 530280 (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY
TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date comment
20CC5T01	INTERNET OF THINGS	V	CSE-CS	6	2024-25	03-0.4

COURSE OUTCOMES

1	Outline the concepts of IoT and apply IoT to different applications. (K2)
2	Utilization of Devices, Gateways and Data Management in IoT. (K3)
3	Analyze and evaluate protocols used in IoT. (K4)
4	Identify how IoT differs from traditional data collection systems. (K3)
5	Illustrate the role of big data, cloud computing and data analytics in a typical IoT system. (K

UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Ref	Contact Hour	Delivery Method
			Unit-1: An Overview of Internet of things			
		1.1	An Overview of Internet of things	T2	1	
		1.2	Internet of Things Technology	T2	1	
		1.3	Behind IoTs	T2	2	Chalk & Board
		1.4	Sources of the IoTs	T2	1	
I	CO – 1	1.5	M2M Communication	T2	1	
		1.6	Examples of IoTs	T2	2	Power poin presentation
		1.7	Design Principles For Connected Devices	T2	2	Assignmen
		1.8	Internet Connectivity Principles and Internet connectivity	T2	1	Test
		1.9	Application Layer Protocols: HTTP, HTTPS, FTP, Telnet.	T1,T2	2	
Content beyond syllabus		1.9	Domain - Specific IoTs	R1	1	NPTEL Vi
			Total		14	
II	CO – 2		**Unit-2: Business Models for Business Processes**			
		2.1	Business Models for Business Processes in the Internet of Things	T1,T2	2	Chalk

Signature with Date

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		Item No.	Topic	Book Reference	No. of periods	Delivery Method
		2.2	IoT/M2M systems layers and designs standardizations	T1,T2	2	& Board
		2.3	Modified OSI Stack for the IoT/M2M Systems	T1	2	Power point presentations
		2.4	ETSI M2Mdomains and High-level capabilities	T1,T2	2	Assignment Test
		2.5	Data Enrichment and Consolidation and Device Management Gateway Ease of designing and affordability	T1,T2	2	
content beyond syllabus		2.6	IoT Supported Hardware platforms	R2	1	Video Lecture
			Total		**11**	
			Unit-3: Design Principles for the Web Connectivity			
		3.1	Design Principles for the Web Connectivity for connected-Devices	T1,T2	2	Chalk & Board
III	CO – 3	3.2	Web Communication protocols for Connected Devices	T1,T2	2	
		3.3	Message Communication protocols for Connected Devices	T1,T2	3	Power point presentations
		3.4	Web Connectivity for connected-Devices.	T1,T2	2	Assignment Test
content beyond syllabus		3.5	APIs/Packages and Web Services	R1	1	Experimental Learning
			Total		**10**	
			Unit-4: Data Acquiring for IoT			
		4.1	Data Acquiring	T1,T2	1	
		4.2	Organizing and Analytics in IoT/M2M	T1,T2	1	
		4.3	Applications /Services /Business Processes	T1,T2	1	Chalk & Board
IV	CO – 4	4.4	IOT/M2M Data Acquiring and Storage	T1,T2	1	
		4.5	Business Models for Business Processes in the Internet Of Things	T1,T2	2	Power point presentations
		4.6	Organizing Data	T1,T2	1	
		4.7	Transactions	T1,T2	2	Assignment Test
		4.8	Business Processes	T1,T2	2	
		4.9	Integration and Enterprise Systems.	T1,T2	1	
content beyond syllabus		4.10	IoT Design Methodology	T2		NPTEL Video
			Total		**13**	
			Unit-5: Data Collection			
V	CC – 5	5.1	Data Collection, Storage and Computing Using a Cloud Platform for IoT/M2MApplications/Services	T1,T2, R3	2	Chalk & Board

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Unit / Item No.				Topic	Book Reference	No. of periods	

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				Topic	Book Reference	No. of periods	
2			5.2	Storage and Computing Using cloud platform Everything as a service, Evaluation of Candidate Rules, Applications of Association Rules	T2,R3	2	
			5.3	Cloud Service Models, IOT cloud-based services using the Xively(Pachube/COSM)	T2,R3	2	
			5.4	Nimbits and other platforms Sensor	T1,T2, R3	2	
			5.5	Actuator, Radio Frequency Identification	T1,T2	1	
			5.6	Wireless, Sensor Network Technology	T1,T2	1	
			5.7	Sensors Technology, Sensing the World	T1,T2	1	
Content beyond syllabus			5.8	Connecting microcontroller with mobile devices.	T1, R1	1	Experim Learni
				Total		12	
				Cumulative Proposed Periods		60	

Signature

TEACHING PLAN

Name of Staff Member : **R. Uma Aruna Devi**

Department : **IT**   Course & Branch **B.Tech & CSE-CS**

Semester : **V**   Section _____   Subject **IOT**   Code **20CC5701**

With effect from **3/6/2024** Last working day **11/10/2024**

No. of Weeks **15**   No. of Classes **69**

Text Books :   1.

Text Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Rajkamal, Internet of Things: Architecture, Design Principles and Applications, McGraw Hill Highe Education.
2	A.Bahgya and V.Madisetti, Internet of Things, Univesity Press, 2015

Reference Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Adrian McEwen and Hakim Cassimally, Designing the Internet of Things, Wiley.
2	CunoPfister, Getting Started with the Internet of Things Oreilly .

Web Details:

1	https://www.geeksforgeeks.org/introduction-to-internet-of-things-iot-set-1/
2	https://cloud.arduino.cc/

		Name	Signature with Date
i	Faculty	Mrs. R. Uma Aruna Devi	
ii	Module Coordinator	Dr. RVVSV Prasad	
iii	Programme Coordinator	Dr. RVVSV Prasad	

Principal