

**Dr G R DAMODARAN COLLEGE OF SCIENCE (AUTONOMOUS)**  
**COIMBATORE - 641014**

**B. Sc (Computer Science)**  
**(Under Choice Based Credit System)**

**EFFECTIVE FOR THE STUDENTS ADMITTED DURING THE ACADEMIC YEAR 2020-2021**

Sem.	Part	Course Code	Course Name	Credits	MARKS			Hrs. / Week	Exam. Duration (Hrs.)	Category
					CA	TEE	TOTAL			
III	I	20300T	TAMIL III	3	25	75	100	5	3	THEORY
III	I	20300H	HINDI III							
III	I	20300F	FRENCH III							
III	I	20300M	MALAYALAM III	3	25	75	100	5	3	THEORY
III	II	20300E	ENGLISH III							
III	IV	20300A	ADVANCED TAMIL I	2	100	NA	100			
III	IV	20300B	BASIC TAMIL I							
III	IV	20300N	NON MAJOR ELECTIVE I: PERSONALITY DEVELOPMENT AND SOFT SKILLS	4	40	60	100	2	3	THEORY
III	III	20307A	CORE: INTERNET OF THINGS							
III	III	20307B	CORE: OBJECT ORIENTED PROGRAMMING WITH C++	4	25	75	100	3	3	THEORY
III	III	20307C	ALLIED: OPERATIONS RESEARCH							
III	III	20307P	CORE: C++ PROGRAMMING LAB	3	40	60	100	5	3	PRACTICAL
III	IV	20300G2	SKILL BASED SUBJECT: PROFESSIONAL COMMUNICATION							
III	V	20307S	EXTENSION ACTIVITIES:NSS / COMPUTER AWARENESS PROGRAMME	1		Grade		-	3	PRACTICAL
IV	I	20400T	TAMIL IV							
IV	I	20400H	HINDI IV	3	25	75	100	5	3	THEORY
IV	I	20400F	FRENCH IV							
IV	I	20400M	MALAYALAM IV							
IV	II	20400E	ENGLISH IV	3	25	75	100	5	3	THEORY
IV	II	20400E	ENGLISH IV							

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*G.R. Damodaran*

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					CA	TEE	TOTAL			
IV	IV	20400B	BASIC TAMIL II	2	100	NA	100	2	3	THEORY
IV	IV	20400A	ADVANCED TAMIL II		40	60				
IV	IV	20400N	NON-MAJOR ELECTIVE: BASICS IN BUSINESS PROCESS OUTSOURCING							
IV	III	20407K	Online Course/SWAYAM/NPTEL	3				4		
IV	III	20407A	CORE: PYTHON PROGRAMMING	3	25	75	100	3	3	THEORY
IV	III	20407B	ALLIED: PRINCIPLES OF MANAGEMENT	5	25	75	100	3	3	THEORY
IV	IV	20400G1	VALUE EDUCATION: INDIAN SOCIETY, PEOPLE AND CULTURE	2	25	75	100	3	3	THEORY
IV	III	20407P	SKILL BASED SUBJECT: PYTHON AND DBMS LAB	2	40	60	100	5	3	PRACTICAL
V	III	20507A	CORE: CYBER SECURITY	4	25	75	100	4	3	THEORY
V	III	20507B	CORE: JAVA PROGRAMMING	4	25	75	100	5	3	THEORY
V	III	20507C	CORE: OPERATING SYSTEMS	4	25	75	100	4	3	THEORY
V	III	20507D	CORE: SOFTWARE ENGINEERING	4	25	75	100	5	3	THEORY
V	III	20507K	Online Course/SWAYAM/NPTEL	4				5		
V	III	20507P	CORE: JAVA PROGRAMMING LAB	3	40	60	100	5	3	PRACTICAL
V	IV	20507E	SKILL BASED SUBJECT: APTITUDE*	2	25	75	100	2	3	PRACTICAL
VI	III	20607A	CORE: COMPUTER NETWORKS	4	25	75	100	4	3	THEORY
VI	III	20607B	CORE: WEB TECHNOLOGY	4	25	75	100	4	3	THEORY
VI	III	20607P	CORE: WEB TECHNOLOGY LAB	3	40	60	100	4	3	PRACTICAL
VI	III	20607S	CORE: PROJECT AND VIVA VOCE	7	25	75	100	12		PRACTICAL

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Sem.	Part	Course Code	Course Name	Credits	MARKS			Hrs. / Week	Exam. Duration (Hrs.)	Category
					CA	TEE	TOTAL			
VI	III		ELECTIVE – I:	4	25	75	100	3	THEORY	
VI	IV	20607C	SKILL BASED SUBJECT: SOFT SKILLS *	2	25	75	100	3	PRACTICAL	
			<b>TOTAL</b>	<b>140</b>			<b>3900</b>	<b>180</b>		

\* a part of the course is Self Study & Both CA and TEE Marks will be evaluated Internally

Sem.	Part	Subject Code	Subject Name
			<b>ELECTIVE I</b>
VI	III	20607U1	ELECTIVE – I: MOBILE PROGRAMMING
VI	III	20607U2	ELECTIVE – I: DATA SCIENCE
VI	III	20607U3	ELECTIVE - I: MEDICAL TRANSCRIPTION
VI	III	20607U4	ELECTIVE - I: ARTIFICIAL INTELLIGENCE
VI	III	20607U5	ELECTIVE – I: INTELLECTUAL PROPERTY RIGHTS

**PROJECT AND VIVA VOCE**

Marks split up:	Marks
I Project Review	10
II Project Review	15
Project Documentation	25
Viva Voce	50
<b>Total</b>	<b>100 Marks</b>

# Online course: This can be availed by the students at anytime during that particular year of study. Students are expected to produce certificates

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**EFFECTIVE FOR THE STUDENTS ADMITTED DURING THE ACADEMIC YEAR 2020-2021**

**MAPPING OF COURSES WITH PROGRAMME OUTCOME LEVELS**

Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
20107A	CORE: DIGITAL LOGIC AND COMPUTER ARCHITECTURE	2	2					1	2		1
20107B	ALLIED: NUMERICAL AND STATISTICAL METHODS	3		1							
20107P	CORE: WEB DESIGNING LAB				3			3	2		1
20207A	CORE: DATA STRUCTURES	2		3					3	1	3
20207B	ALLIED: DISCRETE MATHEMATICS	3		1							
20207P	SKILL BASED SUBJECT: C PROGRAMMING AND DATA STRUCTURES LAB	2		3	3					2	2
20307A	CORE: INTERNET OF THINGS	1	2	2	1	2	2	1	1	1	1
20307B	CORE: OBJECT ORIENTED PROGRAMMING WITH C++	1		2	2	2		3	2	1	2
20307C	ALLIED: OPERATIONS RESEARCH	3		1	1	1		2	2	1	2
20307P	CORE: C++ PROGRAMMING LAB	1		2	2			2	2	2	2
20407A	CORE: PYTHON PROGRAMMING	2		1	2			2	2	2	2
20407B	ALLIED: PRINCIPLES OF MANAGEMENT					3	3	3	2		
20407P	SKILL BASED SUBJECT: PYTHON AND DBMS LAB	2		1	2			2	2	2	2
20507A	CORE: CYBER SECURITY	2	1	2	1	1	2	2	1	3	2
20507B	CORE: JAVA PROGRAMMING	2		1	2			2	2	2	2
20507C	CORE: OPERATING SYSTEMS	1	1	2	1				1	2	2
20507D	CORE: SOFTWARE ENGINEERING				3	2	2	3	2	1	1
20507P	CORE: JAVA PROGRAMMING LAB	2		1	2			2	2	2	2
20507E	SKILL BASED SUBJECT: APTITUDE*	3		3	3				1	1	1
20607A	CORE: COMPUTER NETWORKS	1	3	2		1	1		1	1	1
20607B	CORE: WEB TECHNOLOGY	2		1	2			2	3	2	2
20607P	CORE: WEB TECHNOLOGY LAB	2		1	2			2	3	2	2
20607S	CORE: PROJECT AND VIVA VOCE	2	2	2	3	2	2	3	3	2	3

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Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
20607U1	ELECTIVE – I: MOBILE PROGRAMMING			3	3				3	1	2
20607U2	ELECTIVE –I: DATA SCIENCE	1	1	2	2				2	2	2
20607U3	ELECTIVE - I: MEDICAL TRANSCRIPTION				3	3			3		3
20607U4	ELECTIVE - I: ARTIFICIAL INTELLIGENCE				1	3	3	3		1	2
20607U5	ELECTIVE –I: INTELLECTUAL PROPERTY RIGHTS	1		1	3	2	2	3	1	3	2
20607C	SKILL BASED SUBJECT: SOFT SKILLS *					3	3	2			

**Indicators: 1. Reasonable 2. Significant 3. Strong**



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**EFFECTIVE FOR THE STUDENTS ADMITTED DURING THE ACADEMIC YEAR 2020-2021**

Semester	Course Code	Course Title	Credits	Theory/ Practical	Problems %	Theory %
THIRD	20307A	Core: INTERNET OF THINGS	4	Theory	-	100

**Objective of the course:** This course highlights on physical design, logic design, enabling technologies of IoT, IoT system management and design methodology, IoT physical devices and cloud offerings.

**UNIT I: Introduction to IoT**

**(Teaching Hours: 10)**

Introduction to Internet of things: Introduction- Definition and Characteristics - Physical design of IoT-Logical design of IoT

**UNIT II:IoT Technologies and Applications**

**(Teaching Hours: 10)**

IoT Enabling Technologies - IoT Levels and Deployment templates – Domain Specific IoTs – Home Automation – Smart Cities – Agriculture-Health and Life Science.

**UNIT III:IoT Platform Design Methodology& Case Study**

**(Teaching Hours: 10)**

IoT Platforms Design Methodology – Purpose and Requirements Specification –Process Specification – Domain Model Specification – Information Model Specification –Service Specification – IoT Level Specification- Case Study on IoT System for Weather Monitoring.

**UNIT IV: Raspberry Pi**

**(Teaching Hours: 10)**

IoT physical devices and Endpoints – IoT Device –Exemplary Device: Raspberry Pi – About the Board- Linux on Raspberry Pi - Raspberry Pi Interfaces – Serial – SPI – I2C.

**UNIT V: Case Studies**

**(Teaching Hours: 10)**

Case Studies illustrating IoT Design: Home Automation: Smart lighting- Cities : Smart Parking- Environment: Air pollution monitoring-Productivity application: IoT Printer.

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**Course Outcome mapping with Knowledge level**

Course Outcome	CO Statement	Knowledge level
CO1	To understand the basics of Internet of Things and design of IoT.	K1, K2
CO2	To learn the IoT technologies and applications.	K2, K3
CO3	To understand the design methodology and level specification of IoT and case study.	K3, K4
CO4	To learn about the physical devices such as Raspberry Pi.	K3, K4, K5
CO5	To understand the different IoT case studies.	K3, K5

**Note:**

**K1- Remembering; K2 – Understanding; K3 – Applying; K4 – Analysing; K5 – Creating & Evaluating.**

**Course Outcome mapping with Programme outcome**

Course outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1				2	2					1
CO2				2	1			2		3
CO3				3	2			2		3
CO4				3	3			3		2
CO5				2	3			3		2

**Indicators: 1. Reasonable 2. Significant 3.Strong**

Text Books				
S.No.	Title	Author	Publishers	Publication Year & Edition
1	Internet of Things-A hands on approach	ArshdeepBahga , Vijay Madiseti	Orient Blackswan Private Limited	2014, 1 <sup>st</sup> Edition

**Pedagogy:**PPT presentation, e-content, Seminar, Assignment

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Semester	Course Code	Course Title	Credits	Theory/ Practical	Problems %	Theory %
SIXTH	20607U3	ELECTIVE I –MEDICAL TRANSCRIPTION	4	Theory	-	100

**Objective of the course:** This course helps the students in identifying the basic elements of a medical diagnostic report. Also provides the information about common terms in the medical field and references related to the specialties of emergency room, physical medicine, radiology, and pathology.

**Unit I: Introduction to Medical Transcription (Teaching Hours: 10)**

Preliminaries of medical transcription - Understanding Medical Records – Ethics and Confidentiality – Legal aspects of Healthcare Records.

**Unit II: Grammar, Sentence Structure and Punctuation (Teaching Hours: 10)**

Working with Spelling and grammar – Sentence Formations – Practice Rules to remember when transcribing – Transcribing numbers and figures – Medical Abbreviations – Medical Terminologies.

**Unit III: Format of Reports (Teaching Hours: 10)**

Hospital Medical Reports – Clinical Medical Reports – Emergency Room report -History and Physical, Radiology Report.

Discharge summary -Insurance Reports - Operative reports - Consultation reports -Pathology report - Autopsy report.

**Unit IV: Understanding Computer Usage (Teaching Hours: 10)**

Internet Technologies: Web-Browsers

Word Processing Tools: Open Office - Organizing the Information - Proofreading and Editing - Basic Formatting Guidelines.

**Unit V: Software Support for Medical Transcription (Teaching Hours: 10)**

Case Study: Open Source Software for Medical Transcription – Speech to Text conversion software – Other related software for medical billing.

The nuts and bolts of working as an MT – Future of Medical Transcription

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Course Outcome mapping with Knowledge level

Course Outcome	CO Statement	Knowledge level
CO1	Preliminaries of Medical Transcription	K1 & K2
CO2	Working with Grammar and Medical Terminologies	K2 & K3 & K5
CO3	Report Formats	K2 & K3 & K4 & K5
CO4	Usage of Computers in Medical Transcription	K2 & K3 & K5
CO5	Software Support for Medical Transcription	K2 & K3 & K5

Note: K1- Remembering; K2 – Understanding; K3 – Applying; K4 – Analysing; K5 – Creating & Evaluating.

Course Outcome mapping with Programme outcome

Course outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1		2		3	1	2		1	2	
CO2	2	2		3	2	2		1	2	1
CO3	1	2		3	2	2		1	2	1
CO4		3		1	2	1	1	2	2	2
CO5		3		1	2	1	1	2	2	2

Indicators: 1. Reasonable 2. Significant 3.Strong

Text Book				
S.No.	Title	Author	Publishers	Publication Year & Edition
1	The AAMT Book of Style for Medical Transcription	--	American Association for Medical Transcription	2005, Second
2	Medical Transcription for Dummies	Anne Martinez	Wiley Publishers	2012, First
3.	Web References			

Pedagogy:Lecture, PPT presentation, Demonstration, Assignment

Reference book - ?