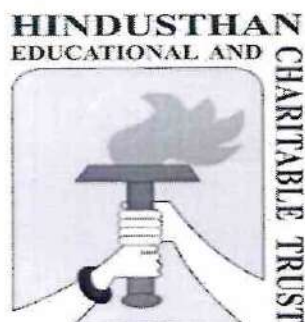


**LEARNING OUTCOMES–BASED CURRICULUM  
FRAMEWORK (LOCF)**

**in the**

**POSTGRADUATE PROGRAMME MASTER OF SCIENCE IN  
INFORMATION TECHNOLOGY**

**FOR THE STUDENTS ADMITTED FROM THE  
ACADEMIC YEAR 2021 - 2022 AND ONWARDS**



**HICAS**

**HINDUSTHAN COLLEGE OF ARTS AND SCIENCE  
(AUTONOMOUS)**

**(Affiliated to Bharathiar University and Accredited by NAAC)**

**COIMBATORE-641028**

**TAMILNADU, INDIA.**

Phone: 0422-4440555

Website: [www.hindusthan.net/hicas/](http://www.hindusthan.net/hicas/)

## **PREAMBLE**

The Programme, M.Sc Information Technology with Learning Outcomes-Based Curriculum Framework(LOCF) is to implant technical and theoretical understanding of computers and their numerous applications in diverse sectors in pupils. Students can gain a thorough understanding of academics as well as IT-related applications. The students will learn about the IT scenario, its scope, careers, and the essentials of the IT sector during the curriculum.

## **VISION**

To cater the needs of the environmental and ethical values in the mind of students to become good citizens and entrepreneurs.

## **MISSION**

The Mission of the college is to pursue a philosophy of perpetual acquisition of knowledge. The important policy is to provide value-based education and to bring out the hidden potentials in students that equip them to approach life with optimism.

## **PROGRAMME EDUCATIONAL OBJECTIVES (PEO)**

Post Graduates of Information Technology programme will

**PEO1:** Implement domain knowledge of core technologies and deliver professional services in career by incorporating creativity in computing profession.

**PEO2:** Explore leadership skills and incorporate ethics as an entrepreneurship to inculcate problem solving capability, design skills and other diverse career paths.

**PEO3:** Expose Knowledge to various contemporary issues which will enable to become ethical and responsible towards themselves as a co-worker for society and the nation.

**PEO 4:** Graduates will demonstrate commitment towards sustainable development for the betterment of society.

**PEO 5:** Graduates will pursue lifelong learning in generating innovative engineering solutions using research and complex problem-solving skills.

## **PROGRAMME OUTCOME (PO)**

### **FOR LAB ORIENTED SCIENCE COURSES**

**PO1: DISCIPLINARY KNOWLEDGE:** Apply the knowledge of mathematics, science, computer fundamentals, to the solution of complex problems.

**PO2: PROBLEM SOLVING AND ANALYSING:** Identify, formulate, review research literature, and analyze complex real world problems reaching substantiated conclusions using first principles using techniques.

**PO3: ENVIRONMENT SUSTAINABILITY AND ETHICS:** Understand the impact of the professional solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO4: MODERN TOOL USAGE:** Create, select, and apply appropriate techniques, resources and modern IT tools including prediction and modeling to complex technical activities with an understanding of the limitations.

**PO5: CO-OPERATIVE TEAMWORK & COMMUNICATIVE SKILLS:** Communicate effectively on complex activities with the technical community and with society.

**PO6: SELF DIRECTED / LIFELONG LEARNING:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**PO7: ENHANCING RESEARCH CULTURE:** Apply ethical research principles and responsibilities of the technical practice.

#### **PROGRAMME SPECIFIC OUTCOME (PSO)**

**PSO1:** Provide graduates with a strong foundation in mathematics, science and engineering fundamentals to enable them to devise and deliver efficient solutions to challenging problems in Core and supportive disciplines.

**PSO2:** Design and develop computer programs/computer-based systems in the areas related to algorithms, networking, web design, cloud computing, IoT and data analytics of varying complexity

**PSO3:** Acquaint with the contemporary trends in industrial/research settings and thereby innovate novel solutions to existing problems

**PSO4:** Impart analytic and thinking skills to develop initiatives and innovative ideas for R&D, Industry and societal requirements.

**PSO5:** Inculcate qualities of teamwork as well as social, interpersonal and leadership skills and an ability to adapt to evolving professional environments in the domains of engineering and technology.



**HINDUSTHAN COLLEGE OF ARTS & SCIENCE (AUTONOMOUS),**

**COIMBATORE-641028**

**SCHEME OF EXAMINATIONS - CBCS & LOCF PATTERN**

**(For the Students admitted from the Academic year 2021-2022 and Onwards)**

**PG PROGRAMME**

**Programme: M.Sc**

**Branch: Information Technology**

Course Code	Course Type	Course Title	Credit points	Lecture Hours/ Week		Exam Duration (hours)	MAX. MARKS		
				Theory	Practical		I.E	E.E	Total
<b>Semester – I</b>									
21ITP01	DSC	Mobile Application Development	4	5		3	40	60	100
21ITP02	DSC	Cloud Computing and Services	4	4		3	40	60	100
21ITP03	DSC	Advanced Java Programming	4	5		3	40	60	100
21ITP04	DSC	Open Source Database Management System	4	5		3	40	60	100
21ITP05	DSC	<b>Practical I:</b> Mobile Application Programming	3	-	5	3	50	50	100
21ITP06	DSC	<b>Practical II:</b> Java Programming	3	-	5	3	50	50	100
21ITP07	SEC	Internship / Institutional Training / <b>Mini-Project</b>	2	-			100	-	100
21ITPE01	AEE	Open Elective – I	2	3		3	100	-	100
21ITPV01	ACC	VAC-I	1*	2		2	50	-	50**
21ITPJ01	SEC	<b>Aptitude / Placement Training</b>	Grade*	2		2	50		50**
-	SEC	SDR – Student Development Record	<b>Assessment will be done in the end of III – semester</b>						
		<b>Total</b>	<b>26</b>	<b>26</b>	<b>10</b>		<b>460</b>	<b>340</b>	<b>800</b>
<b>Semester – II</b>									
21ITP08	DSC	Advanced Operating System	4	5		3	40	60	100
21ITP09	DSC	Advanced Network Technologies	4	5		3	40	60	100
21ITP10	DSC	Web Programming Using Open Source Technologies	4	5		3	40	60	100
21ITP11	DSC	Software Engineering with Agile and DevOps	4	4		3	40	60	100
21ITP12	DSC	<b>Practical III :</b> Advanced Networking Technologies Lab	3	-	5	3	50	50	100
21ITP13	DSC	<b>Practical IV :</b> Web Programming	3	-	5	3	50	50	100
21ITP14	SEC	Internship / Institutional Training / <b>Mini-Project</b> / Extension Activity	2	-			100	-	100
21ITPE02	AEE	Open Elective – II	2	3		3	100	-	100
21ITPV02	ACC	VAC-II	1*	2		2	50	-	50**
21ITPJ02	SEC	<b>Online Courses</b>	Grade*	-			-	-	-
21ITPJ03	SEC	<b>Aptitude / Placement Training</b>	Grade*	2		2	50		50**
		<b>Total</b>	<b>26</b>	<b>26</b>	<b>10</b>		<b>460</b>	<b>340</b>	<b>800</b>



		Semester - III								
21ITP15	DSC	Internet of Things	4	4		3	40	60	100	
21ITP16	DSC	Deep Learning with Python	4	5		3	40	60	100	
21ITP17	DSC	Research Methodology	4	4		3	40	60	100	
21ITP18	DSC	Practical V : Programming the Internet of Things Lab	3	-	5	3	50	50	100	
21ITP19	DSE	Elective-III/DSE-I	3	3		3	40	60	100	
21ITP20	DSE	Elective-III/DSE-II	3	3		3	40	60	100	
21ITP21	DSC	Practical VI : Python Programming Lab	3	-	5	3	50	50	100	
21ITP22	SEC	Internship / Institutional Training / Mini-Project / Extension Activity	2	-			100	-	100	
21ITPE03	AEE	Open Elective-III	2	3		3	100	-	100	
21ITPV03	ACC	VAC-III	1*	2		2	50	-	50**	
21ITPJ04	SEC	Aptitude / Placement Training	Grade*	2		2	50		50**	
21ITPJ05	SEC	Online Courses	Grade*	-			-	-	-	
21ITPJ06	SEC	SDR – Student Development Record	2*	-	-	-	-	-	-	
<b>Total</b>			<b>28</b>	<b>26</b>	<b>10</b>		<b>500</b>	<b>400</b>	<b>900</b>	
		Semester – IV								
21ITP23	DSE	Elective-III/DSE-III	3	5		3	40	60	100	
21ITP24	DSE	Elective-III/DSE-IV	3	5		3	40	60	100	
21ITP25	DSC	Self-Study Course	3	-	-	3	40	60	100	
21ITP26	SEC	Project Work /Student Research	5	-		-	50	150	200	
<b>Total</b>			<b>14</b>	<b>10</b>			<b>170</b>	<b>330</b>	<b>500</b>	

- \* denotes Extra credits which are not added with total credits.
- \*\* denotes Extra marks which are not added with total marks.
- VAC-Value Added Course (Extra Credit Courses)
- \* Grades depends on the marks obtained

Range of marks	Equivalent remarks
80 and above	Exemplary
70 – 79	Very good
60 – 69	Good
50 – 59	Fair
40 – 49	Satisfactory
Below 39	Not Satisfactory = Not completed

- Part IV & V not included in total marks and CGPA calculation.
- I.E-Internal Exam
- E.E-External Exam
- JOC-Job Oriented Course

#### PASSING MINIMUM

- Passing Minimum for PG 50%

## Abstract for Scheme of Examination

(For the students admitted during the academic year 2021 - 2022 and onwards)


Course	Papers	Credit	Total Credits	Marks	Total Marks
Core /DSC	11	4	44	100	<b>1100</b>
Self-Study Course /DSC	1	3	3	100	<b>100</b>
Electives/DSE	4	3	12	100	<b>400</b>
Practical DSC	6	3	18	100	<b>600</b>
Project SEC	1	5	5	200	<b>200</b>
Internship/Institutional Training/Mini- Project / Extension Activity	3	2	6	100	<b>300</b>
Open Electives /AEE	3	2	6	100	<b>300</b>
Job Oriented Course / Value Added Course	3	1*	3*	100	<b>300**</b>
Aptitude /Placement Training SEC	3	Grade*	Grade*	100	<b>300**</b>
Online Courses / SEC	2	Grade*	Grade*	-	-
SDR - SEC	1	2*	2*	-	-
<b>Total</b>			<b>94 + (5 Extra Credits)</b>		<b>3000 + (600**)</b>

<b>List of Papers</b>	
<b>Open Electives</b>	Yoga for Human Excellence Human Health & Hygiene Indian Culture and Heritage Indian Constitution and Political System Consumer Awareness and Protection Professional Ethics and Human Values Human Rights, Women's Rights & Gender Equality Disaster Management Green Farming Corporate Relations start a Business? Research Methodology and IPR General Studies for Competitive Examinations IIT JAM Examination (for Science only) CUCET Examination
<b>VAC Papers</b>	a) Digital Marketing b) SAP ERP Fundamentals c) Digital Humanities d) Master Web Designing in Photoshop e) Cyber law f) Web Services
<b>Courses offered by the Departments to other Programmes</b>	




List of Elective Papers/ DSE (Can choose any one of the paper as electives)		
	Course Code	Title
Electives/ DSE-I	2IITP19A	Enterprise Resource Planning
	2IITP19B	Bioinformatics
Electives/ DSE-II	2IITP20A	Digital Image Processing and Analysis
	2IITP20B	Mobile Computing
Electives/ DSE-III	2IITP23A	Soft Computing
	2IITP23B	Artificial Intelligence
Electives/ DSE-IV	2IITP24A	Multimedia Processing
	2IITP24B	Social Networks

  
Syllabus Coordinator

  
Academic Council - Member Secretary

**Co-ordinator**  
Academic Audit Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

  
**D.K. SARAVANAN**  
MCA, M.Sc (SI), M.Phil., PGDCA., Ph.D.,  
BOS-Chairman/Chairperson  
Department of Information Technology  
Hindusthan College of Arts and Science  
Coimbatore - 641 028.

  
PRINCIPAL

**PRINCIPAL**  
Hindusthan College of Arts and Science  
Coimbatore - 641 028.

### Regulations

1. Internship / Institutional Training / **Mini-Project** is related to the discipline that can be permitted to complete during the end of I, II and III semesters for minimum seven days each and permitted to submit a report.

Internship / Institutional Training	Not more than seven days
Mini project	Depends on the departments

2. Project work is considered as a special course involving application of knowledge in problem solving / analyzing /exploring a real-life situation. A Project work may be given in lieu of a discipline specific elective paper.
3. To fix the practical marks for PG programme for Internal assessment and External assessment as 50 marks I.E. and 50 marks E.E and to modify the component for Internal assessment as Test-1 = 20, Test- 2 = 20 and Observation and concept application = 10.
4. To modify the Internal and External Assessment marks FOR THEORY as 40 and 60 for all the post graduate programmes for the Academic year 2021-2022 and onwards. Subsequently, the Internal component is to be modified as Test -1 = 10, Model = 10 and other component = 20. The Components for internal assessment can be of 5 marks for each 4 components out of 10 components ( **10 Components can be fixed by the concerned board chairman**) selected by each subject incharges for their respective courses.
5. To incorporate Online courses as a non-credit skill enhancement course for the II and III semesters and Grades will be assessed based on the certificates produced by the students. It is compulsory to produce one Online course certificate for each semester to avail grades for the students. (2 certificates in any of the online platform is mandatory)
6. **Two Elective courses DSE- III & DSE- IV are the subjects which are to be related with NPTEL courses.**
7. **If the students who are all completed the NPTEL courses before semester -III, they can avail exemption from appearing exams of DSE- III & DSE- IV in Fast track scheme.**
8. SDR – Student Development Report to be received by the department from the students till end of the **Third**

**PG/MCA Scheme of Evaluation (Internal & External Components)**

(For the students admitted during the academic year 2021-2022 and onwards)

**1. Internal Marks**

Components	Marks
Test	10
Model Exam	10
Internal Assessment components	20 #
<b>TOTAL</b>	<b>40</b>

**# List of components for Internal Assessment**

S.No	Components
1	Multiple choice questions
2	Quiz
3	Video teach
4	UT – Unannounced test
5	Co-operative or Collaborative Learning
6	Mini Project/Assignment
7	Case study
8	Seminar

(Any four components from the above list with five marks each will be calculated. 4x5=20 marks)

**2. a) Components for Practical I.E.**

Components	Marks
Test—I	20
Test - II	20
Application *	10
<b>Total</b>	<b>50</b>

**b) Components for Practical E.E.**

Components	Marks
Experiments	40
Record	5
Viva	5
<b>Total</b>	<b>50</b>

**3. Institutional/ Industrial Training, Mini Project and Major Project Work**

Internships/Industrial Training (I.E)		Major Project Work		
Component	Marks	Component	Marks	Total Marks
Work diary	25	I.E a)Attendance b)Review	20	50
Report	50		30	
Viva-voce	25	E.E+ a) Final report b)Viva-voce	120	150
<b>Total</b>	<b>100</b>		30	
			<b>Total</b>	<b>200</b>

\*Evaluation of report and conduct of viva voce will be done jointly by Internal and External Examiners

**4. Value Added Courses / Aptitude/Placement courses:**

Components	Marks
Two Test (each 1 hour) of 25 marks each CIP is objective pattern (25x1=25)	50
<b>Total</b>	<b>50</b>



#### 5. Guidelines for Open Elective

No of Activities	Marks
Two Tests (each 3 hours) of 50 marks each [5 out of 8 descriptive type questions 5 x 10 = 50 Marks]	100

#### Guidelines:

1. The passing minimum for these items should be 50%
2. If the candidate fails to secure 50% passing minimum, he / she may have to reappear for the same in the Subsequent semesters
3. Item No's:4 is to be treated as 100% Internals and evaluation through online.
4. Item No.2: \* - Application should be from the relevant practical subject other than the listed programme. It must be enclosed in the practical record.

*For all PG/MBA/MCA Programmes (2021-2022 Regulations)*  
**QUESTION PAPER PATTERN FOR CIA EXAM**

Reg.No: \_\_\_\_\_ Q.P.CODE:  
HINDUSTHAN COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)  
PG/MBA/MCA DEGREE CIA EXAMINATIONS \_\_\_\_\_ 20\_\_\_\_\_  
(-----Semester)  
BRANCH: \_\_\_\_\_  
Subject Name: \_\_\_\_\_

Time: Two Hours

Maximum: 50 Marks

**Section-A (3 x 4=12 Marks)**

Answer ALL Questions

ALL questions carry EQUAL Marks

(Q.No: 1 to 3 Either Or type)

**Section-B (2 x 12=24 Marks)**

Answer any TWO Questions out of THREE Questions

ALL questions carry EQUAL Marks

(Q.No: 4 to 6)

**Section-C (1 x 14=14 Marks)**

(Compulsory Question: It should be a Case study/Application oriented/Critical analysis  
from any of the units)

(Q.No: 7)

**QUESTION PAPER PATTERN FOR MODEL / END SEMESTER EXAM**

Reg.No: \_\_\_\_\_ Q.P.CODE:  
HINDUSTHAN COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)  
PG/MBA/MCA DEGREE MODEL EXAMINATIONS \_\_\_\_\_ 20\_\_\_\_\_  
(-----Semester)  
BRANCH: \_\_\_\_\_  
Subject Name: \_\_\_\_\_

Time: Three Hours

Maximum: 60 Marks

**SECTION - A (5x4=20 marks)**

Answer ALL Questions

ALL Questions carry EQUAL Marks

(Q.No 1 to 5 Either Or type)

(One question from each Unit)

**SECTION - B (3x10=30 Marks)**

Answer any THREE Questions Out of FIVE Questions

ALL Questions carry EQUAL Marks

(Q.No 6 to 10)

(One question from each Unit)

**SECTION - C (1x10=10Marks)**

(Compulsory Question: It should be a Case study/Application oriented/Critical analysis  
from any of the units)

(Q.No: 11)

Course Code:	21ITP01	Course Title						Batch:	2021-2022 and Onwards
		Mobile Application Development						Semester:	I
Hrs/Week:	5	L	5	T	-	P	-	Credits:	4

### COURSE OBJECTIVES

- Understanding and applying the fundamental concepts of Android studio and other application
- Remember and Explore Life cycle of an application in Android
- Create & Design to a new application in Mobile environment.
- Develop Debug and Deploy Android applications
- Construct user interface with Built in view & Layouts

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Define to develop simple GUI Applications	K1
CO2	Extend and able to use widgets and components in their android applications	K2
CO3	Apply to work with database locally & cloud	K3
CO4	Examine how to deploy the applications by inheriting web services.	K4
CO5	Estimate Data Storage using SQLite	K5

**KI- Remember, K2- Understand, K3- Apply, K4- Analyze, K5- Evaluate**



## SYLLABUS

21ITP01	Mobile Application Development	I
Unit No.	Topics	Hours
I	<b>INTRODUCTION TO ANDROID:</b> What is Android - History and Version - Installing software's - Setup Eclipse - Hello Android example - Internal Details - Dalvik VM - Software Stack - Android Core Building Blocks - Android Emulator - AndroidManifest.xml - R.java file - Hide Title Bar - Screen Orientation.	13
II	<b>WIDGETS &amp; USER INTERFACE:</b> Working with Button - Toast - Custom Toast - Button - Toggle Button - Switch Button - Image Button - Checkbox - AlertDialog - Spinner - AutoComplete Text View - Rating Bar - Date Picker - Time Picker - Progress Bar - Quick Contact Budge - Analog Clock and Digital Clock - Working with hardware Button - File Download	13
III	<b>ACTIVITY, INTENT &amp; FRAGMENT</b> Activity Lifecycle - Activity Example - Implicit Intent - Explicit Intent - Fragment Lifecycle - Fragment Example - Dynamic Fragment. <b>LAYOUT &amp; VIEW:</b> Option Menu - Context Menu - Popup Menu - Relative Layout - Linear Layout - Table Layout - Grid Layout	13
IV	<b>ANDROID ADAPTOR VIEW:</b> Arrayadapter - Array List Adaptor - Base Adaptor - Grid View - Web View - Scroll View - Search View - Tabhost - Dynamic List View - Expanded List View. <b>ANDROID SERVICES:</b> Android Service - Android Service API - Android Started Service - Android Bound Service - Android Service Lifecycle - Android Service Example	13
V	<b>Data Storage:</b> Shared Preferences - Internal Storage - External Storage <b>SQLite:</b> SQLite API - SQ Lite Spinner - SQLite ListView - API - Android Web Services	13

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group Learning-Assignments and Cooperative learning

## TEXT BOOK

1. Android Developer Fundamental course - Learn to Develop Android Applications - Google Developer Training Team 2016.

## REFERENCE BOOKS

1. Android Application Development for Dummies 3rd Edition published by John Wiley & Sons, .2015
2. Android Programming for Beginners John Horton - December 2015
3. Complete Introduction for Beginners –Step By Step Guide How to Create Your Own Android App Easy! - Matthew Gimson -2015

## WEB RESOURCES

1. <https://books.goalkicker.com/AndroidBook/>


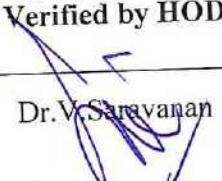
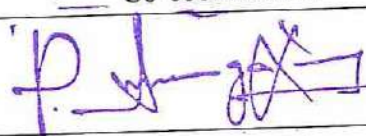
## MAPPING WITH PROGRAM OUTCOMES

CO	PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1		S	S	M	S	S	M	S
CO2		M	M	M	S	S	S	S
CO3		S	S	S	M	S	M	M
CO4		S	M	M	S	S	S	S
CO5		S	S	S	S	S	M	S

S-Strong; M-Medium; L-Low.

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Dr.G.DALIN 	Dr. V. Saravanan 	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

Course Code:	2IITP02	Course Title					Batch:	2020 -2021 & onwards	
		Cloud Computing and Services					Semester:	I	
Hrs/Week:	4	L	5	T	-	P	-	Credits:	4

### COURSE OBJECTIVES

- Understanding the Basics of Cloud computing and its key concepts.
- Remembering and Applying the Cloud Computing services.
- Able to do Cloud implementation and Mobile cloud computing.
- To gain Knowledge in Key components of Amazon Web Services.
- Providing sufficient foundations to enable further study and research.

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Illustrate Cloud Computing and categories the different Cloud services and deployment models	K1
CO2	Identify the key components of Amazon web Service	K2
CO3	Compare security and privacy issues in cloud computing.	K3
CO4	Analyze the components of open stack & Google Cloud platform and understand Mobile Cloud Computing	K4
CO5	Applying the cloud concepts in real time	K5

**KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate**



## SYLLABUS

20ITP02	Cloud Computing and Services	Sem: I
Unit No.	Topics	Hours
I	<b>Defining Cloud Computing:</b> Definition - Cloud types - Benefits of cloud computing – Disadvantages – Role of Open standards - Understanding Cloud Architecture: Exploring the cloud computing stack.	13
II	<b>Understanding Services and Applications by type:</b> Defining IaaS, PaaS, SaaS – Defining Identity as a Service IDaaS – Defining Compliance as a Service (CaaS) - Understanding Abstraction and Virtualization – Capacity Planning.	13
III	<b>Exploring Platform as a Service:</b> Defining Services – Using PaaS Application Frameworks – Using Google web services: Exploring Google Applications, Surveying the Google Application portfolio- Using Amazon Web Services - Using Microsoft Cloud Services: Exploring Microsoft Cloud Services, Defining the Windows Azure Platform.	14
IV	<b>Exploring Cloud Infrastructures:</b> Administrating the cloud – Understanding Cloud Security: Securing the cloud - Securing data - Establishing Identity and presence – Introducing Service Oriented Architecture – Defining SOA Communication – Managing and monitoring SOA.	12
V	<b>Working with Cloud based storage:</b> Cloud storage definition – Provisioning Cloud storage – Exploring cloud backup solutions – Using Webmail services: Exploring Cloud mail Services – Exploring Instant messaging – Collaboration Technologies – Using Media and Streaming.	13

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

## TEXT BOOK

1. Cloud Computing Bible, Barrie Sosinsky, Wiley-India, 2010

## REFERENCE BOOKS

1. Tim Mather, SubraKumaraswamy, and ShahedLatif, Cloud Security and Privacy An Enterprise Perspective on Risks and Compliance, O'Reilly 2009
2. Cloud Computing – Second Edition by Dr. Kumar Saurabh, Wiley India
3. Jason Venner, —Pro Hadoop- Build Scalable, Distributed Applications in the Cloudl, A Press, 2009

## WEB RESOURCES

<https://lecturenotes.in/notes/14455-note-for-cloud-computing-cc-by-rayipudiedukondalu?reading=true&continue=2>

## MAPPING WITH PROGRAM OUTCOMES

CO	PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1		S	M	M	M	L	M	L
CO2		L	M	S	S	M	S	M
CO3		M	S	S	S	S	S	S
CO4		M	L	M	S	S	S	S
CO5		S	M	L	S	S	S	S

S-Strong, M- Medium, L – Low

## ASSESSMENT PATTERN

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Ms.G.Sivabrindha	Dr.V.Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

Course Code:	21ITP03	Advanced Java Programming						Batch:	2020-2021 onwards
								Semester:	I
Hrs/Week:	5	L	5	T	-	P	-	Credits:	4

### COURSE OBJECTIVES

- Learning Fundamentals of Applets and JDBC
- Demonstrate the use of good object-oriented design principles including encapsulation and information hiding.
- The implementation will demonstrate the use of a variety of basic control structures including selection and repetition
- Create to learn Framework Technologies like Spring ,Structs, Hibernate.
- Understand to create RMI application with Framework

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	List classes, objects, members of a class and relationships among them needed for a specific problem.	K1
CO2	Compile dynamic web pages, using Servlets and JSP.	K2
CO3	Apply to develop RMI application using Java Spring Framework	K3
CO4	Analyze and classify the type of framework and its advantages	K4
CO5	Asses Java SDK environment to create, debug and run simple Java program	K5

**KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate**



## SYLLABUS

21ITP03	Advanced Java Programming	I
Unit No.	Topics	Hours
I	<b>Overview:</b> Object Oriented Programming-Simple Program-control statements. Introducing Classes – class fundamentals - Declaring objects – assigning object Reference-Variables- introducing methods – constructors. TheJava Thread Model - Main Thread- creating a Thread - Creating Multiple Threads - using is Alive () and join () - Thread Priorities - Synchronization – Inter thread communication - Suspending ,resuming and stopping Threads	13
II	<b>Applet Fundamentals-</b> Applet Class - Applet life cycle- Steps for Developing Applet Programs- Passing Values through Parameters- Graphics in Applets- GUI Application - Dialog Boxes – Creating Windows - Layout Managers – AWT Component classes – Swing component classes- Borders – Event handling with AWT components - AWT Graphics classes - File Choosers – Color Choosers – Tree – Table– Tabbed panels–Progressive bar - Sliders.	13
III	<b>JDBC -Introduction</b> - JDBC Architecture - JDBC Classes and Interfaces Database Access with MySQL -Steps in Developing JDBC application - Creating a New Database and Table with JDBC -Working with Database Metadata; Java Networking Basics of Networking - Networking in Java- Socket Program using TCP/IP -Socket Program using UDP- URL and Inet address classes.	12
IV	<b>Structs :</b> Introduction to Structs : What is Structs - Features –Model1 vs. Model2 -Custom Validation – Bundled Validators – Ajax Validation View – Controller MVC Design Pattern – tags – UI Components. <b>Hibernate:</b> Introduction to Hibernate Framework –OR Tool-Architecture- Hibernate using XML – Web application	14
V	<b>Spring:</b> Introduction to Spring Framework – Framework of Swing- Advantages of Spring Framework - Modules – Application –IoC Container- Dependency Injection - Constructor Injection- Web Services – SOAP Web Service – Restful Web Services	13

### Teaching methods:

- Use of multimedia/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

## TEXT BOOK

1. Herbert Schildt - —The complete Reference Java —, TataMcGrawHill, 5<sup>th</sup> edition, 2005.

## REFERENCE BOOKS

1. Deitel&Deitel, "Java How to Program", Prentice Hall, 5th Edition, 2002.
2. The Complete Reference 2<sup>nd</sup> Edition James Holmes|TataMcgrawhill 2<sup>nd</sup> Edition 2007.

## WEB RESOURCES

1. <https://beginnersbook.com/java-tutorial-for-beginners-with-examples/>

## MAPPING WITH PROGRAM OUTCOMES

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO							
CO1	S	S	S	S	S	S	S
CO2	S	S	M	S	S	M	S
CO3	M	S	S	S	S	M	S
CO4	M	S	S	S	S	S	S
CO5	S	M	M	S	M	S	S

S - Strong; M-Medium; L-Low.

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
MS.S.Sasikala	Dr.R.RANGARAJ	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.



Course Code:	21ITP04	Course Title					Batch:	2020 -2021 & onwards	
		Open Source Database Management System					Semester:	I	
Hrs/Week:	5	L	5	T	-	P	-	Credits:	4

### COURSE OBJECTIVES

- Understanding DBMS and RDBMS
- Create a relational database using a relational database package.
- Design to facilitating the student to understand the various functionalities of OODBMS.
- Analyze the operations related to creating, manipulating and maintaining databases for Real-world applications using XML
- Understand the various designing concepts, storage methods, querying and managing databases via NOSQL

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Learning the Database internals and Advanced concepts	K1
CO2	Analysing the structure of the databases	K2
CO3	Applying the NOSQL concept in real time	K3
CO4	Examine the storage size of the database and design appropriate storage techniques.	K4
CO5	Creating the data storage via XML commands	K5

KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate



SYLLABUS		Sem: I
2IITP04	Open Source Database Management System	Hours
Unit No.	Topics	
I	<b>Database internals and Advanced concepts:</b> Introduction- Data Models - Entity Relationship model - Relational model – Relational Database - Introduction - SQL - Other Relational languages - Integrity and Security – Relational Database design.	11
II	<b>Transaction Management:</b> Overview of Transaction Management- The ACID properties – Transactions and Schedule – Concurrent execution of Transactions – Lock based concurrency control – Performance of locking - Transaction support in SQL – Introduction to crash recovery – The log – Other recovery related structures – Checkpointing – Recovering from a system crash – Media Recovery.	13
III	<b>Object based Databases and XML:</b> Structured Data Types - Operations on Structured Data - Encapsulation and ADTs – Inheritance - Objects, OIDs, and Reference Types - Database Design for an ORDBMS - ORDBMS Implementation Challenges – OODBMS - Comparing RDBMS, OODBMS, and ORDBMS – XML – Background – Structure of XML Data – XML Document Schema – Querying and Transformation - The Application program interface – Storage of XML data- XML Application - Case Study in XML.	15
IV	<b>Parallel and Distributed Databases:</b> Distributed Databases – Homogeneous and Heterogeneous Databases - Distributed Data Storage - Distributed Transactions - Commit Protocols – Concurrency Control in Distributed Databases – Availability - Distributed Query Processing - Heterogeneous Distributed Databases - Directory Systems - Parallel Databases – Introduction - I/O Parallelism – Inter query Parallelism – Intra operation Parallelism - Interoperation Parallelism - Design of Parallel Systems – Case Study in Oracle.	14
V	<b>NoSQL:</b> NoSQL Basics - Interfacing and Interacting with NoSQL – Storage Architecture – CRUD Operations - NoSQL Stores Queries - Data Stores Modifications and Evolution Management - Indexing and Ordering Data Sets - NoSQL in Cloud – Case Study in MongoDB.	12

**Teaching methods:**

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

## TEXT BOOKS

1. Silberschatz, Korth, Sudarshan, —Database system conceptsl, 6th Edition, Tata McGraw Hill,2013 (For UNITS I,III, IV).
2. ShashankTiwari, —Professional NoSQLl, 1 edition- 2011 (For UNIT V).

## REFERENCE BOOKS

1. Ramakrishnan, Gehrke, —Database Management Systemsl, Tata McGraw Hill
2. RamezElmasri and Shamkant B. Navathe, —Fundamentals of Database Systemsl, Fifth Edition, Pearson Education, 2008.
3. G.K.Gupta, —Database Management Systemsl, Tata McGraw Hill, 2011.

## WEB RESOURCES

<https://pdfs.semanticscholar.org/0390/91a2f0772060b60d97df25c59f1000e20aed.pdf>

## MAPPING WITH PROGRAM OUTCOME

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	M	S	S	M	S
CO2	S	S	S	L	S	S	M
CO3	S	M	M	S	M	M	S
CO4	M	S	M	M	S	M	L

S-Strong, M- Medium, L – Low

## ASSESSMENT PATTERN

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Mrs. S. Nilmozhi	Dr. V. Sarayanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.



Course Code:	21ITP05	Practical I : Mobile Application Programming					Batch:	2020-2021 & Onwards	
							Semester:	I	
Hrs/Week:	5	L	-	T	-	P	5	Credits:	3

### COURSE OBJECTIVES

- Ability to understand about Android studio and Eclipse Environment
- Able to Create GUI application with Multi-screen Templates
- Deploy SQLite with Application
- Design their application using Web Services
- Construct user interface with Built in view & Layouts

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Define a Mobile Application using Android Studio	K1
CO2	Interpret to use widgets and components in their android applications	K2
CO3	Apply to work with database locally & cloud	K3
CO4	Examine how to deploy the applications by inheriting web services.	K4
CO5	Asses various Android applications related to layouts & rich uses interactive interfaces	K5
<b>KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate</b>		



## SYLLABUS

21ITP05	Practical I : Mobile Application Programming	I
Ex. No.	PROGRAM LIST	Hours
1.	Create a simple Login App using Using Database	6
2.	Design and implement a single screen app that displays information about a fictional small business	7
3.	Build a Scorekeeper app, which gives a user the ability to keep track of the score of two different teams playing a game of your choice	7
4.	Create a simple file upload program with user authentication	6
5.	Create a simple application to find a Location of your android device	6
6.	Create a simple dictionary App	6
7.	The Quiz App	7
8.	Musical Structure App	6
9.	Tour Guide App	7
10	News App	7

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

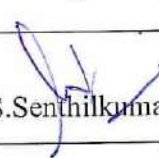
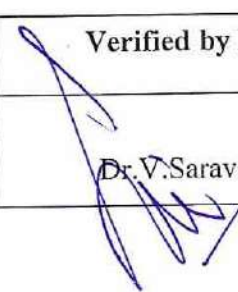
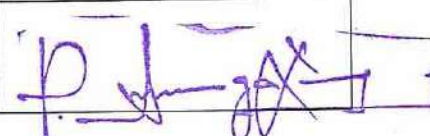
### MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	M	S	S	S	S
CO2	M	M	M	S	M	S	M
CO3	S	S	S	M	S	M	S
CO4	S	M	M	S	S	S	S
CO5	S	S	S	M	S	S	S

S - Strong; M-Medium; L-Low.

### ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Mr.K.S.Senthilkumar 	Dr.V.Saravanan 	

**Co-ordinator**  
**Curriculum Development Cell**  
**Hindusthan College of Arts & Science,**  
**Coimbatore-641 028.**

Course Code:	21ITP06	Practical II: Java Programming						Batch:	2020-2021 & Onwards
Hrs/Week:	5	L	-	T	-	P	5	Semester:	I
								Credits:	3

### COURSE OBJECTIVES

- Deploy simple application using object oriented concepts using java
- Understanding the concepts of Framework applied in java.
- Evaluate the techniques of RMI in java
- Create a Simple application in GUI Environment.
- Understanding the concepts of Java Networking

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Observe to develop simple GUI Applications	K1
CO2	Extend on developing RMI Application	K2
CO3	Experiment with an application using Framework	K3
CO4	Classify and understand the concepts of Hibernate	K4
CO5	Evaluate the use of Java in a variety of technologies and on different platforms.	K5
<b>KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate</b>		



## SYLLABUS

21ITP06	PRACTICAL II : Java Programming	I
Ex. No.	PROGRAM LIST	Hours
1.	Demonstrate REMOTE METHOD INVOCATION application using Java	5
2.	Create an Event Driven Java Application. (Mouse Events/Keyboard Events)	6
3.	Exhibit Socket Programming for Two way communication in java.	6
4.	Create a Java program to display IP ADDRESS and HOST NAME of the machine	5
5.	Illustrate a concept of inheritance with Servlet	5
6.	Design a java program to implement GUI WITH BORDER LAYOUT.	6
7.	Create a Event Handler program using Spring Framework	5
8.	Create a File upload program using Struts Framework	6
9.	Create a program for handling exceptions using Struts.	5
10.	Demonstrate simple JAVA BEANS applications.	5
11.	Build a java program to execute the NETWORKING concept.	5
12.	Design a java program to perform ANIMATION of different shapes.	6

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

**MAPPING WITH PROGRAM OUTCOMES**

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	M	S	S	S	S
CO2	M	M	M	S	S	M	S
CO3	S	S	S	M	S	S	S
CO4	S	M	M	S	S	M	S
CO5	S	S	S	S	S	S	S

S - Strong; M-Medium; L-Low

**ASSESSMENT PATTERN (if deviation from common pattern)**

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
S.SASIKALA	Dr. V. Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>	<b>2IITP08</b>	<b>Advanced Operating System</b>						<b>Batch:</b>	<b>2020-2021 &amp;Onwards</b>
								<b>Semester:</b>	<b>II</b>
<b>Hrs/Week:</b>	<b>5</b>	<b>L</b>	<b>P</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>4</b>

### COURSE OBJECTIVES

- Understanding the Main components of an OS & their functions.
- Mechanisms of OS to handle processes and threads and their communications.
- Gain insight into the components and management aspects of real time and mobile operating systems.
- Develop real-time algorithm for task scheduling.
- Design how Distributed Shared Memory is managed

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understanding the importance of computer system resources and the role of operating systems in their management policies and algorithms.	K1
CO2	Analysing the concepts of Distributed Operating Systems	K2
CO3	Understanding latest Operating Systems and its methodologies.	K3
CO4	Validate Problem-solving schemes as correct, efficient, and well-structured programs, and can integrate the programs into the computing infrastructure as functional information systems	K4
CO5	Creating real time OS applications	K5

**KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate**



## SYLLABUS

21ITP08	Advanced Operating System	II
Unit No.	Topics	Hours
I	<b>Basics of Operating Systems:</b> What is an Operating System? – Main frame Systems – Desktop Systems – Multiprocessor Systems – Distributed Systems – Clustered Systems – Real-Time Systems – Handheld Systems – Feature Migration – Computing Environments - Process Scheduling – Cooperating Processes – Inter Process Communication- Deadlocks – Prevention – Avoidance– Detection – Recovery.	15
II	<b>Distributed Operating Systems:</b> Issues – Communication Primitives – Lamport's Logical Clocks – Deadlock handling strategies – Issues in deadlock detection and resolution distributed file systems –design issues – Case studies – The Sun Network File System-Coda.	11
III	<b>Real time Operating Systems :</b> Introduction – Applications of Real Time Systems – Basic Model of Real Time System – Characteristics – Safety and Reliability - Real Time Task Scheduling	13
IV	<b>Operating Systems for Handheld Systems:</b> Requirements – Technology Overview – Handheld Operating Systems – Palm OS- Symbian Operating System- Android –Architecture of android – Securing handheld systems	13
V	<b>Case Studies:</b> Linux System: Introduction – Memory Management – Process Scheduling Scheduling Policy - Managing I/O devices – Accessing Files- iOS : Architecture and SDK Framework - Media Layer - Services Layer - Core OS Layer - File System.	13

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

## TEXT BOOKS

1. William Stallings, —Operating systemsI, Pearson Prentice Hall, 6<sup>th</sup> Edition,2009.
2. Pradeep K Sinha, —Distributed Operating Systems: Concepts and DesignI, Prentice Hall of India,2007.

## REFERENCE BOOKS

1. Abraham Silberschatz; Peter Baer Galvin; Greg Gagne, — Operating System Concepts I, Seventh Edition, John Wiley & Sons, 2004.
2. Rajib Mall, — Real-Time Systems: Theory and Practice I, Pearson Education India, 2006.
3. Pramod Chandra P. Bhatt, An introduction to operating systems, concept and practice, PHI, Third edition, 2010

## WEB RESOURCES

1. <https://www.docsity.com/en/notes-for-distributed-operating-system/2725203/>

## MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	M	M	M	S	S	S	S
CO2	M	S	M	S	M	S	S
CO3	S	M	M	S	S	S	S
CO4	M	M	M	M	S	M	S
CO5	S	S	S	S	S	S	S

S - Strong; M-Medium; L-Low.

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	
Ms. G. Sivabrintha	Dr. V. Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

Course Code:	21ITP09	Advanced Networking Technologies						Batch:	2020-2021 &Onwards
								Semester:	II
Hrs/Week:	5	L	5	T	-	P	-	Credits:	4

### COURSE OBJECTIVES

- Understand the issue of data flow and selecting the network media.
- Describe the difference between static and dynamic routing protocols.
- Introduce the use of the Wireshark network protocol analyzer.
- Examine the issues of wireless security and Learning the basics of VoIP.
- Understand the concept of BGP and IPv6 over the Internet

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Illustrate the Physical Network Design	K1
CO2	Configuring Static Routing and Dynamic Routing Protocols	K2
CO3	Comparing router and Switch security	K3
CO4	Analysing Network Data Traffic	K4
CO5	Experiencing the new protocols	K5
<b>KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate</b>		



## SYLLABUS

21ITP09	Advanced Networking Technologies	II
Unit No.	Topics	Hours
I	<b>Introduction to Physical Network Design:</b> Core- Distribution Layer -Access Layer - Data Flow - Selecting the Media- IP Subnet Design-VLAN Network-Virtual LAN-Configuration and Tagging. Routed Network- Router- Gateway Address- Network Segments- Multilayer Switch- Layer 3 Routed Networks-Routed Port Configuration-InterVLAN Routing Configuration- Serial and ATM Port Configuration.	13
II	<b>Advanced Router Configuration I:</b> Configuring Static Routing - Dynamic Routing Protocols - Configuring RIPv2 – TFTP—Trivial File Transfer Protocol. <b>Advanced Router Configuration II:</b> Configuring Link State Protocols—OSPF- Configuring Link State Protocols-IS-IS- Configuring Hybrid Routing Protocols—EIGRP	13
III	<b>Configuring and managing the network infrastructure:</b> Domain Name and IP Assignment- Ip Management With DHCP- Scaling the Network with NAT And PAT- DOMAIN NAME SERVICE (DNS) <b>Introduction to Analyzing Network Data Traffic:</b> Protocol Analysis/Forensics - Wire shark Protocol Analyzer-Analyzing Network Data Traffic-Filtering.	13
IV	<b>Network Security:</b> Denial of Service-Firewalls and Access Lists-Router Security-Switch Security-Wireless Security-VPN Security. <b>Introduction to VoIP-</b> The Basics of Voice over IP- Voice over IP Networks- VoIP Security	13
V	<b>Internet Routing—BGP:</b> Configuring BGP- BGP Best Path Selection- IPv6 over the Internet- Configuring BGP on JUNIPER Routers	13

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

### TEXT BOOK

1. Jeffrey S. Beasley, Piyasat Nilkaew - A Practical Guide to Advanced Networking ,2015, Pearson.

### REFERENCE BOOKS

1. Alberto Leon-Garcia, Indra Widjaja —Communication Networks I, Second Edition, McGraw-Hill Education, 2003
2. Shaikh Farhan, Shaikh Mohd Ashfaq —Advanced Networking Technologies I Tech-Neo Publications LLP, 2019

### WEB RESOURCES

1. <https://ptgmedia.pearsoncmg.com/images/9780789749048/samplepages/0789749041.pdf>


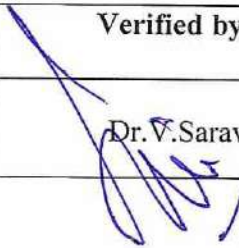
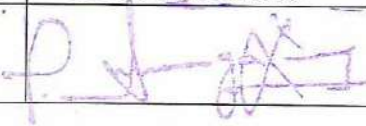
### MAPPING WITH PROGRAM OUTCOMES

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	M	M	M	S	M	S
CO2	M	S	M	S	S	S	S
CO3	M	S	S	M	S	M	S
CO4	M	M	M	S	S	M	S
CO5	S	S	M	S	M	S	S

S - Strong; M-Medium; L-Low.

### ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC — Co-coordinator
 Ms. U. Sinthuja	 Dr. V. Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>	<b>21ITP10</b>	<b>Web Programming Using Open Source Technologies</b>						<b>Batch:</b>	<b>2020-2021 &amp; Onwards</b>
								<b>Semester:</b>	<b>II</b>
<b>Hrs/Week:</b>	<b>5</b>	<b>L</b>	<b>5</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>4</b>

**COURSE OBJECTIVES**

- Applying knowledge to get familiar with basics of the Internet Programming.
- Acquiring knowledge and skills for creation of web site considering both client and server side.
- Implementing interactive web page(s) using HTML, CSS and JavaScript.
- Ability to develop responsive web applications
- Exploring different web extensions and web services standards

**COURSE OUTCOMES (CO)**

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understanding of Content Management Systems	K1
CO2	Understanding different Web Extensions and Web Services.	K2
CO3	Experiencing Interactive web page(s) using HTML, CSS and JavaScript.	K3
CO4	Demonstrating a responsive web site using HTML5 and CSS3.	K4
CO5	Building Dynamic web site using server side PHP Programming and Database connectivity.	K5
<b>KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate</b>		



## SYLLABUS

21ITP10	Web Programming Using Open Source Technologies	II
Unit No.	Topics	Hours
I	<b>INTRODUCTION :</b> Server-Side Web Scripting - Syntax and Variables-Control and Functions. Passing Information between Pages: GET Arguments - POST Arguments - Formatting Form Variables - PHP Super global Arrays	13
II	<b>DATA MANIPULATIONS:</b> Strings in PHP - String Functions-Arrays and Array Functions: Creating Arrays - Retrieving Values - Multidimensional Arrays - Inspecting Arrays - Deleting from Arrays - Iteration. Advanced Array Functions: Transformation of Arrays. Number Handling: Numerical Types - Mathematical Operators - Simple Mathematical Functions - Randomness.	13
III	<b>SESSION AND COOKIES :</b> Regular Expressions: Tokenizing and parsing Functions - Regular Expressions - Perl - Compatible Regular Expressions - Advanced String Functions. Working with the File system: PHP File Permissions - File Reading and Writing Functions - File system and Directory Functions - Network Functions - Date and time Functions - Calendar Conversion Functions. Working with Sessions and Cookies: Sessions work in PHP - Session Functions - Configuration Issues - Cookies - Sending HTTP Headers	13
IV	<b>STRUCTURED QUERY LANGUAGE (SQL):</b> Relational Database and SQL-SQL standards-The Workhorses of SQL- Database Design-Privileges and Security. PHP and MySQL: Connecting to MySQL - Making MySQL Queries - Fetching Data Sets - Multiple Connections - Error Checking - Creating MySQL Databases with PHP - MySQL Functions.	13
V	<b>CONTENT MANAGEMENT SYSTEM :</b> What is CMS – Word press - Joomla - Drupal -Magento - Prestashop - Comparison of Content Management System ,Opencart , Cscart. Search Engine Optimization - How it Works - How SEO in marketing	13

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

### TEXT BOOK

1. Steve Suehring, Tim Converse and Joyce Park ,—PHP6 and MySQL Bible, Wiley- India. New Delhi 2009

### REFERENCE BOOKS

1. Dacie Cristian, —Pack Pub AJAX and PHPI-2006
2. Scouarnec Yann, Stolz Jeremy Jeremy and Glass Michael , —Beginning PHP5, APACHE, MYSQL Web Development, Wiley-India. New Delhi, 2005 Steven Holzner, —The Complete Reference, Tata McGraw Hill Edition, New Delhi, 2009

### WEB RESOURCES

1. <https://www.tutorialspoint.com/php/index.htm>
2. <http://www.tizag.com/phpT/>

### MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	S	M	S	S	S
CO2	S	M	S	M	S	M	S
CO3	S	S	S	M	S	M	S
CO4	S	M	M	S	M	S	S
CO5	S	S	S	S	S	S	M

### ASSESSMENT PATTERN (if deviation from common pattern)

S - Strong; M-Medium; L-Low.

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Mr.K.S.Senthilkumar	Dr.V.Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,<sup>27</sup>  
Coimbatore-641 028.

Course Code:	21ITP11	Software Engineering with Agile and DevOps						Batch:	2020-2021 & Onwards
								Semester:	II
Hrs/Week:	4	L	5	T	-	P	-	Credits:	4

### COURSE OBJECTIVES

- Understanding the agile and Scrum basics in Software Engineering
- Analysing Product Inception strategies and Scaled agile frameworks
- Knowing the Estimation, Agile forecasting and project Management ideas
- Exploring Sprints and Agile Testing
- Understanding and Applying DevOps

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Learning the background of an Agile project and the roles and responsibilities.	K1
CO2	Remembering quality in an Agile project and Adapt existing testing experience and knowledge of Agile values and principles.	K2
CO3	Apply relevant methods and techniques for testing in an Agile project and test automation activities.	K3
CO4	Assist business stakeholders in defining understandable and testable user stories, scenarios, requirements and acceptance criteria as appropriate.	K4
CO5	Working with other team members using effective communication styles and channels, The various tools available to Agile test teams including DevOps to facilitate the testing of the project.	K5
<b>KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate</b>		



## SYLLABUS

21ITP11	Software Engineering with Agile and DevOps	II
Unit No.	Topics	Hours
I	<b>Introduction to Agile:</b> Agile versus traditional method comparisons and process tailoring Software Process Models – overview, Introduction to Agile, Various Agile methodologies - Scrum, XP, Lean, and Kanban, Agile Manifesto, Scrum: Scrum process, roles - Product Owner, ScrumMaster, Team, Project Manager, product manager, architect, events, and artifacts;	10
II	<b>Product Inception:</b> Product vision, stakeholders, initial backlog creation; Agile Requirements - User personas, story mapping, user stories, 3Cs, INVEST, acceptance criteria, sprints, requirements, product backlog and backlog grooming; <b>Tools:</b> Agile tracking tools such as JIRA; Scaled agile frameworks: SAFe, Scrum@Scale, Disciplined Agile	10
III	<b>Definition of Done, Definition of Ready; Estimation;</b> Agile forecasting and project Management - Big visible information radiators, velocity, progress tracking, Track Done pattern, project forecasting, Ux Design, Control the Flow: Sprint Planning, Sprint Reviews, Sprint Retrospectives, Sprint Planning - Agile release and iteration (sprint) planning, Develop Epics and Stories, Estimating Stories, Prioritizing Stories (WSJF technique from SAFe), Create product roadmap	10
IV	<b>Sprints:</b> Iterations/Sprints Overview. Velocity Determination, Iteration Planning Meeting, Iteration, Planning Guidelines, Development, Testing, Daily Stand-up Meetings, Progress Tracking, Velocity Tracking, Monitoring and Controlling: Burn down Charts, Inspect & Adapt (Fishbone Model), Agile Release Train <b>Testing:</b> Functionality Testing, UI Testing, Performance Testing, Security Testing, Tools - Selenium Agile Testing: Principles of agile testers; The agile testing quadrants, Agile automation, Test automation pyramid	12
V	<b>DevOps:</b> Continuous Integration and Continuous Delivery CI/CD: Jenkins Creating pipelines, Setting up runners Containers and container orchestration (Dockers and Kubernetes) for application development and deployment; Checking build status; Fully Automated Deployment; Continuous monitoring with Nagios; Introduction to DevOps on Cloud	10

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

## TEXT BOOKS

1. Agile Project Management: Managing for Success, By James A. Crowder, Shelli Friess, Springer, 2014
2. DevOps: Continuous Delivery, Integration, and Deployment with DevOps: Dive ... By SricharanVadapalli, Packt, 2018

## REFERENCE BOOKS

1. Learning Agile: Understanding Scrum, XP, Lean, and Kanban, By Andrew Stellman, Jennifer Greene, 2015, O Reilly
2. Agile Project Management: Creating Innovative Products, Second Edition By Jim Highsmith, Addison-Wesley Professional, 2009
3. DevOps: Puppet, Docker, and Kubernetes By Thomas Uphill, John Arundel, NeependraKhare, Hideto Saito, Hui-Chuan Chloe Lee, Ke-Jou Carol Hsu, Packt, 2017

## WEB RESOURCES

1. [www.mattivuori.net](http://www.mattivuori.net)


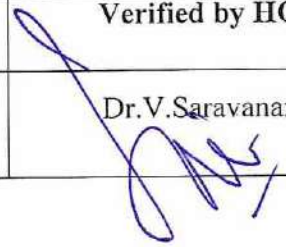
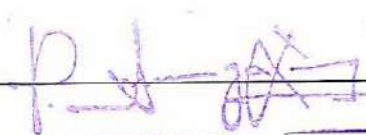
## MAPPING WITH PROGRAM OUTCOME

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	S	L	S	M	M
CO2	S	S	M	M	M	S	S
CO3	S	S	S	M	S	M	S
CO4	M	M	M	S	M	S	S
CO5	S	S	S	S	S	S	M

S - Strong; M-Medium; L-Low.

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Ms.U.Sinthuja 	Dr.V.Saravanan 	

<b>Course Code:</b>	<b>2IITP12</b>	<b>Practical III: Advanced Network Technologies Lab</b>						<b>Batch:</b>	<b>2020-2021 &amp; Onwards</b>
								<b>Semester:</b>	<b>II</b>
<b>Hrs/Week:</b>	<b>5</b>	<b>L</b>	<b>-</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>5</b>	<b>Credits:</b>	<b>3</b>

### COURSE OBJECTIVES

- Understand the issue of data flow and selecting the network media.
- Remember the difference between static and dynamic routing protocols.
- Experience the Wire shark network protocol analyser.
- Examine the issues of wireless security and Learning the basics of VoIP.
- Understand the concept of BGP and IPv6 over the Internet

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Illustrate the Physical Network Design	K1
CO2	Configuring Static Routing and Dynamic Routing Protocols	K2
CO3	Comparing router and Switch security	K3
CO4	To analyzing Network Data Traffic	K4
CO5	Experiencing the new versions of protocols	K5
<b>KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5 –Evaluate</b>		



## SYLLABUS

21ITP12	PRACTICAL III - Advanced Network Programming	II
Ex. No.	PROGRAM LIST	Hours
1	Connect the computers in the Local Area Network.	6
2	Configure the Router and generate the commands to configure network	6
3	Configure a Network Topology using packet tracer software.	6
4	Installation and connecting to a CISCO Router, as well as an overview of the interfaces. Basic router setup and commands are covered in this tutorial.	6
5	Setup of IP addressing for a number of network topology in a given scenario.	6
6	Customize a DHCP Server to provide a pool of four IP devices with contiguous IP addresses, a default gateway, and a default DNS address. Integrate a DHCP server with a BOOTP demon to support Windows and Linux OS binaries automatically based on the client's MAC address.	6
7	Configure, implement and debug the following: Use open-source tools for debugging and diagnostics. a. ARP/RARP protocols b. RIP routing protocols c. BGP routing d. OSPF routing protocols e. Static routes (check using netstat)	7
8	Setup DNS: Build a cache DNS client and a DNS Proxy; enforce reverse DNS and forward DNS; characterize traffic using TCP dump/Wireshark when the DNS server is up and down.	7
9	Optimize an FTP server on a Linux/Windows computer and characterize the file transfer rate for a cluster of small files of 100k each and a 700mb video file using an FTP client/SFTP client. Repeat the experiment using a TFTP client.	7
10	Install an IMAP/POP mail server and build a simple SMTP client in C/C++/Java to send and receive emails.	7

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

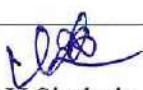
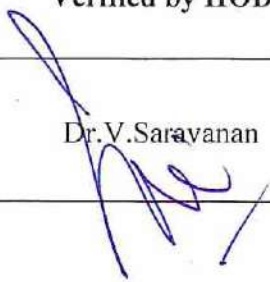
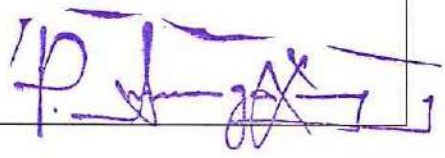
**MAPPING WITH PROGRAM OUTCOMES**

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	M	S	M	S	S	M	M
CO2	M	S	M	M	M	S	S
CO3	S	S	S	M	M	M	M
CO4	M	M	M	S	M	S	S
CO5	M	S	S	S	S	S	M

S -Strong; M-Medium; L-Low.

**ASSESSMENT PATTERN (if deviation from common pattern)**

Follows common pattern of Internal and External assessment, suggested in the Regulations

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Ms.U.Sinthuja	 Dr.V.Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>	21ITP13	<b>Practical IV: Web Programming</b>					<b>Batch:</b>	2020-2021 &Onwards	
							<b>Semester:</b>	II	
<b>Hrs/Week:</b>	5	L	-	T	-	P	5	<b>Credits:</b>	3

#### **COURSE OBJECTIVES**

- Ability to understand markup languages and Scripting languages
- Deploy a simple web application using PHP &MYSQL
- Knowledge on Creating a Simple Forum based application
- Design Develop Debug and Deploy an application with Admin Panel
- Understanding knowledge on Word press.

#### **COURSE OUTCOMES (CO)**

<b>S.No</b>	<b>COURSE OUTCOME</b>	<b>BLOOMS LEVEL</b>
CO1	Understanding a simple GUI Applications	K1
CO2	Remembering a web application using PHP & MYSQL	K2
CO3	Applying Template in Web Application	K3
CO4	Examine an application using Client / Server Panel in Web Environment.	K4
CO5	Asses design dynamic websites that meet specified needs and interests.	K5

**KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5 –Evaluate**



## SYLLABUS

21ITP13	PRACTICAL IV : Web Programming	II
Ex. No.	PROGRAM LIST	Hours
1.	Design and create a program for implementing Inheritance.	6
2.	Develop a program to send an HTML formatted Email with attachment in PHP.	7
3.	Develop and demonstrate a program for login authentication using PHP and My SQL.	6
4.	Creating a Crud Grid For A Student Database Using PHP and My SQL.	7
5.	Develop a program to upload a file in PHP.	6
6.	Design and create a RSS feed using PHP and My SQL.	6
7.	Create a Pay slip for an employee using PHP and My SQL.	6
8.	Create a simple Discussion board for students to share their knowledge	7
9.	Build a college website using Word press Theme.	7
10.	Create a home page and customize the data through Admin Panel	7

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

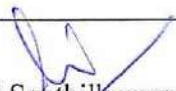
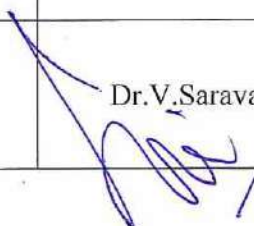

**MAPPING WITH PROGRAM OUTCOMES**

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	M	S	S	S	S
CO2	M	M	M	S	S	S	S
CO3	S	S	S	M	S	M	S
CO4	S	M	M	S	S	S	M
CO5	S	M	S	S	M	M	S

S - Strong; M-Medium; L-Low

**ASSESSMENT PATTERN (if deviation from common pattern)**

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Mr.K.S.Seethikumar	 Dr.V.Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>		<b>Course Title</b>							
		<b>YOGA FOR HUMAN EXCELLENCE</b>							
<b>Hrs/Week:</b>	<b>3</b>	<b>L</b>	<b>3</b>	<b>T</b>		<b>P</b>		<b>Credits:</b>	<b>2</b>

### COURSE OBJECTIVES

- To acquire understanding yoga.
- To develop insights into the vedha
- To explore the importance of being mentally and physically healthy.
- To perform asanas for well being.
- To understand the importance of Good food and their contribution for a healthy life

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Recalling the importance of yoga and understanding yoga	K1 & K2
CO2	Understanding Vedha and their benefits	K2
CO3	Illustrating the concepts of vedha and their benefits.	K3
CO4	Examining Meditation and their contribution to mental Health.	K4
CO5	Analyse the various types of food for a healthy physical and mental life.	K4



<b>YOGA FOR HUMAN EXCELLENCE</b>		
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
I	<b>MEANING OF YOGA</b> Concept of yoga -Yoga as science – Yoga as art – origin and history of yoga – Yoga in Vethic period – after Vethic period – Yoga for modern age (simplified kundalani yoga formulated by Sri Vethathiri maharishi.	6
II	<b>VEDHA</b> Concept of Vedha – Benefits-Upanished – Geetha Six Dharsans – Sankiam – Patanjali Yoga – Nyaya – Vaisedikam –Meemamsam – Vedhantham – Advaitam, Duvaitham – Vishistathvaitham – Saiva Sithantham – Saivam, Saktham Hindusm, Jainism, Buddhism, Christianity, Islam – Sikhism .	6
III	<b>MEDITATION AND MENTAL HEALTH</b> Meaning-Mind and body - powers of mind – conscious, subconscious and unconscious mind –Thoughts – power of - Thought culture – Blessing (Vazhga valamudan, Vazhga vaiyagam) –Various types of meditation, Akana, Thuriyam, shanthi, manipuraka, visukthi etc., - Electro- Encephalogram – Mental frequencies	6
IV	<b>ASANAS AND PRANAYAMA</b> Concept –Benefits of Asanas–Types of asanas- <b>Pranayama</b> –Types and benefits-Mudras-Benefits and Types.	6
V	<b>FOOD FOR HEALTHY LIFE</b> Meaning -Types – Benefits- Satvic Rajo and Tamas- Food for spiritual Life – simple and Balanced diet –Vegetarian food - Fasting and its benefits- Food work and sleep .Concept of siddha – Allopathy – Ayurveda.	6

**Text Book**

1. Art of Nurturing the Life Force and Mind - Vethathiri Publications.

**Reference Books**

1. Manavalakalai Part – 2 - Thathuvagnani Vethathiri Maharishi
2. Simplified Exercise - Thathuvagnani Vethathiri Maharishi
3. Yogasanas - Vethathiri Publications

<b>Course Code:</b>		<b>Course Title</b>						
		<b>HUMAN HEALTH AND HYGIENE</b>						
<b>Hrs/Week:</b>	<b>3</b>	<b>L</b>	<b>3</b>	<b>T</b>		<b>P</b>	<b>Credits:</b>	<b>2</b>

### COURSE OBJECTIVES

- Know about the functioning of the human body and health.
- Expose the students to some important diseases
- Understand issues related to the present day healthcare system
- Acquire basic understanding of other healthcare systems

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Illustrate the physiology of human body.	K1
CO2	Explain the food value.	K2
CO3	Demonstrate about primary health centres	K3
CO4	Explain the causes, symptoms and prevention of various diseases	K4
CO5	Explain the concept of health and health education.	K5

HUMAN HEALTH AND HYGIENE		
Unit No.	Topics	Hours
I	Definition and concept of health. Concept, Objectives and principles of health education. Immunity; Types and schedule of immunization.	6
II	Definition, Physiology and structure of human cell. Elementary anatomy, Physiology and functions of the following system. Cardiovascular system. Gastrointestinal system. Excretory system. Respiratory system. Nervous system. Musculoskeletal system.	6
III	Introduction to food. Composition and nutritive value of Cereals (Rice, Wheat, Millets, Ragi, Pearl millet). Nutritional deficiency disease – Anaemia, Scurvy. Composition and medical value of Ginger, Black pepper and Turmeric. Dental Care and eye care.	6
IV	Primary health centers, UNICEF, WHO, RED CROSS, ICDS, CARE and other non government agencies.	6
V	Non-communicable diseases – Stroke, Diabetes, Chronic lung disease : Obesity and Cancer. Communicable diseases – Dengue fever, Malaria, Amoebiasis, Viral fever and AIDS. Awareness on Diarrhea, Alcoholism, Smoking, Tobacco chewing, Ulcer and Jaundice.	6

#### Text Book

1. William Thayer, 2016, Elementary Physiology and Hygiene. the Human Body and Its Health. a Text-Book for Schools, Wentworth Press.

#### Reference Books

1. Caldwell B. Esselstyn, 2008, Prevent And Reverse Heart Disease: The Revolutionary, Scientifically Proven, Nutrition-Based Cure, Penguin USA.
3. K.Park, 2021, Park's Textbook Of Preventive And Social Medicine, Banarsidas Bhanot Publishers.



<b>Course Code:</b>		<b>Course Title</b>							
		<b>INDIAN CULTURE AND HERITAGE</b>							
<b>Hrs/Week:</b>	<b>3</b>	<b>L</b>	<b>3</b>	<b>T</b>		<b>P</b>		<b>Credits:</b>	<b>2</b>

### COURSE OBJECTIVES

- To impart basic knowledge to know the Heritage and the Culture of the India.

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understand the Elements of developed Civilization and life style.	K1
CO2	Remember of advanced cultural significance.	K2
CO3	Apply on creative works on hand craft.	K3
CO4	Analyze in historical Temples and Architecture.	K4

INDIAN CULTURE AND HERITAGE		
Unit No.	Topics	Hours
I	<b>The Indus Valley Civilization and Harappan Culture</b> What is the Indus Valley Civilization, Period and Phases of growth. Salient Feature of the Harappan culture, Important Harappan Sites and their significance. Important Features of the Harappan culture.	8
II	<b>Hinduism</b> Introduction Of Hinduism, Scriptures and Philosophies Of Hinduism, Hindu Philosophies, Sects OF Hinduism, Important of Hindu Scriptures.	7
III	<b>Temples And Architecture In Ancient And Medieval India.</b> Temples and Their Fundamental Elements, The Nagara Temple Architecture, Buddhist and Jain Architecture, Important Temples and Their Salient Features.	7
IV	<b>Indian Heritage Dance, Music, Paintings</b> Classification Of Indian Music, Classical Music, Folk Music, Modern Music, Musical Instrument, Modern Development in Music. Classification of Painting. Miniature Paintings, Modern Paintings.	6
V	<b>The Indus Valley Civilization and Harappan Culture</b> What is the Indus Valley Civilization, Period and Phases of growth. Salient Feature of the Harappan culture, Important Harappan Sites and their significance. Important Features of the Harappan culture.	8

#### Text Book

1. Mr.Madhukar Kumar Bhagat - The Indian Heritage, Art And Culture
2. Mr.Nitin Singhanai – Indian Art And Culture

#### Reference Books

1. Indian Culture – Mr.P K Agrawal.

<b>Course Code:</b>		<b>Course Title</b>					<b>Batch:</b>	<b>2021-2022 onwards</b>
		<b>Indian Constitution and Political System</b>					<b>Semester:</b>	<b>I</b>
<b>Hrs/Week:</b>	<b>3</b>	<b>L</b>	<b>3</b>	<b>T</b>		<b>P</b>	<b>Credits:</b>	<b>2</b>

**COURSE OBJECTIVES:**

1. To give an overview of Indian Constitution
2. To enumerate the salient features of the Indian Constitution
3. To explain the fundamental rights and duties of every Indian citizen
4. To understand about the Indian political system

**COURSE OUTCOMES (CO)**

<b>S.No</b>	<b>COURSE OUTCOME</b>	<b>BLOOMS LEVEL</b>
CO1	Remember and Understand the history of the Indian Constitution	K1,K2
CO2	Enable the students to interpret, evaluate the salient features of Indian Constitution	K3 K4
CO3	Enable the students to understand their fundamental rights & duties under Indian Constitution	K2
CO4	Comprehend the Indian federalism	K3
CO5	Enable the Students to interpret and explain about the Indian political system	K1, K2



Indian Constitution and Political System		I
Unit No.	Topics	Hours
I	An overview of constitutional development with reference to Government of India Act 1909, 1919, 1935 and Indian Independence Act 1947.	6
II	The Constituent Assembly of India. Salient features of the Indian Constitution – the Preamble	6
III	Fundamental Rights – Directive Principles of State Policy – Fundamental Duties	6
IV	Indian federalism, Centre state relation- distribution of legislative powers, administrative and financial relations between the union and states-The finance commission – Planning commission	9
V	Government of the Union (a) The Union Executive – the President and the Vice-President – The Council of Ministers and the Prime Minister – Powers and functions (b) The Union legislature – The Parliament – The Lok Sabha and the Rajya Sabha, Composition, powers and functions – the role of the Speaker. (c) Indian judicial system (d) Government of the State. The Governor – the Council of Ministers and the Chief Minister – Powers and Functions The State Legislature – composition, powers and functions.	9

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

**Text Book:**

*Constitution of India- P.K. Agarwal- Prabhat Prakashan*

**Reference Books:**

1. *The Constitution & Parliament of India- Derek o' Brian- Rupa Publications India*

2. *Indian Constitution : Government And Political System- P.B. Rathod- Commonwealth Publishers, New Delhi*

3. *Indian Political System- Himanshu Roy & M.P. Singh- Pearson Education*

4. *Indian Government and Politics- Bidyut Chakrabarty and Rajendra Kumar Pandey-SAGE publishing, India.*

**Web Link:**

[https://www.india.gov.in/my-government/constitution-india#:~:text=It%20is%20a%20Sovereign%20Socialist,a%20parliamentary%20system%20of%20government.&text=As%20per%20Article%2079%20of,the%20People%20\(Lok%20Sabha\).](https://www.india.gov.in/my-government/constitution-india#:~:text=It%20is%20a%20Sovereign%20Socialist,a%20parliamentary%20system%20of%20government.&text=As%20per%20Article%2079%20of,the%20People%20(Lok%20Sabha).)

Course Code:		Course Title						Batch:	2021-2022 And Onwards
		CONSUMER AWARENESS AND PROTECTION						Semester:	I
Hrs./Week:	3	L	3	T	-	P	-	Credits:	2

### COURSE OBJECTIVE

- To acquaint the students with the basic knowledge about the Consumer Awareness and the need for protection of consumers in India.
- To give an outline of the Consumer Rights under the Consumer Protection Act, 1986.
- To make the students understand the procedure for redressal of consumer grievances in India.
- To familiarise the various legislations prevailing in India for consumer Protection.
- To enable the students to gain the knowledge about the Consumerism.

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Recalling the basic knowledge about the Consumer Awareness.	K1
CO2	Understanding of the Consumer Rights under the Consumer Protection Act, 1986.	K2
CO3	Describing the procedure for redressal of consumer grievances in India.	K2
CO4	Classifying the various legislations prevailing in India for consumer Protection.	K3
CO5	Analysing the concept of consumerism.	K4

## SYLLABUS

<b>Open Elective – 1</b> <b>CONSUMER AWARENESS AND PROTECTION</b>		<b>Sem: I</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>Consumer Awareness</b> Meaning of Consumer – Goods and Services - Distinction between buyer and Consumer – Consumer Awareness – Meaning- Definition- Need and Importance – Objectives of Consumer Awareness	<b>6</b>
<b>II</b>	<b>Consumer Protection Act, 1986</b> Definitions-Consumer Rights –Right to Information -Right to choose-Right to safety- Right to consumer education - Right to be heard-Right to get redressal -Responsibilities of the consumers–Problems to Consumers – Exploitation of Consumers.	<b>6</b>
<b>III</b>	<b>Grievance Redressal</b> Dispute Redress Forums – District level – State level – National level- Consumer Courts- Redressal Mechanism- Procedure to file a complaint – Grounds to complain - Role of Voluntary Consumer Protection Organisations in India - NGOs	<b>6</b>
<b>IV</b>	<b>Other Legislations</b> Indian Contract Act, 1872- The Sale of Goods Act, 1930 - The Prevention of Food Adulteration Act, 1954-The Agricultural Produce (Grading and Marking ) Act, 1937- The Standards of Weights and Measures Act, 1976-The Trade Marks Act, 1999-The Essential Commodities Act, 1955-The Bureau of Indian Standards Act, 1986-The Competition Act, 2002	<b>6</b>
<b>V</b>	<b>Consumerism</b> Meaning of Consumerism – Consumerism movement in India – Consumer Awareness in rural India- Role of Ombudsman, IRDA, TRAI - Use of Online and internet in Consumerism – Websites used for online grievance handling	<b>6</b>

**Teaching methods:** Lecturing, PowerPoint Projection through LCD and Assignment

**Text Books:**

1. Dr. R. Sivanesan, "Consumer Awareness" Margham Publications., Chennai

**Reference Books:**

1. H.K. Saharay, "Text Book on Consumer Protection Law" Universal Law Publishing Co., New Delhi
2. Srinibas Pathi & Lalrintluanga, – "Consumer Awareness and Consumer Protection" Dominant Publishers and Distributors (P) Ltd.
3. Gupta. S.L, "Consumer Behaviour" Sultan Chand & Sons, New Delhi.
4. Dr. Shashikala J Maheswari, "Consumer Awareness and Practices"
5. Mohammed Kamalun Nabi, "Consumer Rights and Protection in India", Ingram Publications.



Course Code:		Course Title						Batch:	2021-2022 and Onwards
		Professional Ethics and Human Values						Semester:	I
Hrs/Week:	3	L	3	T	-	P	-	Credits:	2

#### COURSE OBJECTIVES:

- To orient students about value education and human education.
- To help them learn concepts of human values and respect for others.
- To provide in-depth understanding about moral awareness.
- To inculcate a sense of ethics in the profession the students take up.
- To acquire knowledge on professional practices.

#### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understand value education and develop a sense of self respect	K1, K2
CO2	Develop an understanding towards to human values and respect others.	K2,
CO3	Acquire ethical and leadership qualities in managing self and others	K1, K2, K3
CO4	Gain clarity and apply personal and professional ethics	K2, K3
CO5	Practices moral values and code of conduct in their profession	K2,K3

## SYLLABUS

	<b>Professional Ethics and Human Values</b>	<b>Sem:I</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>VALUE EDUCATION:</b> Definition, Concept and Need for Value Education - The Content and Process of Value Education-Self-Exploration as a means of Value Education-Happiness and Prosperity as parts of Value Education	7
<b>II</b>	<b>HUMAN VALUES:</b> Morals, values and Ethics – Integrity – Work ethic – Service learning – Civic virtue – Respect for others – Living peacefully – Caring – Sharing – Honesty – Courage – Valuing time – Cooperation – Commitment – Empathy – Self confidence – Character – Spirituality	7
<b>III</b>	<b>ETHICS &amp; LEADERSHIP QUALITIES:</b> Ethical values: Ethics, Social Ethics, Public Policy - Leadership qualities: Integrity, Character, Courage - Personality development. Inter-culture Tolerance	7
<b>IV</b>	<b>INTRODUCTION TO PROFESSIONAL ETHICS:</b> Basic concepts, Governing Ethics, Personal and Professional Ethics, Ethical Dilemmas, Life Skills, Profession and Professionalism, Professional Association, Professional Risks, Professional Accountabilities, Professional Success	7
<b>V</b>	<b>PROFESSIONAL PRACTICES:</b> Professions and Norms of Professional Conduct, Norms of Professional Conduct vs. Profession, Responsibilities, Obligations and Moral Values in Professional Ethics, Professional code of Ethics	8

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

**Text Book:**

1. Jayasree Suresh and B. S. Raghavan, *Human Values and Professional Ethics*, 3rd Edition, S. Chand Publications
2. P S R Murthy : “*Indian Culture, Values and Professional Ethics*”, 2nd Edition, B S Publications, Hyderabad. 2013

**Reference Books:**

1. Prof. (Col) P S Bajaj and Dr. Raj Agrawal, *Business Ethics – An Indian Perspective*, Biztantra, New Delhi, 2004.
2. NCERT. “*Value Education*”. Dharma Bharti National Institute of Peace and Value Education, Secunderabad, 2002
3. Daniel and Selvamony. “*Value Education Today - Madras Christian College, Tambaram and ALACHE*, New Delhi, 1990
4. A. Alavudden, R. Kalil Rahaman & M. Jayakumaran : “*Professional Ethics & Human Values*”, 1st Edition, University Science Press (An Imprint of Laxmi Publications Pvt Ltd., Chennai, Bangalore. 2008
5. Dr. Saroj Kumar and Prof. Sheenu Nayyer, *Human values and Professional Ethics*, Thakur Publications,
6. R. Subramanian, *Professional Ethics*, Oxford University Press, 2015

Course Code:	2	Open Elective HUMAN RIGHTS, WOMEN'S RIGHTS & GENDER EQUALITY					Batch:	2021-2022 & Onwards	
		L	2	T	-	P	-	Semester:	
Hrs/Week:	2	L	2	T	-	P	-	Credits:	2

**COURSE OBJECTIVE:**

- To help the students acquire knowledge on human rights and International Covenant.
- To facilitate the students to learn the Constitution and Human Rights.
- To provide the students conceptual framework of Women's Rights.
- To learn about the UN convention on rights of women.
- To expose the students regarding the Gender Equality-factors and issues.

**COURSE OUTCOMES (CO)**

S. No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Recall the concepts of Human Rights.	KI
CO2	Remember the basic concept of Constitution and Human Rights.	K1
CO3	Understand the framework of Women's Rights.	K2
CO4	Gain knowledge on UN convention on rights of women.	K3
CO5	Infer the Gender Equality-factors and issues.	K2

**KI- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate**



## SYLLABUS

<b>HUMAN RIGHTS, WOMEN'S RIGHTS &amp; GENDER EQUALITY</b>		<b>Sem:</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>Human Rights</b> Human Rights: Concept, Scope – Classification of Human rights – Universal Declaration of Human Rights – International Covenant on Economic, Social and Cultural Rights – International Covenant on Civil and Political Rights.	<b>5</b>
<b>II</b>	<b>Constitution and Human Rights</b> Human Rights in the Constitution of India. Constitutional Vision: Constituent Assembly, Nature of Constitution, Preamble, Fundamental Rights, Right to Constitutional remedies.	<b>5</b>
<b>III</b>	<b>Women's Rights</b> Women Rights- Definition and Concept Women Rights in the Indian Constitution, Exclusive Rights for women in India, Status of Women in India.	<b>5</b>
<b>IV</b>	<b>UN convention on rights of women.</b> Women and health, Women and education, Women Rights to Property, Domestic violence, and Dowry system: causes, effects and solution, Government role in women empowerment in India.	<b>5</b>
<b>V</b>	<b>Gender Equality</b> Definition and Concept of gender equality, issues of gender equality, factors of gender inequality in India, UNICEF role to promote gender equality.	<b>6</b>

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

**Text Book:**

1. Nameema.C. "Human Rights Education – Theory and Practice", Shipra Publication, New Delhi, (2007).

**Reference Books:**

1. Adamantia Pollis and Peter Schwab. "Human Rights: New Perspectives", New Realities, Lynne Rienner Publishers, (2000).
2. Chakraborty and Somen. "Human Rights Trainer's Manual", Indian Social Institute, New Delhi, (2004).
3. P.D.Kaushik "Women Rights" Bookwell Publication 2007.

**Web Link:**

- [https://en.wikipedia.org/wiki/Human\\_rights](https://en.wikipedia.org/wiki/Human_rights)
- [https://en.wikipedia.org/wiki/Universal\\_Declaration\\_of\\_Human\\_Rights](https://en.wikipedia.org/wiki/Universal_Declaration_of_Human_Rights)
- [https://en.wikipedia.org/wiki/Women%27s\\_rights](https://en.wikipedia.org/wiki/Women%27s_rights)

Course Code:		Open Elective DISASTER MANAGEMENT						Batch:	2021-2022 & Onwards
								Semester:	
Hrs/Week:	2	L	2	T	-	P	-	Credits:	2

**COURSE OBJECTIVE:**

- To understand the nature and meaning of disaster, various types of disaster.
- To gain knowledge on fundamental aspects of disaster management.
- To know about mental health consequences of disaster and disaster mitigation.
- To assess the impact of disaster on women, children, aged and others.

**COURSE OUTCOME**

S. No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Identify the concepts, nature and meaning of disaster, various types of disaster.	K1
CO2	Understand the fundamental aspects of disaster management.	K2
CO3	Solve the disaster mitigation and psycho-social issues.	K3
CO4	Evaluate the impact of disaster on women, children, aged and others.	K4

**SYLLABUS**

	<b>Open Elective DISASTER MANAGEMENT</b>	<b>Sem:</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>Meaning of Disasters</b> Concept, Meaning, Types Differences and Similarities between Natural and Technological disasters, Characteristics of various Natural disasters.	<b>5</b>
<b>II</b>	<b>Disaster Management</b> Fundamental aspects of Disaster Management – Stages or phases of Disaster Management – Community responses for Disaster Management and Preparedness, Challenges in Disaster Management.	<b>5</b>
<b>III</b>	<b>Organization and Management</b> Role of Government in Disaster Management – Tamil Nadu Government Initiatives, The Disaster Management Act 2005: Objectives, Organizational Body, Powers, Functions and Limitations.	<b>5</b>
<b>IV</b>	<b>Disaster Mitigation and Psycho-Social Support</b> Disaster mitigation – relief and rehabilitation. Risk: Risk management for Social Workers, Importance of Psycho-social care – Principles of Psycho - social care.	<b>5</b>
<b>V</b>	<b>Impact of Disaster on Women, Children, Aged and others</b> Impact on the individual, family and society; Mental health consequences of disaster; Specific psychosocial needs of vulnerable groups like children, women and older persons.	<b>11</b>

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

**TEXT BOOK:**

1. Sathish Modh. "Introduction to Disaster Management", Macmillan Publishers, New Delhi, (2010).

**REFERENCE BOOKS:**

1. Klinenberg Eric. "Heat Wave: A Social Autopsy of Disaster in Chicago", University of Chicago Press, Chicago, (2002).
2. Rajan Kumar, Sahoo, Thilothama, Senapati. "Disaster Management and Mitigation", Dominant Publishers, New Delhi, (2014).
3. Sahni, Aryabandu. "Disaster Risk Reduction in South Asia", PHI Learning Pvt, Ltd, New Delhi, (2011).
4. Singh S.R. "Disaster Management", APH Publishing Corporation, New Delhi, (2010).
5. Singh S.K. "Natural Disasters Threats, Patterns and Social Work", Sublime Publication, Jaipur, (2012).

**Web Link:**

- [https://en.wikipedia.org/wiki/Disaster\\_management\\_in\\_India](https://en.wikipedia.org/wiki/Disaster_management_in_India)
- <https://en.wikipedia.org/wiki/Disaster>
- [https://en.wikipedia.org/wiki/Category:Disaster\\_management](https://en.wikipedia.org/wiki/Category:Disaster_management)
- [https://en.wikipedia.org/wiki/Emergency\\_management](https://en.wikipedia.org/wiki/Emergency_management)
- [https://en.wikipedia.org/wiki/Disaster\\_response](https://en.wikipedia.org/wiki/Disaster_response)



<b>Course Code:</b>		<b>Open Elective GREEN FARMING</b>						<b>Batch:</b>	<b>2021-2022 &amp; Onwards</b>
								<b>Semester:</b>	
<b>Hrs/Week:</b>	<b>2</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>2</b>

**COURSE OBJECTIVE:**

- To develop knowledge about elements of soil and its properties ---
- To study plant diseases and their symptoms
- To inculcate about the soil nutrient resources viz., manures, fertilizers and biofertilizers
- To develop the farming management system
- To understand the organic farming structure, concepts and its advantage

**COURSE OUTCOME**

<b>S. No</b>	<b>COURSE OUTCOME</b>	<b>BLOOMS LEVEL</b>
CO1	Define the composition and properties of soil	K1
CO2	Outline the plant diseases and their control measures	K2
CO3	Develop knowledge on Manure and Biofertilizers	K3
CO4	Categorize the farm management system	K4

## SYLLABUS

	<b>GREEN FARMING</b>	<b>Sem:</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>Soil:</b> Definition – Composition of soil – Types of soils found in India and Tamil Nadu- Physical properties of soil – Texture – Structure, colour, particle density, Bulk density, Pore space, Consistency, Soil air and Soil water Soil temperature – Significance of physical properties in plant growth – Chemical properties of soil. Soil colloids P <sub>H</sub> , Electrical conductivity.	<b>5</b>
<b>II</b>	<b>Study of plant diseases and symptoms</b> – Mode of spread of plant diseases – Brief study of sulphur, copper, systemic groups of fungicides - Importance of seed treatment with fungicides – Basic biological agents for disease control.	<b>5</b>
<b>III</b>	<b>Manures and Biofertilizers:</b> Definition – Classification – Bulky Organic Manures (BOM) and Concentrated Organic Manures (COM) – Preparation of different types of compost including industrial waste, coir waste, press mud – Vermicompost – enriched Farm Yard Manure (FYM) etc – Green manures (GM )and Green Leaf Manures(GLM) – their Benefits and significance . Bio - fertilizers and their types – Application of Bio - Fertilizers.	<b>5</b>
<b>IV</b>	<b>Farm Management</b> - Definition and importance – Farming System – Definition, classification - Cropping system – Definition – difference between farming system and cropping system – Systems of farming and types of farming – Advantages and disadvantages – mechanized farming and its possibilities in India – Integrated farming systems (IFS) – definition - types of IFS, Suitable for different situations.	<b>5</b>
<b>V</b>	<b>Organic Farming:</b> Stages in Agricultural Development – History of Alternative Agricultural Development – Ill effects of Green Revolution Organic farming – Need, Concepts, Definition and Components – Essential characteristics – Key principles – Different concepts of organic farming – Natural farming, Biodynamic farming, Perma culture and Zero Budget Farming.	<b>6</b>

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

### **TEXT BOOK:**

Johl,S.S. and T.R.Kapur, 2017, Fundamentals of Farm Business management, Kalyani publishers, Lundhiana.

### **REFERENCES:**

1.Buckman, H.O. and N.C. Brady. 2002. Nature and properties of soil, The McMillan Co, New York, Indian Publishers – Eurasia Publishing House (P) Ltd., Ram Nagar, New Delhi.

2. Das, P.C. 2009. Manures and Fertilizers, Kalyani Publishers, New Delhi

3. Sahai, V.N. 2015. Fundamentals of Soil, Kalyani Publishers, New Delhi
4. Palaniappan, S.P. and K. Annadurai. 2016. Organic Farming Theory and Practice. Scientific Publishers (India), Jodhpur.
5. Sharma, Arun K. 2002. A Hand Book of Organic Farming Agrobios (India), Jodhpur.
6. Kahlon, A.S. and Karam Singh. 1992. Economic of farm management in India – Theory and Practice. Allied Publishers Pvt. Ltd., Chennai.
7. Karuppusamy, S.S. and S.Kulandaisamy. 2019. Pannai Nirvagam, Gandhigram Rural Institute - Deemed University, Gandhigram

**WEBLINK:**

[https://www.coabnau.in/uploads/1587019407\\_Principlesoforganicfarming.pdf](https://www.coabnau.in/uploads/1587019407_Principlesoforganicfarming.pdf)

<https://sites.google.com/a/univsul.edu.iq/hemin-abubakir/teaching/organic-farming-lecture-notes>



<b>Course Code:</b>		<b>Open Elective CORPORATE RELATIONS</b>						<b>Batch:</b>	<b>2021-2022 &amp; Onwards</b>
								<b>Semester:</b>	
<b>Hrs/Week:</b>	<b>2</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>2</b>

**COURSE OBJECTIVE:**

- The General Aptitude evaluates the talent/ability/potential to perform a certain task. This Course will be helpful for Students who are going to appear for any Job Placement/Interview also for those who are appearing for Government Jobs, BANK Exams, Campus Placements, GATE, PSU.

**COURSE OUTCOME**

<b>S. No</b>	<b>COURSE OUTCOME</b>	<b>BLOOMS LEVEL</b>
CO1	The General Aptitude evaluates the talent/ability/potential to perform a certain task. This Course will be helpful for Students who are going to appear for any Job Placement/Interview also for those who are appearing for Government Jobs, BANK Exams, Campus Placements, GATE, PSU.	K1
CO2		K2
CO3		K3
CO4		K4

## SYLLABUS

	GREEN FARMING	Sem:
Unit No.	Topics	Hours
I	Basic concepts: Number system – Simplification – Fraction – Approximate values – Percentage – LCM & HCF – Ratio & Proportion.	5
II	Profit & Loss – Simple Interest & Compound Interest – Partnership – Mixture & Allegation	5
III	Time & Work – Pipe & Cistern – Problem on Ages Speed, Time & Distance – Trains -- Boat & Streams	5
IV	Clocks & Calendar – Probability – Permutation & Combination – Cubes & Dices -- Blood relation – Directions – Puzzles test – Logical sequence of word Error Spotting – Sentence Correction – Direct & Indirect Speech – Active & Passive voice – Reading Comprehension -- Parajumbles	5
V	Series Completion – Analogy – Classification – Coding & Decoding -- Figure series – Figure formation and analysis – Mirror & Water image. Syllogism – Statement Conclusions – Statement Arguments – Statement Assumptions – Seating Arrangements. Antonyms – Synonyms – Common Confusables – One word substitutions – Idioms & Phrases	6

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

### TEXT BOOK:

1. General Aptitude for Campus Recruitment Examinations – Corporate relations

<b>Course Code:</b>		<b>Course Title</b>							
		<b>Start up a Business</b>							
<b>Hrs/Week:</b>	<b>3</b>	<b>L</b>	<b>3</b>	<b>T</b>		<b>P</b>		<b>Credits:</b>	<b>2</b>

#### **COURSE OBJECTIVES**

- To acquire knowledge in Entrepreneurship.
- To make students understand the Digital means of identifying Business Opportunities.
- To identify the various phases of a project and develop a project plan.
- To develop plans to incubate Business Ideas and to introduce the concept of start up to students
- To identify and understand the various sources of Financing Business.

#### **COURSE OUTCOMES (CO)**

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Recalling the concept of entrepreneurship, types and traits essential for entrepreneurship	K1
CO2	Understanding the entrepreneurs development program and digital entrepreneurship..	K2
CO3	Illustrating project life cycle phases and characteristics of a project.	K3
CO4	Examining the components of a good business plan, business idea, startups and incubations	K4
CO5	Analyse the various sources of Finance to start up a business	K4



## SYLLABUS

<b>START UP A BUSINESS</b>		
Unit No.	Topics	Hours
I	<b>ENTREPRENEURSHIP</b> Concept and Introduction - characteristics, Traits, functions. and types of entrepreneurs - Intrapreneur – Innovation and entrepreneurship- Entrepreneurship and Green Entrepreneurship.	6
II	<b>ENTREPRENEURIAL DEVELOPMENT</b> Entrepreneurship development programmes - need - objectives – course contents - phases – evaluation –Digital entrepreneurship.	6
III	<b>PROJECT MANAGEMENT</b> Project Management: Meaning of project - concepts - categories - project life cycle phases - characteristics of a project .	6
IV	<b>BUSINESS PLANS AND IDEAS</b> Business Plan- Meaning of a business plan- Components of a good Business Plan- Business Ideas. Start Ups- Meaning and Types. Incubation – Meaning - Creative Incubation process.	6
V	<b>ENTREPRENEURIAL FINANCE</b> Source of finance for new ventures – Institutional finance supporting Small Scale Industries (SSI's) —Role of DIC - NSIC -SIDO-MSME-Small scale industries registration procedure in India.	6

### TEXT BOOKS

1. Vasant Desai – “Dynamics of Entrepreneurial Development & Management”, Himalaya Publishing House

### REFERENCE BOOKS

1. Khanka S.S - Entrepreneurial Development
2. Gupta C.B. & Srinivasan N.P - Entrepreneurial Development
3. Choudhury.S - Project Management
4. Denis Lock - Project Management

Course Code:		Open Elective	Batch:	2021-2022 and onwards
		RESEARCH METHODOLOGY AND IPR	Semester:	

**COURSE OBJECTIVE:**

1. To understand the basic concepts of research, types, Research Problems and research Designs.
2. To identify various methods of sampling and data collection.
3. To gain knowledge using various statistical tools in Research.
4. The Learners can understand the IPR and its economic analysis.
5. To understand Patent Rights, Copy Rights and Trade Marks.

**COURSE OUTCOMES (CO)**

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understand the process of Research and Research Design	K1
CO2	Apply the various sampling techniques used for data collection.	K3
CO3	Identify and apply the necessary tools used in the Research	K2 & K3
CO4	Applying knowledge of IPR in Business	K4
CO5	Identify and analyze the Patent Right , Copy Right and Trade Mark in Business	K1 & K4

**SYLLABUS**

	<b>RESEARCH METHODOLOGY AND IPR</b>	<b>Sem:</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
I	<b>Research Methodology Introduction</b> Research: Meaning – Objectives – Scope – Concepts – Significance – challenges-types-Research process– Criteria good researcher – Research problems: Identification-Selection. Hypothesis – Research design.	6
II	<b>Sampling Design</b> Sampling design: Meaning-Sampling frame- Sampling and Non-Sampling Errors- determination of sample size Methods of sampling. Census: merits and demerits – Census Vs Sampling. Pilot study –Pretest. Primary and Secondary data: Meaning-sources-merits-demerits. Methods of data collection: Observation-Interview-Survey- Email-Schedule and Questionnaire.	6
III	<b>Statistical Tools</b> Statistical tools used in research-Measures of Central tendency – Standard deviation – Correlation – simple, partial and multiple correlation- Report writing: Significance – Layout of research report- mechanics of writing a Research report – Precautions to be followed in Research Report- Types of reports	6
IV	<b>Introduction to IPR</b> Introduction to Intellectual Property Rights- Concept , Theories and Kinds of Intellectual Property Rights – Economic analysis of Intellectual Property Rights- Need for Private Rights versus Public Interests- Advantages and Disadvantages of IPR.	6
V	<b>Norms of IPR</b> Classification of Intellectual Property-Industrial Property, Literary Property Emerging Forms-Traditional forms of IP-Patents, Trademarks, Trade Name Descriptions, Industrial designs, Geographical Indications of Goods, Copyright Related Rights and Trade Secrets-Their characteristic	6

*Note: Distribution of marks: 60% Theory and 40% Problem*

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

**TEXT BOOKS**

1. C.R.Kothari., “Research Methodology”, Second Revised Edition, New Age International Publishers, New Delhi, 2004.
2. P. Narayanan (Eastern Law House), Intellectual Property Law



## REFERENCE BOOKS

1. Murry, R., Spiegel, Larry, J. and Stephens, "Theory and Problems of Statistics", Third Edition, Tata McGraw – Hill Publishing Co. Ltd., New Delhi, 2017.
2. Panneerselvam, R., "Research Methodology", Eleventh Edition, PHI Learning Pvt. Ltd., New Delhi, 2016. 3
3. N.S. Gopalakrishnan & T.G. Agitha, Principles of Intellectual Property (2009), Eastern Book Company, Lucknow
4. Intellectual property right, Deborah, E. BoDcboux, Cengage learning

## WEB RESOURCES

1. [www.managementstudyguide.com](http://www.managementstudyguide.com)
2. [www.pondiuni.edu.in](http://www.pondiuni.edu.in).
3. <https://ipindia.gov.in>

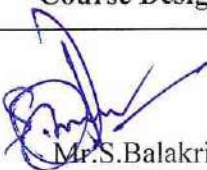
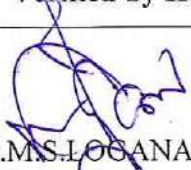

## MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	M	M
CO2	S	M	S	M	S
CO3	S	S	M	S	M
CO4	M	S	S	M	M
CO5	S	M	M	M	S

S-Strong, M- Medium, L – Low

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Mr.S.Balakrishnan Name & Signature of the Staff	 Dr.M.S.LOGANATHAN Name & Signature	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

Course Code:	Open Elective IIT JAM/CUCET						Batch:	2021-2022 & Onwards	
							Semester:		
Hrs/Week:	2	L	2	T	-	P	-	Credits:	2

## SYLLABUS

	GREEN FARMING	Sem:
Unit No.	Topics	Hours
I	<b>Chemistry</b> Atomic structure, Bohr's theory and Schrodinger wave equation, Periodicity in properties, chemical bonding, Properties of S,P,D and F block elements, Complex formation, Coordination compounds, Photochemistry, Stereo chemistry of carbon compounds; Inductive, electromeric, conjugative effects and resonance. Mechanism of organic reactions; soaps and detergents; synthetic polymers.	9
II	<b>Mathematics</b> Sets, Relations and functions, Mathematical Induction, Logarithms. Complex numbers, Linear and Quadratic equations, Sequences and Series, Trigonometry, Cartesian system of rectangular, coordinates, Straights lines and family, Circles, conic sections, Permutation, and combinations. Application of Derivatives, Definite and Indefinite Integrals, Differential equations.	9
III	<b>Physics</b> Physical world and measurement, Elementary statics and dynamics, Kinematics, Laws of motion, Work, Energy and power, electrostatics, current electricity, Magnetic effects of current and magnetism, Electromagnetic induction and alternating current, Electromagnetic waves, Optics, dual nature of matter and radiations, atomic nucleus, Solids and semiconductor devices, Principles of communication, motion of system of particles and rigid body, Gravitation, Mechanics of solids and fluids, Heat and thermodynamics and oscillations, Waves.	12 hrs. 9

**Teaching methods:** Lecturing, PowerPoint Projection through LCD, Assignment, Discussion and Activity.

Course Code:		Digital Marketing			Batch:			2021 -2022 & onwards	
					Semester:				
Hrs/Week:	2	L	2	T	-	P	-	Credits:	1

### COURSE OBJECTIVES

- Providing the knowledge of digital marketing and its importance for marketing success,
- Developing a plan, digital channels and Google AdWords campaigns.
- Knowing the social media planning and implement the knowledge Analytics of digital marketing.
- Analysing the marketing strategies
- Understanding and adapt the global market

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Cognitive knowledge of the skills required in conducting online research and research on online markets.	K1
CO2	Comprehend the importance of conversion and working with digital relationship marketing.	K2
CO3	Analyze the confluence of marketing, operations, and human resources in real-time delivery.	K3
CO4	Estimate and evaluate issues in adapting to globalised markets that are constantly changing and increasingly networked.	K4
CO5	Evaluate the global market condition	K5



## SYLLABUS

<b>Digital Marketing</b>		<b>Sem:</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>Principles of Digital Marketing:</b> Basics of Marketing-What is Digital Marketing?-Comparison of Traditional and Digital Marketing-Statistics of Digital Marketing- Benefits of Digital marketing.	<b>6</b>
<b>II</b>	<b>Latest Digital marketing trends</b> -Digital marketing platforms-Digital Marketing strategy for websites-Career opportunities in digital marketing.	<b>6</b>
<b>III</b>	<b>Social Media Marketing:</b> Introduction to social media marketing-Facebook marketing-Facebook advertising-YouTube marketing-Twitter marketing-LinkedIn marketing-Instagram Marketing-Document Sharing Site	<b>6</b>
<b>IV</b>	<b>Email Marketing:</b> What is Email Marketing-Benefits of email marketing-Basic terminology in email marketing-Email Marketing software.Google AdSense and Affiliate Marketing: Online money earning strategies-Success stories of online entrepreneurs-Planning a website for Adsense-What is Adsense?-Types of Bidding	<b>6</b>
<b>V</b>	<b>Implementing Ads in a Website</b> -What is Affiliate Marketing-Types of Affiliate Marketing-Making Money using Affiliate Marketing-Popular Affiliate Networks-Freelancing Business Strategies.	<b>6</b>

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning

### TEXT BOOK

1. Kevin Urrutia&Wilson Lin, —Digital Marketing Made Easy||, FORBES, Kindle Edition.

### REFERENCE BOOK

1. —eMarketing The essential guide to marketing in a digital world|| author Rob Stokes and the Minds of Quirk

## WEB RESOURCES

1. <https://blendinfotech.com/digital-marketing-India>


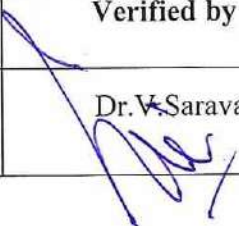
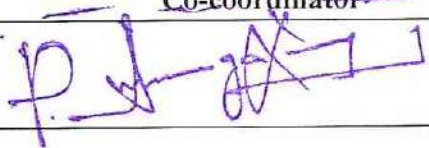
## MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	S	S	S	L	S	M	M
CO2	M	M	M	M	M	L	S
CO3	S	S	S	M	S	M	L
CO4	L	M	M	S	M	S	S
CO5	S	S	S	S	S	S	M

S - Strong; M-Medium; L-Low.

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Mr. G. Ravishankar	 Dr. V. Saravanan	

**Co-ordinator**  
Curriculum Development Cell  
Industhan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>		<b>SAP ERP Fundamentals</b>				<b>Batch:</b>		<b>2020 -2021 &amp; onwards</b>	
						<b>Semester:</b>		-	
<b>Hrs/Week:</b>	<b>2</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>1</b>

**COURSE OBJECTIVES**

- Understanding the knowledge of SAP Architecture and its basics.
- Learning the ERP and SAP technologies.
- Creating ABAP Dictionary
- Analysing ERP via SQL
- Understand the SQL Database Operations

**COURSE OUTCOME(CO)**

<b>S.No</b>	<b>COURSE OUTCOME</b>	<b>BLOOMS LEVEL</b>
CO1	Highlighting the basics of the SAP system.	K1
CO2	Associating ERP and SAP related technologies.	K2
CO3	Determining ERP Manufacturing Perspective and ERP modules.	K3
CO4	ERP implementation lifecycle, emphasis on ERP benefits	K4
CO5	Analysingb the ERP tools via SQL and its Database.	K5



## SYLLABUS

<b>SAP ERP Fundamentals</b>		Sem: _
Unit No.	Topics	Hours
I	<b>SAP Architecture:</b> Presentation Server, Application Server, Database Server - Defining an Instance -Understanding a User Context- Understanding a Roll Area-List and their jobs of background services.	6
II	<b>Introduction to ABAP/4:</b> ABAP/4 Programming concept-Introduction of various types of program-Fundamentals of creation of programs-Introduction of standard Data Types-Declaration of different types of variables	6
III	<b>Loop and Controls-</b> IF structure-Case statement-Loop statement-Control break statement-Data structure-User-Defined Data Types.	6
IV	<b>Introduction of ABAP Dictionary:</b> Overview of Dictionary objects-Overview of Types of Base tables-Creation of Client independent -base tables-Creation of Client dependent base tables-Understanding of standard database tables- Views-Structure-Data Element-Domain-Search Help.	6
V	<b>Introduction of Database Operations:</b> Understanding of Open SQL statement-Understanding of Native SQL statement-Working with Insert, Update, Delete statement-Addition of corresponding fields of statement.	6

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT.
- Flipped Learning and Flipped Classroom.
- Active Learning Forums.
- Usage of Projectors.
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops.
- Availability of E-resources.
- Group Discussions, Group learning-Assignments and Cooperative learning.

## TEXT BOOKS

1. BEGINNER'S GUIDE TO SAP: An Introduction To The Basics of Using SAP- Peter Moxon,Publisher Peter Moxon (11 March 2014)
2. Introduction To SAP for Beginners - by Parveen,Kindle Edition

### REFERENCE BOOK

1. BEGINNERS GUIDE TO SAP ABAP - Peter Moxon; 1st Edition (January 20, 2014)

### WEB RESOURCES

1. <https://sapfidocz.files.wordpress.com/2013/01/sap-book-for-beginners-and-learners.pdf>


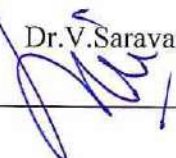
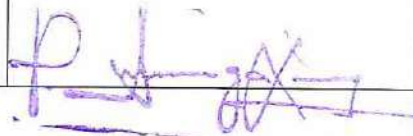
### MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	M	S	S	M	S	M	S
CO2	M	S	L	L	M	L	S
CO3	S	S	S	M	S	M	L
CO4	L	M	M	S	M	S	S
CO5	S	S	S	S	S	S	S

S - Strong; M-Medium; L-Low.

### ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Ms.G.SivaBrindha	 Dr.V.Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>		<b>Digital Humanities</b>			<b>Batch:</b>			<b>2021 -2022 &amp; onwards</b>	
					<b>Semester:</b>			-	
<b>Hrs/Week:</b>	<b>2</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>1</b>

### COURSE OBJECTIVES

- Exploring contested definitions of the digital humanities
- Remembering the digital humanities within the emerging field
- Analysing why the digital humanities matter beyond the academic field itself
- Learning Hands-on experimentation, trying out various types of digital humanities analysis
- Applying heterogeneous datasets, tools, and methods.

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understanding the prospects and limitations of science and technology in digital humanities, their role in society.	K1
CO2	Demonstrate knowledge and understanding of the main field of study and significant in-depth knowledge in some subcategories of the digital humanities	K2
CO3	Analyze, questions, and situations related to the digital humanities as a field of study and work	K3
CO4	Assess, and manage complex phenomena related to the digital humanities	K4
CO5	Dveloping individual's responsibility for how they are used	K5



## SYLLABUS

Digital Humanities		Sem: _
Unit No.	Topics	Hours
I	<b>The digital humanities:</b> Development - Beginnings of the intersection of humanities with computing	6
II	<b>The second wave :</b> qualitative and generative-Present state of DH- DH in India Week.	4
III	<b>Digital Humanities:</b> meaning and nature-Meaning and definitions -Features and principles-Methods and procedures-Using digital technology for academic purposes-Basics of computing, Editing tools	7
IV	Using the Microsoft toolbar and networking tools like the Google drive- <b>Wordpress</b> (blogging)-Wordpress (website) Week-Digital Libraries and Archiving	7
V	<b>Introduction to Opportunities and Challenges:</b> Tools and Systems-Hands-On Work (to be posted on Wordpress)- Presentation of results	6

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning.

## TEXT BOOKS

1. Exploring Digital Humanities in India: Pedagogies, Practices, and Institutional Possibilities - by Maya Dodd (Editor), NidhiKalra (Editor) Routledge India; 1st Edition (July 9, 2020)
2. Digital Humanities - Berry David.M, Polity Press, ISBN: 9780745697666, 9780745697666

## REFERENCE BOOK

1. The Historical Web and Digital Humanities - The Case of National Web Domains By NielsBrütger, DitteLaursen Copyright Year 2019, ISBN 9781138294318, Published March 28, 2019 by Routledge

## WEB RESOURCES

1. [http://klangable.com/uploads/books/Simanowski\\_2016\\_Digital-Humanities-and-Digital-Media.pdf](http://klangable.com/uploads/books/Simanowski_2016_Digital-Humanities-and-Digital-Media.pdf)  
[https://www.deccansoft.com/Documents/SyllabusDocs/7f53e17e-b4a1-45d2-b3b0-bafd2a504d27\\_Syllabus\\_of\\_Digital\\_Marketing.pdf](https://www.deccansoft.com/Documents/SyllabusDocs/7f53e17e-b4a1-45d2-b3b0-bafd2a504d27_Syllabus_of_Digital_Marketing.pdf)



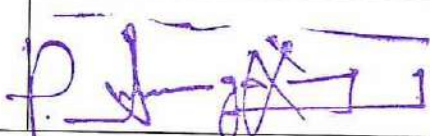
## MAPPING WITH PROGRAM OUTCOMES

CO	PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1		M	S	M	S	M	S	S
CO2		M	M	M	M	M	M	S
CO3		S	S	S	M	S	M	M
CO4		M	M	S	M	M	S	L
CO5		M	M	M	L	M	M	M

S-Strong, M- Medium, L – Low

## ASSESSMENT PATTERN (if deviation from common pattern)

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Ms. G. SivaBrindha	 Dr. V. Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

Course Code:		Master Web Designing in Photoshop						Batch:	2021 -2022 & onwards
								Semester:	-
Hrs/Week:	2	L	2	T	-	P	-	Credits:	1

#### COURSE OBJECTIVES

- Understand and Demonstrate contested definitions of the adobe Illustrator user interface
- Exploring debates about the Adobe via tools within the emerging field
- Understanding and customizing the workspace
- Through hands-on experimentation, trying out painting
- Learning advancement in photoshop

#### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Identify elements of the adobe Illustrator user interface and demonstrate knowledge of their functions.	K1
CO2	Demonstrate knowledge of how to work with brushes, symbols, graphic styles, and patterns.	K2
CO3	Analyse the usage of Color Tools and Shape tools	K3
CO4	Demonstrate knowledge of how to use drawing and shape tools	K4
CO5	Applying the knowledge of how to do painting.	K5



## SYLLABUS

	<b>Master Web Designing in Photoshop</b>	Sem: _
Unit No.	Topics	Hours
I	<b>Workspace:</b> Workspace Basics-Workspace overview-Customizing the workspace	5
II	<b>Tools:</b> Tool Panel Overview-Improved User Interface -Tool Galleries-Files and Templates-Using multiple-Artboards-Viewing Artwork.	6
III	<b>Drawing Basics</b> -Drawing simple lines and shapes-Drawing Pixel aligned paths for web Workflows-Drawing with the pen, Pencil or Flare tool-Editing Paths-Adjust Path Segments-Symbolism tools and symbol sets-Symbols.	7
IV	<b>Selecting Colors</b> -Using and creating swatches-Color groups-Create color themes with kuler-Adjusting Colors.	6
V	<b>Painting:</b> Painting with fills strokes-Live Paint groups-Brushes-Gradients-Meshes-Patterns.	6

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning.

### TEXT BOOKS

1. Adobe Illustrator CC Classroom in a Book, 1 edition, Pearson Education India.
2. Adobe Illustrator CC Classroom in a Book (2017 release) 1st Edition, Kindle Edition

### REFERENCE BOOK

1. Adobe Illustrator CS6 Classroom in a Book by adobe create team

### WEB RESOURCES

1. <https://www.goodreads.com/book/show/14786149-adobe-illustrator-cs6-classroom-in-a-book>


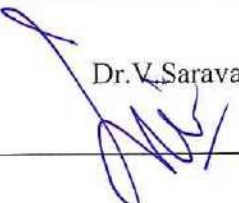

## MAPPING WITH PROGRAM OUTCOMES

PO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
<b>CO1</b>	S	M	M	S	M	M	S
<b>CO2</b>	M	M	S	M	S	S	S
<b>CO3</b>	S	M	S	M	M	M	M
<b>CO4</b>	M	M	M	S	S	M	S
<b>CO5</b>	S	M	S	M	M	M	S

## ASSESSMENT PATTERN *(if deviation from common pattern)*

S-Strong, M- Medium, L – Low

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Ms. U. Sinthuja	 Dr. V. Saravanan	

Co-ordinator  
 Curriculum Development Cell  
 Hindusthan College of Arts & Science,  
 Coimbatore-641 028.

Course Code:	Cyber Law						Batch:	2021 -2022 & onwards	
							Semester:	-	
Hrs/Week:	2	L	2	T	-	P	-	Credits:	1

### COURSE OBJECTIVES

- Understanding and fixing issues which are related to Intellectual Property Rights over cyberspace.
- Understanding to individuals regarding cyberspace at both national and international levels.
- Make the general internet-users aware about the various classifications and types of cybercrime.
- Intercepting and tackling any problems that may arise from online transactions.
- Knowing about Legal and Ethical aspects of crimes in common.

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understanding the Cyber Crimes and Frauds	K1
CO2	Understanding the fraudulent behavior	K2
CO3	Learning IT acts and applying in real life	K3
CO4	Learning Regulation of certifying authorities	K4
CO5	Analysing Cybercrime and computer crime	K5



## SYLLABUS

	<b>Cyber Law</b>	<b>Sem: _</b>
<b>Unit No.</b>	<b>Topics</b>	<b>Hours</b>
<b>I</b>	<b>Cyber Crimes and Frauds</b> - Introduction to Cyber Crime - Cyber Terrorism - Cyber Warfare - Crimes in Social Media - Cyber Fraud and Cyber Cheating	<b>5</b>
<b>II</b>	<b>Email frauds</b> - Credit card frauds & Financial frauds - Telecom Frauds - E Commerce Frauds - Understanding the fraudulent behavior - Fraud triangle - Fraud detection techniques	<b>5</b>
<b>III</b>	<b>IT act aim and objectives, Scope of the act, Major Concepts:</b> Important provisions, Attribution, acknowledgement, and dispatch of electronic records, Secure electronic records and secure digital signatures.	<b>6</b>
<b>IV</b>	<b>Regulation of certifying authorities:</b> Appointment of Controller and Other officers, Digital Signature certificates, Duties of Subscribers, Penalties and adjudication, The cyber regulations appellate tribunal, Offences, Network service providers not to be liable in certain cases, Miscellaneous Provisions.	<b>7</b>
<b>V</b>	<b>Legal and Ethical aspects :</b> Cybercrime and computer crime - Intellectual property – Privacy - Ethical issues - Crimes of the Millennium - Section 80 of IT Act 2000 - NonCognizable offences - Necessity of arrest without warrant - Arrest but no punishment - Security in Cyber laws case studies - General law and cyber law – a swift Analysis.	<b>7</b>

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning.

## TEXT BOOKS

1. William Stallings, (2017), INetwork Security Essentials: Applications and StandardsI, Sixth Edition, Pearson Education.
2. David Alexander, Amanda Finch, David Sutton, (2013), —Information Security Management PrinciplesI, Second Edition, BCS Publishers.
3. William Stallings, Lawrie Brown, (2011), —Computer Security, Principles and PracticesI, Second Edition, Pearson Education.

## REFERENCE BOOKS

1. Cyber Law simplified- VivekSood, Mc-GrawHill, 11th reprint , 2013

2. Cyber Cybersecurity and Cyber Laws, Alfred Basta, Nadine Basta, Mary brown, ravindrakumar, Cengage learning

### WEB RESOURCES

1. <https://www.amazon.in/CYBERLAW-JURISPRUDENCE-2020-PAVAN-DUGGAL-ebook/dp/B08NWX36HJ>


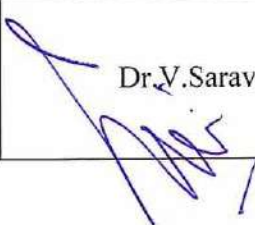
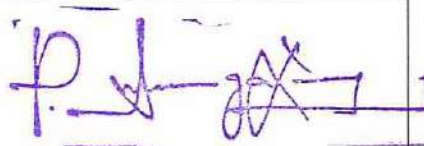
### MAPPING WITH PROGRAM OUTCOMES

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO							
CO1	S	M	M	S	M	S	S
CO2	S	M	S	M	S	M	S
CO3	S	M	S	M	M	S	M
CO4	M	S	M	S	S	M	S
CO5	S	S	S	M	M	M	S

### ASSESSMENT PATTERN *(if deviation from common pattern)*

S-Strong, M- Medium, L – Low

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
 Ms. U. Sindhujha	 Dr. V. Saravanan	

Co-ordinator  
Curriculum Development Cell  
Hindusthan College of Arts & Science,  
Coimbatore-641 028.

<b>Course Code:</b>	<b>Web Services</b>						<b>Batch:</b>	<b>2021 -2022 &amp; onwards</b>	
							<b>Semester:</b>	<b>-</b>	
<b>Hrs/Week:</b>	<b>2</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>-</b>	<b>P</b>	<b>-</b>	<b>Credits:</b>	<b>1</b>

### COURSE OBJECTIVES

- Understanding the details of web services technologies like SOAP, WSDL, and UDDI.
- Learning how to implement and deploy web service client and server.
- Understanding the design principles and application of SOAP and REST based web services (JAX-WS and JAX-RS).
- Understanding WCF service.
- Designing secure web services and QoS of Web Services

### COURSE OUTCOMES (CO)

S.No	COURSE OUTCOME	BLOOMS LEVEL
CO1	Understanding basics of web services technologies	K1
CO2	Demonstrate knowledge of how to work with web service client and server	K2
CO3	Learning and comparing WCF services	K3
CO4	Demonstrate REST based web services (JAX-WS and JAX-RS)	K4
CO5	Applying knowledge of how to do QoS.	K5



## SYLLABUS

	<b>Web Services</b>	Sem: _
Unit No.	Topics	Hours
I	<b>Web services basics</b> : What Are Web Services? Types of Web Services Distributed computing infrastructure, overview of XML, SOAP, Building Web Services with JAX-WS, Registering and Discovering Web Services, Service Oriented Architecture	6
II	Web Services Development Life Cycle, Developing and consuming simple Web Services across platform	4
III	<b>The REST Architectural style</b> : Introducing HTTP, The core architectural elements of a RESTful system, Description and discovery of RESTful web services, Java tools and frameworks for building RESTful web services,	6
IV	JSON message format and tools and frameworks around JSON, Build RESTful web services with JAX-RS APIs, The Description and Discovery of RESTful Web Services, Design guidelines for building RESTful web services, Secure RESTful web services	7
V	<b>Developing Service-Oriented Applications with WCF</b> : What Is Windows Communication Foundation, Fundamental Windows Communication Foundation Concepts, Windows Communication Foundation Architecture, WCF and .NET Framework Client Profile, Basic WCF Programming, WCF Feature Details. Web Service QoS	7

### Teaching methods:

- Use of multi-media/AV (Audio-Visual)/ICT
- Flipped Learning and Flipped Classroom
- Active Learning Forums
- Usage of Projectors
- Inquiry-based learning through quizzing, MCQs, etc.
- Student seminars and workshops
- Availability of E-resources
- Group Discussions, Group learning-Assignments and Cooperative learning.

### TEXT BOOKS

- 1) RESTful Java Web Services, JobineshPurushothaman, PACKT Publishing,2nd Edition, 2015
- 2) Developing Service-Oriented Applications with WCF, Microsoft, 2017
- 3) Web Services: Principles and Technology, Michael P. Papazoglou, Pearson Education Limited, 2008

### REFERENCE BOOKS

- 1) Leonard Richardson and Sam Ruby, RESTful Web Services, O'Reilly, 2007
- 2) The Java EE 6Tutorial, Oracle, 2013

## WEB RESOURCES

1. <https://docs.microsoft.com/en-us/dotnet/framework/wcf/index>


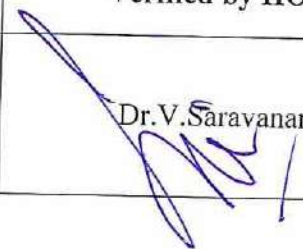

## MAPPING WITH PROGRAM OUTCOMES

POCO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	M	S	M	S	S	L	S
CO2	M	M	M	M	S	M	S
CO3	S	L	S	M	L	S	M
CO4	M	L	M	S	M	M	L
CO5	S	L	S	M	L	M	L

## ASSESSMENT PATTERN *(if deviation from common pattern)*

S-Strong, M- Medium, L – Low

Follows a common pattern of Internal and External assessment, suggested in the Regulations.

Course Designed by	Verified by HOD	Approved by CDC Co-coordinator
Ms.U.Sirithuja 	Dr.V.Saravanan 	

Co-ordinator  
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