DON BOSCO ARTS & SCIENCE COLLEGE

ANGADIKADAVU

(Affiliated to Kannur University Approved by Government of Kerala)

ANGADIKADAVU P.O., IRITTY, KANNUR – 670706

COURSE PLAN

BCA

(2018 – 21)

SEMESTER - VI

ACADEMIC YEAR - (2020-21)

VI Semester BCA (2018 - 21)			
SL. No.	**Name of Subjects with Code**	**Name of the Teacher**	**Duty Hours per week**
1.	**6B 17 BCA Web Technology**	**Sindhu P M**	**2**
2.	**6B 18 BCA Data Mining and Data Warehousing**	**Hebin Layola**	**4**
3.	**6B 19 BCA E01 Information Security(Elective)**	**Vineetha Mathew**	**4**
4.	**6B 20 BCA – E05 Network Programming (Elective)**	**Fincy Cyriac**	**4**
5.	**6B 21 BCA System Software**	**Sruthi N**	**3**
6.	**6B 24 BCA LAB VII- Web Technology**	**Sindhu P M**	**3**
7.	**6B 25 BCA - Lab -VIII Project**	**Vineetha Mathew**	**5**
	Name of Class Incharge	**Vineetha Mathew**	

TIME TABLE

Day	09.50 Am - 10.45 Am	10.45 Am -11.40 Am	11.55 Am -12.50 Pm	01.40 Pm - 02.35 Pm	02.35 Pm - 03.30 Pm
1	6B 19 BCA E01 Information Security	6B 21 BCA System Software	6B 17 BCA Web Technology	6B 18 BCA Data Mining and Data Warehousing	6B 20 BCA – E05 Network Programming
2	6B 19 BCA E01 Information Security	6B 20 BCA – E05 Network Programming	6B 17 BCA Web Technology	6B 21 BCA System Software	6B 18 BCA Data Mining and Data Warehousing
3	6B 19 BCA E01 Information Security	6B 18 BCA Data Mining and Data Warehousing	6B 20 BCA – E05 Network Programming	6B 24 BCA LAB VII- Web Technology	6B 24 BCA LAB VII- Web Technology
4	6B 19 BCA E01 Information Security	6B 18 BCA Data Mining and Data Warehousing	6B 20 BCA – E05 Network Programming	6B 21 BCA System Software	6B 24 BCA LAB VII- Web Technology
5	6B 25 BCA - Lab -VIII Project	6B 25 BCA - Lab -VIII Project	6B 25 BCA - Lab -VIII Project	6B 25 BCA - Lab -VIII Project	6B 25 BCA - Lab -VIII Project

Subject Code:	**6B17BCA**
Subject Name:	**WEB TECHNOLOGY**
No. of Credits:	**2**
No. of Contact Hours:	**2**
Hours per Week:	**2**
Name of the Teacher:	**SINDHU P M**

SYLLABUS

Module -1:

Introduction to internet and web, An overview of internet programming –WWW design issues. Introduction to HTML-structure of HTML,tags,attributes,syntax of tags ,starting and ending tags, html doc elements-<html><title><body>, physical style, tags, listing, labeling, grouping,

Module-2:

Table tags-,, attributes-height,width,rowspan,colspan, border,color. Form-tag attributes-type-passwd, submit, radio, check, method, action.Frame-<frame><frameset><iframe><noframe>and other important tags and attributes.

Module-3:

Javascript- datatypes, variables, function, object, array. Client-side object hierarchy and document.object Model,<script>,event handlers, javascript in urls. Windows and frames dialog boxes, status line, navigator object, opening Windows, closing windows, Location

object, history object.- Date object- math object- Accessing form object.

Module-4:

Intro to PHP and advantages of ,PHP basic-functions, string, array, object, web techniques, database.

Module-5:

Client-server model, introduction to cgi, environment variables, request-response model, encoding and decoding form data. Simple programming in CGI- database.

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	16-11-2020 To 20-11-2020	1	Introduction to internet and web
		2	An overview of internet programming
2	23-11-2020 To 27-11-2020	3	WWW design issues.
		4	Introduction to HTML
3	30-11-2020 To 04-12-2020	5	Structure of HTML
		6	Tags
4	07-12-2020 To 11-12-2020	7	Attributes
		17	Syntax of tags ,starting and ending tags
5	14-12-2020 To 18-12-2020	8	Html doc elements
		9	Physical style tags
6	21-12-2020 To 25-12-2020	21 December	**Christmas Vacation**
		22 December	**Christmas Vacation**
		23 December	**Christmas Vacation**
		24 December	**Christmas Vacation**
		25 December	**Christmas**
7	28-12-2020 To 01-01-2021	10	Listing
		11	Labeling, grouping
8	04-01-2021 To 08-01-2021	12	**MODULE 1 EXAM**
		13	Table tags
9	11-01-2021 To 15-01-2021	14	Attributes-height,width,rowspan,colspan, border,color.
		15	Form-tag attributes
10	18-01-2021 To 22-01-2021	16	Type-passwd, submit, radio, check, method, action
		17	Frame
11	25-01-2021	18	Other important tags and attributes.

No of Weeks	Dates	Session	Topic
	To 29-01-2021	26 January	Republic Day - Holiday
		19	**MODULE 2 EXAM**
12	01-02-2021 To 05-02-2021	20	Javascript, Datatypes
		21	Variables, Function
13	08-02-2021 To 12-02-2021	22	Object, Array
		23	Client-side object hierarchy and document. object Model
14	15-02-2021 To 19-02-2021	24	Client-side object hierarchy and document. object Model
		25	**MODULE3 EXAM**
15	22-02-2021 To 26-02-2021	26	Introduction to PHP and advantages of php
		27	Basic-functions.
16	01-03-2021 To 05-03-2021	28	String, Array
		29	Object, Web techniques
17	08-03-2021 To 12-03-2021	30	Database
		11 March	Maha Sivarathri - Holiday
18	15-03-2021 To 19-03-2021	31	**MODULE 4 EXAM**
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
19	22-03-2021 To 26-03-2021	32	Client-server model, introduction to cgi
		33	Environment variables, request-response model,
20	22-03-2021 To 26-03-2021	34	Encoding and decoding form data.
		35	Simple programming in CGI- database.
21	29-03-2021 To 02-04-2021	29 March	**Talent Hunt**
		36	**MODULE5 EXAM**
		31 March	**Easter vacation**
		01 April	**Easter vacation**
		02 April	**Easter vacation**
22	05-04-2021	05 April	**Easter vacation**

No of Weeks	Dates	Session	Topic
	To 09-04-2021	06 April	**Easter vacation**
		07 April	**Easter vacation**
			Study Leave
			Study Leave
23	05-04-2021 To 09-04-2021		**Study Leave**
			Study Leave
			Study Leave
			Study Leave
			Study Leave
24	12-04-2021		**VI Semester UG University Exam Begin**

Subject Code:	**6B18BCA**
Subject Name:	**DATA MINING & DATA WAREHOUSING**
No. of Credits:	**4**
No. of Contact Hours:	**72**
Hours per Week:	**4**
Name of the Teacher:	**Hebin Layola**

COURSE OBJECTIVE:

- To expose to the students the introduction to data mining and data warehousing.
- To understand the data management aspects data pre processing model and inference considerations, complexity considerations, post processing of discovered structures visualization and online updating

SYLLABUS

Module I

Introduction; data warehousing – what is, Multidimensional data model, OLAP operations, warehouse schema, Data warehousing Architecture, warehouse server, Metadata, OLAP engine, data warehouse Backend Process.

Module II

Data mining – what is, KDD vs data mining, DBMS vs data mining, DM Techniques, issues and challenges, Applications. (Case studies) *

Module III

Association rules – What is, Methods, a priori algorithm, partition algorithm, Pincersearch algorithm, FP-tree growth algorithm, incremental and Border algorithms, Generalized Association rule.

Module IV

Clustering techniques – Paradigms, Partitioning Algorithms, k – Medoid algorithms, CLARA, CLARANS, hierarchical clustering, DBSCAN, Categorical Clustering, STIRR.

Module V

Decision trees – what is, tree construction principles, Best split, Splitting indices, Splitting criteria, decision tree construction algorithms, CART, ID3, C4.5, CHAID. Introduction to web, spatial and temporal data mioning.

Text book :

1. Data Mining Techniques, A K Pujari, University press.

Reference :

1. J. Han, M. Kamber, “Data Mining Concepts and Techniques”, Harcourt India Pvt Ltd.
2. M. Dunham, “ Data Mining : introductory and Advanced Topics”, Pearson Pub.

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	16-11-2020 To 20-11-2020	1	Introduction
		2	Data ware housing-what is.
		3	Multidimensional data model
		4	OLAP operations
2	23-11-2020 To 27-11-2020	5	Warehouse schema
		6	Data ware housing architecture
		7	Warehouse server
		8	metadata
3	30-11-2020 To 04-12-2020	9	Data warehouse backend process
		10	Module 1 –revision
		11	Module 1-unit test
		12	Module 2-what is data mining
4	07-12-2020 To 11-12-2020	13	KDD vs data mining
		14	DBMS vs dataminning
		15	DM techniques
		16	Issues and challenges
5	14-12-2020 To 18-12-2020	17	Data mining applications
		18	Case studies
		19	Case studies
6	21-12-2020 To 25-12-2020	21 December	**Christmas Vacation**
		22 December	**Christmas Vacation**
		23 December	**Christmas Vacation**
		24 December	**Christmas Vacation**
		25 December	**Christmas**
7	28-12-2020 To 01-01-2021	20	Module ii-Revision
		21	Module ii-Exam
		22	Module III-Association rules-what is
		23	Methods
8	04-01-2021 To 08-01-2021	24	Apriori algorithm
		25	Apriori algorithm
		26	Partition algorithm
		27	Pincer search algorithm
9	11-01-2021	28	Pincer search algorithm
		29	FP-tree growth algorithm

No of Weeks	Dates	Session	Topic
	To 15-01-2021	30	FP-tree growth algorithm
		31	Partitioning algorithms
10	18-01-2021 To 22-01-2021	32	Partitioning algorithms
		33	Incremental Algoritm
		34	Border algorithms
		35	Generalized Association rule
11	25-01-2021 To 29-01-2021	36	Module III-Revision
		26 January	Republic Day - Holiday
		37	Module III-Exam
		38	Module IV-Clustering techniques
12	01-02-2021 To 05-02-2021	39	Paradigms
		40	K-Medoid algorithms
		41	CLARA
		42	CLARANS
13	08-02-2021 To 12-02-2021	43	Hierarchical clustering
		44	DBSCAN
		45	Categorical Clustering
		46	STIRR
14	15-02-2021 To 19-02-2021	47	Module IV-Revision
		48	Module IV-Exam
		49	Module V-Decision trees-what is
		50	Tree construction principles
15	22-02-2021 To 26-02-2021	51	Best split
		52	Splitting indices
		53	Spliting criteria
		54	Decision tree construction algorithms
16	01-03-2021 To 05-03-2021	55	CART
		56	ID3
		57	C4.5
		58	Chaid
17	08-03-2021 To 12-03-2021	59	Introduction to web
		60	Spatial Data mining
		61	Temporal Data mining
		11 March	Maha Sivarathri - Holiday
18	15-03-2021 To	62	Sequence data mining
		63	Text mining
			VI Semester UG Internal Exam

No of Weeks	Dates	Session	Topic
	19-03-2021		**VI Semester UG Internal Exam**
			VI Semester UG Internal Exam
19	22-03-2021 To 26-03-2021	64	Deviation Detection
		65	Revision &Class Test
		66	Revision-QP-Discussion
		67	Revision-QP-Discussion
20	22-03-2021 To 26-03-2021	68	Revision-QP-Discussion
		69	Revision-QP-Discussion
		70	Class Test
		71	Class Test
21	29-03-2021 To 02-04-2021	29 March	**Talent Hunt**
		72	Revision
		31 March	**Easter vacation**
		01 April	**Easter vacation**
		02 April	**Easter vacation**
22	05-04-2021 To 09-04-2021	05 April	**Easter vacation**
		06 April	**Easter vacation**
		07 April	**Easter vacation**
			Study Leave
			Study Leave
23	05-04-2021 To 09-04-2021		**Study Leave**
			Study Leave
			Study Leave
			Study Leave
			Study Leave
24	12-04-2021		**VI Semester UG University Exam Begin**

Subject Code:	**6B 19 BCA - E01**
Subject Name:	**INFORMATION SECURITY**
No. of Credits:	**3**
No. of Contact Hours:	**72**
Hours per Week:	**4**
Name of the Teacher:	**Vineetha Mathew**

SYLLABUS

Module I

Introduction to Information Security- The need for Security, Principles of security - confidentiality, Authentications, Integrity, Non-repudiation. Types of attacks- Passive attacks, Active attacks, Virus, Worm, Trojan horse. Introduction to Cryptography, Steganography, Secret Sharing.

Module II Symmetric Key Encipherment:-

Traditional symmetric Key Ciphers: Introduction-Kirchhoff's principle, cryptanalysis, categories of traditional ciphers; Substitution Ciphers - monoalphabetic ciphers, polyalphabetic ciphers; Transposition Ciphers - keyless and keyed transposition ciphers, Stream and Black Ciphers - stream ciphers, block ciphers.

Module III DES(Data Encryption Standard):-

Introduction, DES Structure - initial and final permutations, rounds, cipher and reverse cipher, examples; DES Analysis - properties, design criteria, DES weaknesses; Multiple DES - double DES, triple DES; Security of DES - brute-force attack, differential cryptanalysis, linear cryptanalysis.

Module IV Public key Cryptosystem:

Principles of Public Key Cryptosystems- Public Key Cryptosystem, Applications of Key Cryptosystems, Requirement for Public Key Cryptosystem, Public Key Cryptanalysis. RSA Algorithm – Description of the Algorithm, Computational Aspects, Security of RSA.

Module V Digital Signature:-

Comparison- inclusion, verification method, relationship, duplicity; Process- needs for keys, signing the digest; Service- message authentication, message integrity,

nonrepudiation, confidentiality; Attacks on Digital Signature- attack types; Digital Signature Schemes- RSA digital signature schemes

Text Books:

1. Cryptography and Network Security", Behrouz A Forouzan, Tata McGraw-Hill Publishing Company Limited, Special Indian Edition 2007. (For Module - I, II, III, V).

2. Cryptography and Network Security Principles and Practices, Willian Stalling, Pearson Education (For Module - IV).

Reference:

1. Fundamentals of computer security, Josef Pieprzyk, Thomas hardjino and Jennifer Sebberry, Springer International Edition 2008

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	16-11-2020 To 20-11-2020	1	Introduction to Information Security-
		2	The need for Security
		3	Principles of security - confidentiality, Authentications
		4	Integrity, Non-repudiation.
2	23-11-2020 To 27-11-2020	5	Types of attacks- Passive attacks
		6	Active attacks
		7	Virus, Worm
		8	Trojan horse.
3	30-11-2020 To 04-12-2020	9	Introduction to Cryptography
		10	Steganography
		11	Steganography
		12	Secret Sharing.
4	07-12-2020 To 11-12-2020	13	Revision
		14	Class Test
		15	Introduction-Traditional symmetric Key Ciphers
		16	Kirchhoff's principle
5	14-12-2020 To 18-12-2020	17	Cryptanalysis
		18	Categories of traditional ciphers
		19	Substitution Ciphers - monoalphabetic ciphers
		20	Monoalphabetic ciphers
6	21-12-2020 To 25-12-2020	21 December	**Christmas Vacation**
		22 December	**Christmas Vacation**
		23 December	**Christmas Vacation**
		24 December	**Christmas Vacation**
		25 December	**Christmas**
7	28-12-2020 To 01-01-2021	21	Monoalphabetic ciphers
		22	Monoalphabetic ciphers
		23	Polyalphabetic ciphers
		24	Polyalphabetic ciphers
8	04-01-2021 To 08-01-2021	25	Polyalphabetic ciphers
		26	Transposition Ciphers - keyless transposition ciphers
		27	Transposition Ciphers -keyed transposition ciphers
		28	Stream and Black Ciphers - stream ciphers, block ciphers.
9	11-01-2021	29	Revision

No of Weeks	Dates	Session	Topic
	To 15-01-2021	30	Class Test
		31	Introduction, DES Structure
		32	Initial and final permutations
10	18-01-2021 To 22-01-2021	33	Rounds
		34	Cipher and reverse cipher
		35	Examples
		36	DES Analysis - Properties
11	25-01-2021 To 29-01-2021	37	DES Analysis - Design criteria
		26 January	**Republic Day - Holiday**
		38	DES weaknesses
		39	Multiple DES - double DES
		40	Meet in the Middle Attack
12	01-02-2021 To 05-02-2021	41	Triple DES
		42	Security of DES - brute-force attack, differential cryptanalysis, linear cryptanalysis.
		43	Revision
		44	Class Test
13	08-02-2021 To 12-02-2021	45	Principles of Public Key Cryptosystems
		46	Public Key Cryptosystem
		47	Applications of Key Cryptosystems
		48	Requirement for Public Key Cryptosystem
14	15-02-2021 To 19-02-2021	49	Public Key Cryptanalysis.
		50	RSA Algorithm – Description of the Algorithm
		51	Example RSA
		52	Sample questions on RSA
15	22-02-2021 To 26-02-2021	53	Computational Aspects
		54	Security of RSA.
		55	Comparison- inclusion, verification method, relationship, duplicity
		56	Process- needs for keys
16	01-03-2021 To 05-03-2021	57	Signing the digest
		58	Service- message authentication, message integrity, nonrepudiation, confidentiality
		59	Attacks on Digital Signature- attack types;
		60	Digital Signature Schemes- RSA digital signature schemes
17	08-03-2021	61	Revision
		62	Class Test

No of Weeks	Dates	Session	Topic
	To 12-03-2021	63	Revision Module 1
		11 March	**Maha Sivarathri - Holiday**
18	15-03-2021 To 19-03-2021	64	Revision Module 2
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
19	22-03-2021 To 26-03-2021	65	Revision Module 3
		66	Revision Module 4
		67	Revision Module 5
		68	Previous Question Paper Discussion
20	22-03-2021 To 26-03-2021	69	Previous Question Paper Discussion
		70	Previous Question Paper Discussion
		71	Previous Question Paper Discussion
		72	Previous Question Paper Discussion
21	29-03-2021 To 02-04-2021	29 March	**Talent Hunt**
		31 March	**Easter vacation**
		01 April	**Easter vacation**
		02 April	**Easter vacation**
22	05-04-2021 To 09-04-2021	05 April	**Easter vacation**
		06 April	**Easter vacation**
		07 April	**Easter vacation**
			Study Leave
			Study Leave
23	05-04-2021 To 09-04-2021		**Study Leave**
			Study Leave
			Study Leave
			Study Leave
			Study Leave
24	12-04-2021		**VI Semester UG University Exam Begin**

Subject Code:	**6B 20BCA - E05**
Subject Name:	**Network Programming**
No. of Credits:	**3**
No. of Contact Hours:	**72**
Hours per Week:	**4**
Name of the Teacher:	**Fincy Cyriac**

SYLLABUS

Module I

Introduction – A Simple Day Time Client – Protocol Independence – Error Handling– A Simple - Day Time Server.The Transport Layer : TCP, UDP – TCP Connection Establishment and Termination – TIME_WAIT State – Port Numbers – Concurrent Servers – Buffer Size and Limitations – Standard Internet Services – Protocol Usage by Common Internet Applications.

Module II

Socket Introduction – Socket address Structures – Byte Ordering Functions – Byte Manipulation Functions – Elementary TCP Sockets – socket , connect, bind, listen, accept, fork and exec, close, getsockname and getpeername functions

Module III

TCP Client/Server Example – TCP Echo Server - main(), str_echo() – TCP Echo Client -main(), str_cli() – startup – termination – Shutdown of Server Host.

Module IV

Socket Options – getsockopt and setsockopt functions – Socket States – Generic Socket Options – TCP Socket Options.

Module V

Name and Address Conversions - DNS – gethostbyname – gethostbyaddr – getservbyname – getservbyport – getaddrinfo – freeaddrinfo – host_serv – tcp_connect –tcp_listen functions.

Text Book

1. W. Richard Stevens, Bill Fenner, Andrew M. Rudoff, “Unix Network Programming
The Sockets Networking API Volume I”, Pearson Education

Reference

1. Barry Nance, “Network Programming in C”, Prentice Hall

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	16-11-2020 To 20-11-2020	1	Introduction
		2	A Simple Day Time Client
		3	Protocol Independence
		4	Error Handling
2	23-11-2020 To 27-11-2020	5	A Simple - Day Time Server
		6	The Transport Layer
		7	TCP
		8	UDP
3	30-11-2020 To 04-12-2020	9	TCP Connection Establishment
		10	TCP Connection Termination
		11	TIME_WAIT State
		12	Port Numbers
4	07-12-2020 To 11-12-2020	13	Concurrent Servers
		14	Buffer Size and Limitations
		15	Standard Internet Services
5	14-12-2020 To 18-12-2020	16	Protocol Usage by Common Internet Applications.
		17	Module 1 class test
		18	Socket Introduction
6	21-12-2020 To 25-12-2020	21 December	**Christmas Vacation**
		22 December	**Christmas Vacation**
		23 December	**Christmas Vacation**
		24 December	**Christmas Vacation**
		25 December	**Christmas**
7	28-12-2020 To 01-01-2021	19	Socket address Structures
		20	Byte Ordering Functions
		21	Byte Manipulation Functions
8	04-01-2021 To 08-01-2021	22	Elementary TCP Sockets – socket
		23	Elementary TCP Sockets – connect
		24	Elementary TCP Sockets – bind
		25	Elementary TCP Sockets – listen
9	11-01-2021 To 15-01-2021	26	Elementary TCP Sockets – accept
		27	Elementary TCP Sockets –fork
		28	Elementary TCP Sockets – exec
		29	Elementary TCP Sockets –close

No of Weeks	Dates	Session	Topic
10	18-01-2021 To 22-01-2021	30	getsockname
		31	getpeername
		32	Module 2 class test
		33	TCP Client/Server Example
11	25-01-2021 To 29-01-2021	34	TCP Echo Server – main()
		26 January	Republic Day - Holiday
		35	TCP Echo Server – main()
		36	TCP Echo Server - str_echo()
12	01-02-2021 To 05-02-2021	37	TCP Echo Server - str_echo()
		38	TCP Echo Client –main()
		39	TCP Echo Client –main()
		40	TCP Echo Client - str_cli()
13	08-02-2021 To 12-02-2021	41	Startup
		42	Termination
		43	Shutdown of Server Host.
		44	Module 3 class test
14	15-02-2021 To 19-02-2021	45	Socket Options
		46	getsockopt function
		47	setsockopt function.
		48	Socket States
		49	Generic Socket Options
15	22-02-2021 To 26-02-2021	50	Generic Socket Options
		51	Generic Socket Options
		52	TCP Socket Options
		53	Module 4 class test
16	01-03-2021 To 05-03-2021	54	Name and Address Conversions -
		55	DNS
		56	gethostbyname
		57	gethostbyaddr
17	08-03-2021 To 12-03-2021	58	getservbyname
		59	getservbyport
		60	getaddrinfo
		61	freeaddrinfo.
		11 March	Maha Sivarathri - Holiday
18	15-03-2021 To 19-03-2021	62	host_serv
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam

No of Weeks	Dates	Session	Topic
		63	tcp_connect
19	22-03-2021 To 26-03-92021	64	tcp_listen functions
		65	Module 5 class test
		66	Previous years question paper discussion
		67	Previous years question paper discussion
20	22-03-2021 To 26-03-2021	68	Revision module 1
		69	Revision module 2
		70	Revision module 3
		71	Revision module 4
21	29-03-2021 To 02-04-2021	29 March	**Talent Hunt**
		72	Revision module 5
		31 March	**Easter vacation**
		01 April	**Easter vacation**
		02 April	**Easter vacation**
22	05-04-2021 To 09-04-2021	05 April	**Easter vacation**
		06 April	**Easter vacation**
		07 April	**Easter vacation**
			Study Leave
			Study Leave
23	05-04-2021 To 09-04-2021		**Study Leave**
			Study Leave
			Study Leave
			Study Leave
			Study Leave
24	12-04-2021		**VI Semester UG University Exam Begin**

Subject Code:	**6B21BCA**
Subject Name:	**SYSTEM SOFTWARE**
No. of Credits:	**2**
No. of Contact Hours:	**3**
Hours per Week:	**54**
Name of the Teacher:	**SRUTHI N**

OBJECTIVES

1. Introduce formal language processing activities.
2. Basic idea of assembly language programming and role of assembler.
3. Insight into Design of assemblers and macro processors.
4. Concept of Macros and Macro pre-processors.
5. Overview of various aspects of compilers.
6. Concepts and design aspects of linkers and loaders.

SYLLABUS

Module I

Introduction – Evolution – Language processing activities – Fundamentals of language processing and specification – Development tools – Data structures for language processing

Module II

Scanning and parsing – Elements of ALP – Assembly scheme – Pass structure of assemblers – Two pass assembler – Single pass assembler

Module III

Macros: Definition and call – Expansion – Nested macro calls - Advanced macro facilities – Macro preprocessor.

Module IV

Compiler: Compilation – Memory allocation – Compilation of expressions and control structures – Code optimization – Interpreters.

Module V

Linker: Design – Relocation and linking – Self relocating programs – Linker for MS DOS – Linking for Overlays – Loader

Text Book:

D M Dhamdhere, “Systems Programming and Operating Systems”, Tata McGraw-Hill

Reference:

John J Donovan, “Systems Programming”, Tata McGraw-Hill

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	16-11-2020 To 20-11-2020	1	Introduction – Evolution
		2	Language processing activities
		3	Language processing activities
2	23-11-2020 To 27-11-2020	4	Fundamentals of language processing and specification
		5	Fundamentals of language processing and specification
		6	Development tools
3	30-11-2020 To 04-12-2020	7	Data structures for language processing
		8	Data structures for language processing
		9	Revision module 1
4	07-12-2020 To 11-12-2020	10	Class test Module1
		11	Scanning and parsing
		12	Elements of ALP
5	14-12-2020 To 18-12-2020	13	Assembly scheme
		14	Pass structure of assemblers
		15	Two pass assembler
6	21-12-2020 To 25-12-2020	21 December	**Christmas Vacation**
		22 December	**Christmas Vacation**
		23 December	**Christmas Vacation**
		24 December	**Christmas Vacation**
		25 December	**Christmas**
7	28-12-2020 To 01-01-2021	16	Single pass assembler
		17	Single pass assembler
		18	Revision module 2
8	04-01-2021 To 08-01-2021	19	Class test Module 2
		20	Macros: Definition and call
		21	Expansion – Nested macro calls
9	11-01-2021 To 15-01-2021	22	Advanced macro facilities
		23	Macro preprocessor.
		24	Revision module 3
10	18-01-2021 To	25	Class test Module 3
		26	Compiler: Compilation

	22-01-2021	27	Memory allocation
11	25-01-2021 To 29-01-2021	28	Compilation of expressions and control structures
		26 January	Republic Day - Holiday
		29	Compilation of expressions and control structures
12	01-02-2021 To 05-02-2021	30	Code optimization
		31	Code optimization
		32	Code optimization
13	08-02-2021 To 12-02-2021	33	Interpreters
		34	Interpreters
		35	Revision module 1,2 &3
14	15-02-2021 To 19-02-2021	36	Revision module 4
		37	Class test Module 4
		38	Linker: Design
15	22-02-2021 To 26-02-2021	39	Relocation and linking
		40	Relocation and linking
		41	Self relocating programs
16	01-03-2021 To 05-03-2021	42	Self relocating programs
		43	Linker for MS DOS
		44	Linker for MS DOS
17	08-03-2021 To 12-03-2021	45	Linking for Overlays
		46	Linking for Overlays
		11 March	Maha Sivarathri - Holiday
18	15-03-2021 To 19-03-2021	47	Loader
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
		48	Loader
19	22-03-2021 To 26-03-2021	49	Revision module 1&2
		50	Class test Module 1&2
		51	Revision module 3
20	22-03-2021 To 26-03-2021	52	Class test Module 3
		53	Revision module 4&5
		54	Class test Module 4&5
21	29-03-2021 To 02-04-2021	29 March	**Talent Hunt**
		31 March	**Easter vacation**
		01 April	**Easter vacation**
		02 April	**Easter vacation**

22	05-04-2021 To 09-04-2021	05 April	**Easter vacation**
		06 April	**Easter vacation**
		07 April	**Easter vacation**
			Study Leave
			Study Leave
23	05-04-2021 To 09-04-2021		**Study Leave**
			Study Leave
			Study Leave
			Study Leave
			Study Leave
24	12-04-2021		**VI Semester UG University Exam Begin**

Subject Code:	**6B 24 BCA Lab – VII**
Subject Name:	**Web Technology**
No. of Credits:	**2**
No. of Contact Hours:	**3**
Hours per Week:	**3**
Name of the Teacher:	**SINDHU P M**

Sample Program list

1. Develop an HTML page using all basic tags
2. Develop an HTML page containing all types of lists
3. Write an HTML code to insert an image into the web page. Use the attributes height, width and border. Also align some text with respect to the images
4. Create a web page giving the following train details in a tabular form with the heading Train Time Table.
5. Train name, starting place, destination, arrival and departure time and fare
6. Create an HTML page with images. Clicking on the images should lead to external documents.
7. Form Validation using Java Script
8. Create a web page for your college using frames, images and hyper links
9. Create an email registration form. Give necessary validations
10. Write a JavaScript code using arrays
11. Create a web page that illustrate the onMouseOver and onMouseOut event handlers
12. Develop an HTML page that accepts any mathematical expression, evaluates that expression and display the result of the evaluation
13. Write a Javascript program to display the current time
14. Write a Javascript program to print the prime numbers within a range
15. Write a Javascript program to show the working of alert()
16. Write a JavaScript program to find the factorial of a number.
17. Form Processing using PHP
18. Form validation using PHP
19. Storing data in MYSQL using PHP

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	16-11-2020 To 20-11-2020	1	Develop an HTML page using all basic tags
		2	Develop an HTML page using all basic tags
		3	Develop an HTML page containing all types of lists
2	23-11-2020 To 27-11-2020	4	Develop an HTML page containing all types of lists
		5	Write an HTML code to insert an image into the web page. Use the attributes height, width and border. Also align some text with respect to the images
		6	Write an HTML code to insert an image into the web page. Use the attributes height, width and border. Also align some text with respect to the images
3	30-11-2020 To 04-12-2020	7	Create a web page giving the following train details in a tabular form with the heading Train Time Table. Train name, starting place, destination, arrival and departure time and fare.
		8	Create a web page giving the following train details in a tabular form with the heading Train Time Table. Train name, starting place, destination, arrival and departure time and fare.
		9	Create a web page giving the following train details in a tabular form with the heading Train Time Table. Train name, starting place, destination, arrival and departure time and fare .
4	07-12-2020 To 11-12-2020	10	Create an HTML page with images. Clicking on the images should lead to external documents.
		11	Create an HTML page with images. Clicking on the images should lead to external documents.
		12	Create an HTML page with images. Clicking on the images should lead to external documents.
5	14-12-2020 To 18-12-2020	13	Form Validation using Java Script
		14	Form Validation using Java Script
		15	Form Validation using Java Script
6	21-12-2020 To 25-12-2020	21 December	**Christmas Vacation**
		22 December	**Christmas Vacation**
		23 December	**Christmas Vacation**
		24 December	**Christmas Vacation**
		25 December	**Christmas**
7	28-12-2020 To 01-01-2021	16	Create a web page for your college using frames, images and hyper links
		17	Create a web page for your college using frames, images and hyper links

No of Weeks	Dates	Session	Topic
		18	Create a web page for your college using frames, images and hyper links
8	04-01-2021 To 08-01-2021	19	Create an email registration form. Give necessary validations
		20	Create an email registration form. Give necessary validations
		21	Create an email registration form. Give necessary validations
9	11-01-2021 To 15-01-2021	22	Write a JavaScript code using arrays
		23	Write a JavaScript code using arrays
		24	Write a JavaScript code using arrays
10	18-01-2021 To 22-01-2021	25	Create a web page that illustrate the onMouseOver and onMouseOut event handlers
		26	Create a web page that illustrate the onMouseOver and onMouseOut event handlers
		27	Create a web page that illustrate the onMouseOver and onMouseOut event handlers
11	25-01-2021 To 29-01-2021	28	Develop an HTML page that accepts any mathematical expression, evaluates that expression and display the result of the evaluation
		26 January	Republic Day - Holiday
		29	Develop an HTML page that accepts any mathematical expression, evaluates that expression and display the result of the evaluation
		30	Develop an HTML page that accepts any mathematical expression, evaluates that expression and display the result of the evaluation
12	01-02-2021 To 05-02-2021	31	Write a Javascript program to display the current time
		32	Write a Javascript program to display the current time
		33	Write a Javascript program to display the current time
13	08-02-2021 To 12-02-2021	34	Write a Javascript program to print the prime numbers within a range
		35	Write a Javascript program to print the prime numbers within a range
		36	Write a Javascript program to print the prime numbers within a range
14	15-02-2021 To 19-02-2021	37	Write a Javascript program to show the working of alert()
		38	Write a Javascript program to show the working of alert()
		39	Write a Javascript program to show the working of

No of Weeks	Dates	Session	Topic
			alert()
15	22-02-2021 To 26-02-2021	40	Write a JavaScript program to find the factorial of a number.
		41	Write a JavaScript program to find the factorial of a number.
		42	Write a JavaScript program to find the factorial of a number.
16	01-03-2021 To 05-03-2021	43	Form Processing using PHP
		44	Form Processing using PHP
		45	Form validation using PHP
17	08-03-2021 To 12-03-2021	46	Form validation using PHP
		47	Form validation using PHP
		48	Storing data in MYSQL using PHP
		11 March	Maha Sivarathri - Holiday
18	15-03-2021 To 19-03-2021		**VI Semester UG Internal Exam**
			VI Semester UG Internal Exam
			VI Semester UG Internal Exam
		49	Storing data in MYSQL using PHP
		50	Storing data in MYSQL using PHP
20	22-03-2021 To 26-03-2021	51	Storing data in MYSQL using PHP
		52	Model practical exam1
		53	Model practical exam 2
21	29-03-2021 To 02-04-2021	29 March	**Talent Hunt**
		54	Model practical exam 3
		31 March	**Easter vacation**
		01 April	**Easter vacation**
		02 April	**Easter vacation**
22	05-04-2021 To 09-04-2021	05 April	**Easter vacation**
		06 April	**Easter vacation**
		07 April	**Easter vacation**
			Study Leave
			Study Leave
23	05-04-2021 To 09-04-2021		**Study Leave**
			Study Leave
			Study Leave
			Study Leave
			Study Leave
24	12-04-2021		**VI Semester UG University Exam Begin**