MILAGRES COLLEGE

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Office of the Principal **87626 90235**

2013-14 Cs th yrs

PAPER-XXII	BCA-506-E2.3 : LAMP TECHNOLOGY	48 hours
Theory/Week: 4 Hrs Credits: 2		I A: 20 Exam: 80
	UNIT-I	12 Hrs.

Linux Operating System: Linux Operating System Concepts and Architecture; Overview of the Linux Kernel, User Space, Kernel Space; Processes and Daemons, Process Control; Overview of Linux Administration; Linux File system, User, Group and Resource Management; Configuration Files Overview; File system Permissions, Access Permissions and Security, Common Filesystem Commands, Recursion Option in Commands, Find, Grep, Cat, More, Less and Sort Commands.

	UNIT-II	12 Hrs.

Apache Web Server: Linux distribution Apache Installation; Starting and stopping Web Server Apache Configuration files; Apache Directives – Server Configuration, Directory level configuration: htaccess and <Directory>, Access Control, URL Pathnames, MIME types, CGI files, Automatic directory Indexing, Authentication, Log files; Virtual Hosting – IP Address Virtual Host, Name Based Virtual Host, Dynamic Virtual Hosting; Server Side includes; Apache GUI Configuration Tools â Comanche and linuxconf; Web Server Security –SSL; Apache Web Server Configuration files

	UNIT-III	12 Hrs.

HTML/XHTML and HTTP: basics review, PHP and the web server Architecture model, Overview of PHP capabilities, CGI vs. Shared Object Model, PHP HTML Embedding Tags and Syntax, simple PHP script example; PHP and HTTP environment variables

MYSQL Database Server: Installation- precompiled packages, post installed configuration, post installed troubleshooting; MySQL Administration; Commands – myisamchk, mysql, mysqladmin, mysqlbug, mysqlimport, mysqlshow; Creating users and granting them permissions; Creating databases; Data types; Creating a table; Graphical tools

PHP: Obtaining, Installing and configuring PHP; obtaining PHP Source code; Installing PHP from Binary Packages; PHP and security considerations; PHP configuration parameters and the php.ini File; Language Options, Register Globals and Security Resource limits parameters, Error Handling and Logging parameters; Data handling parameters, Paths and Directories, Dynamic Extensions, Checking install with phpinfo function.

	UNIT-IV	12 Hrs.

PHP Language core: Variables, Constants and Datatypes, and Operators; Decision making, Flow control and loops; Arrays and Array operations, Two dimensional and multidimensional arrays, Strings and strings operations; Functions, Function Declaration and parameter passing; Outputting data, include and require statements; file and Directory Access Operation; Error Handling and Reporting Considerations; Processing HTML From Input from the User ; Creating a Dynamic HTML Form with PHP; Login and Authenticating Users; Using GET, POST, SESSION and COOKIES variable; Session management and Variables; Working with Cookies, Sending Emails; Object Oriented PHP: Classes and Constructors

Database Operation With PHP: Built-in Database Function ,Connecting to a MySQl Database; Selecting a Database, Building and Sending the Query to Database; Engine, Retrieving Result â¢€ Retrieving, Updating and Inserting Data; Sample Database Routines and Code Segments, Logging Database; Operations for Troubleshooting

2018-2019

MANGALORE UNIVERSITY

Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

I SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC131	Fundamentals of Information Technology	4	3	20	80	100	2
	BCAC132	Problem Solving using C	4	3	20	80	100	2
	BCAC133	Computer Organization	4	3	20	80	100	2
	BCAP134	Office Automation Lab	4	3	20	80	100	2
	BCAP135	C Programming Lab	4	3	20	80	100	2
II	BCACE136 BCACE137	E1 : Internet Basics & HTML (*) E2: Cloud Computing	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC & CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

II SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC181	Basic Mathematics	4	3	20	80	100	2
	BCAC182	Object Oriented Programming using C++	4	3	20	80	100	2
	BCAC183	Database Concepts and Oracle	4	3	20	80	100	2
	BCAP184	C++ Lab	4	3	20	80	100	2
	BCAP185	DBMS Lab	4	3	20	80	100	2
II	BCACE186 BCACE187 BCACE188	E1 : Internet of Things (*) E2: Big Data Analytics E3: Artificial Intelligence	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	34	27	210	640	850	17

2018-19

Group-II
Course-1

Elective - I : Semester Supportive Course

24 Hours

Theory : 2 hrs/week
Credits : 1

BCACE 136-E1 Internet Basics & HTML

IA : 10
Exam : 40

Learning Objectives

- To provides knowledge about basic concepts of internet and its applications and about various 5nternet tools available. Also to learn HTML instructions to develop simple web pages
- **Learning Outcome :**

At the end of the course the students will be able to

- Understand features of Internet and email
- Develop Simple web pages using HTML & Style Sheets

UNIT I **12 Hrs**

The Internet : Introduction, Evolution, basic internet terms, Getting connect to internet, Internet applications, Data over the internet **Internet tools:** Web browser, Web browser features, Internet Explorer environment, Electronic mail, Email address structure, checking email,sending email, email attachment, How email works, advantages and disadvantages of email,

Search Engines: Searching an internet, refining the search, Instant messaging, Features of messangers.

UNIT II **12 Hrs**

Creating Web page using HTML tags: Concepts of HTML, Head & Body Sections,Building HTML documents using various text formatting tags: <H1>...<H6>, <B>,<U>,<I>, <FONT>, <SUP><SUB><P> with align,
<BLOCKQUOTE>
<BODY> with attributes bgcolor, background,text, <HR> with size,color, Lists: Ordered, unordered and definition lists, <IMG> <A>
Creating tables : <TABLE>,<CAPTION>,<TH><TR><TD> with various attributes
Creating frames <FRAMESET>,<FRAME> tags with attributes-
Creating FORMS with elements <Input> types textbox, radio, checkbox, list box, combo box,text area, submit, button , reset. Cascading Stylesheets : Inline, embedded and external stylesheets with examples by applying font, background and box properties.

Text Books :

1. ITL Education Solution Limited, **Introduction to Information Technology**, PearsonEducation, 2012
2. Steven Holzner, HTML Black book, dreamtech publisher, 2010

2019-20

Group II Course : 1	Elective -II: Expanded Course BCACE 186 E1: Internet of Things	24 Hours
Theory/Week 2 Hrs Credit: 1		IA :10 Exam :40

UNIT I		12 Hours
Topic	**Chapter**	**Sub Sections**
Internet of Things Overview: IoT Definition , IoT vision ,smart and hyper connected devices, IoT conceptual framework, IoT Architectural view, Technology behind IoT , Components of IoT system, ,Development tools, APIs and Device interfacing components , Platform and integration tools ,Sources of IoT, M2M communication, M2M architecture, Software and Development tools, IoT examples	Chapter 1	1.1 To 1.7 [Includes All Sub sections]
Design Principles for Connected Devices: Introduction, Modified OSI model for IoT / M2M systems, ITU-T reference model, Communication technologies	Chapter 2	2.1 ,2.2,2.2.1,2.2.2 , 2.3,2.3.1,2.3.2
Design Principles for Web : Web Communication protocols for connected devices, Message Communication protocols, Communication Gateway protocols-SOAP, REST, HTTP RESTFUL and WEBSOCKETS	Chapter 3	3.1 To 3.4 [includes All Sub sections]

UNIT II		6 Hours
Internet Connectivity -Introduction, Internet connectivity, Internet based communication, IP addressing in IoT.	Chapter 4	4.1 To 4.4 [includes All Sub sections]
Data Acquiring and storage, Organising the data Transactions on stored data.	Chapter 5	5.1 To 5.4 [includes All Sub sections]
Sensors : Introduction , Sensor Technology, Industrial IoT and Automative IoT, Sensor data Communication protocols, Actuator, RFID technology Wireless sensor network technology.	Chapter 7	7.1 To 7.7 [includes All Sub sections]

TEXT BOOK :

Internet of Things: Architecture and Design Principles by Raj Kamal Mc Graw Hill Education

Reference Books:

1. **IoT Fundamentals** by David Janes , Ganzalo , Patrik , Rob Barton and Jeromey Henry
2. **Internet of Things** by Saurabh Gupta
3. **Internet of Things: A Hands-On Approach** by Arsheep Bahga , Vijay Madisetti

MANGALORE UNIVERSITY

Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

III SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC231	Operating Systems & Linux	4	3	20	80	100	2
	BCAC232	Data Structures	4	3	20	80	100	2
	BCAC233	Visual Basic .NET Programming	4	3	20	80	100	2
	BCAP234	Operating Systems and Data Structures lab	4	3	20	80	100	2
	BCAP235	VB.Net Lab	4	3	20	80	100	2
II	BCACE236 BCACE237	E1 : Hardware & PC Maintenance E2 : Desktop Publishing	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

BCA206: Elective Courses: Course Detailed are attached in APPENDIX I

IV SEMESTER

Group	Course Code	Course	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC281	Computer Graphics and Animation	4	3	20	80	100	2
	BCAC282	Java Programming	4	3	20	80	100	2
	BCAC283 BCAC284 BCAC285	E1: Data Mining E2: CONA E3: Business Statistics & Mathematics	4	3	20	80	100	2
	BCAP286	Computer Graphics and Animation Lab	4	3	20	80	100	2
	BCAP287	Java Lab	4	3	20	80	100	2
II	BCAOE288 BCAOE289	E1 : Fundamentals of ICT E2: E-Commerce	2	2	10	40	50	1
III		Foundation Language-I	4	3	20	80	100	2
		Foundation Language-II	4	3	20	80	100	2
		Elective Foundation	2	2	10	40	50	1
IV		EC &CC	2	2	50	-	50	1
		Total	36	27	210	640	850	17

MANGALORE UNIVERSITY

Bachelor of Computer Applications (BCA) Degree Programme Pattern and Scheme of Examinations

V SEMESTER

Group	Course Code	Course Particulars	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC331	Software Engineering	4	3	20	80	100	2
	BCAC332	Computer & Communication Networks	4	3	20	80	100	2
	BCAC333	Distributed Computing	4	3	20	80	100	2
	BCAC334	Web Technology	4	3	20	80	100	2
	BCAC335	Python Programming	4	3	20	80	100	2
	BCAC336 BCAC337 BCAC338	E1: Accounting & Financial Management E2: Android Application Development E3: SciLab Programming	4	3	20	80	100	2
	BCAP339	Web Applications Lab	3	3	20	80	100	2
	BCAP340	Python Programming Lab	3	3	20	80	100	2
	BCAP341 BCAP342 BCAP343	E1:AFM Lab / E2: AAD Lab / E3: SciLab	3	3	20	80	100	2
		Total	33	27	180	720	900	18

VI SEMESTER

Group	Course Code	Course Particulars	Instruction Hours/Week	Duration of exams (Hrs)	Marks & Credits			
					IA	Exam	Total	Credits
I	BCAC381	E-Commerce	4	3	20	80	100	2
	BCAC382	Network Security & Management	4	3	20	80	100	2
	BCAC383	Software Testing	4	3	20	80	100	2
	BCAC384 BCAC385 BCAC386	E1: Programming for Analytics E2: Business Statistics with R E3: Multivariate Data Analysis	4	3	20	80	100	2
	BCAC387	Project Work	20	3	100	Reports - 300 Presentation and Viva - 100 Total: 400	500	10
		Total	36	27	180	720	900	18

Total Marks : 5200

Grand Total Credit for three year BCA Degree Programme: 104