GANPAT UNIVERSITY

FACULTY OF COMPUTER APPLICATIONS

Programme	Master of Computer Applications	**Branch/Spec.**	Computer Applications
Semester	BRIDGE COURSE	**Version**	1.0.0.0
Effective from Academic Year	2020-21	**Effective for the batch Admitted in**	June 2020
Subject Code	P11A6ADP	**Subject Name**	ALGORITHMS AND LOGIC DEVELOPMENT

Teaching scheme						**Examination scheme (Marks)**			
(Per week)	**Lecture (DT)**		**Practical (Lab.)**		**Total**		**CE**	**SEE**	**Total**
	L	TU	P	TW					
Credit	**01**	**00**	**01**	**00**	**02**	Theory	**20**	**30**	**50**
Hours	**01**	**00**	**02**	**00**	**03**	Practical	**20**	**30**	**50**

Objective:

To provide wide opportunities of Logic Development using Algorithm, Flowchart and Computer Program.

Pre-requisites:

Nil

Learning Outcome:

After completing this course, students should be able to:

- ✓ Students gain an overall understanding of Logic Development
- ✓ Students able to design the solution of problem
- ✓ Understand logic development tools for Algorithm, Flowchart and Program
- ✓ To gain and implement of Algorithm, Flowchart and Program
- ✓ To acquire logic skills for computer based problems & solutions

Content:

Unit		Hrs
	SECTION – I	
1	**Introduction to Design of problem** Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation and Comments	03
2	**Fundamentals of Algorithm & Flowchart** Algorithms, Flowchart, Pseudocode, Structured programming - top-down and bottom-up.	04
	SECTION – II	
3	**Introduction to C programming** Structure of a C Program, Why C language, Writing, Compiling and Executing program,	04

	Data types, Variables, Identifiers and keywords, Literals, Strings.	
4	**Understand the basic statements** Types of Operators, Input and Output Statements, Selection Statement, Control Statement, Jumping Statement.	04
Practical Content:		
List of programs specified by the subject teacher based on above mentioned topics		
Text Books:		
1	Brain Friendly Guide Head First C by David Griffiths & Dawn Griffiths, Oreilly Publication, First Edition.	
Reference Books:		
1	Brain Friendly Guide Head First Software Development by Dan Pilone & Russ Miles, Oreilly Publication, First Edition.	
MOOC/ Certification Courses:		
1	https://raptor.martincarlisle.com/	
2	https://programming-steps.blogspot.com/2013/10/raptor-flowchart	
3	https://www.w3schools.in/c-tutorial/	
4	https://www.tutorialspoint.com/cprogramming/index.htm	
Question Paper Scheme:		
	University Examination Duration: 3 Hours Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –3 Marks Q.2 –6 Marks Q.3 –6 Marks **SECTION - II** Q.4 –3 Marks Q.5 –6 Marks Q.6 –6 Marks	

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Effective from Academic Year	2020-21	**Effective for the batch Admitted in**	June 2020
Subject Code	P11A8CFN	**Subject Name**	COMPUTER FUNDAMENTALS AND NETWORKING

Teaching scheme						**Examination scheme (Marks)**			
(Per week)	**Lecture (DT)**		**Practical (Lab.)**		**Total**		**CE**	**SEE**	**Total**
	L	TU	P	TW					
Credit	1	-	-	-	1	Theory	**20**	**30**	**50**
Hours	1	-	-	-	1	Practical	-	-	-

Objective:

To make aware the students about basics of computer, languages, peripheral devices and network.

Pre-requisites:

Nil

Learning Outcome:

Student can get awareness about basic of computer, devices and network fundamentals.

Theory Syllabus

	SECTION-I	
Unit.	**Content**	**Hrs**
1	**Introduction to Computer:** Information Technology, Hardware and processor: History of Computer, Definition of computer, Block Diagram of computer, Characteristics of computer. Data and Information, Features of Information, System Hardware, Processor Architecture, Computer Arithmetic, Instruction Set Architecture	3
2	**Types of Languages:** Low level v/s High level languages, Introduction of Machine Language, Assembly Language. Language Processor: Compilers, Interpreter, Assemblers, Difference between Compiler-Assembler-Interpreter, Types of Software: System Software, Application Software	2
3	**Peripheral Device:** FDD, Hard disk drive, Tape Drives, CD-DVD Drives, USB, Cache memory, Pen Drive Port Introduction: USB, Serial, Parallel and PS2 08, Input Devices: Key Board, Mouse, Touch screen, Scanner, OMR, MICR, OCR	3

	Output Devices: VDU, Printer, Communication Devices: MODEM, NIC	
	SECTION-II	
4	**Introduction to Computer Network** Need of Computer Network, Advantages of Computer Network, Uses of Computer Network, Network Models, Categories of Networks and Internetworks, Network Topologies (Bus, Star, Ring, Star Bus, Star Ring and Physical Mesh)	3
5	**Network Concepts and Components** Network Concepts: Wireless Networks, Layered Approach, Interfaces, Services, Protocols Intranet and Extranet, Network Components: Cabling and Connector Standards Network Interface Card, Concentrators, Hubs, Repeaters, Gateways, Bridges/Switches, Routers	4

Text Books:	
1	Information Technology and Concepts, 2nd Edition By. Dr. Madhulika Jain, BPB publication
2	Fundamental Of computer Organization By Albert Zomaya
3	B.A. Forouzan:DataCommunicationandNetworking,TataMcGrawHill.
Practical content:	
	N.A.
MOOC/ Certification Courses :	
1	https://www.tutorialspoint.com/computer_fundamentals/index.htm
2	https://www.javatpoint.com/computer-fundamentals-tutorial
3	http://codesandtutorials.com/networking/networkprotocols/index.php
Question Paper Scheme :	
	University Examination Duration: 3 Hours Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –3 Marks Q.2 –6 Marks Q.3 –6 Marks **SECTION - II** Q.4 –3 Marks Q.5 –6 Marks Q.6 –6 Marks

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Programme	Master of Computer Applications	**Branch/Spec.**	Computer Applications
Semester	Bridge Course	**Version**	1.0.0.0
Effective from Academic Year	2020-21	**Effective for the batch Admitted in**	June 2020
Subject Code	P11A7WDD	**Subject Name**	WEB DESIGNING AND DATABASE

Teaching scheme						**Examination scheme (Marks)**			
(Per week)	**Lecture (DT)**		**Practical (Lab.)**		**Total**		**CE**	**SEE**	**Total**
	L	TU	P	TW					
Credit	**01**	**00**	**01**	**00**	**02**	Theory	**20**	**30**	**50**
Hours	**01**	**00**	**02**	**00**	**03**	Practical	**20**	**30**	**50**

Objective:

To make aware the student about the basics of web designing and database.

Pre-requisites:

Nil

Learning Outcome:

Student can get awareness about basics of web designing and database systems.

Theory Syllabus

	SECTION-I	
Unit.	**Content**	**Hrs**
1	**HTML** Headings, Paragraphs, Links, Images, Tables, Lists, Form input types	2
2	**CSS** Selectors, Colours, Backgrounds, Borders, Margins, Paddings, Height/Width, Text, Fonts, Alignments	4
3	**JavaScript** Variables, data types, conditional statements, loops, JavaScript popup boxes (alert, confirm, prompt)	2
	SECTION-II	
4	**Database** Create Database, Alter Database, Create Table, Alter Table, Drop Table, Select, Insert, Update, Delete	7

Text Books:

1	HTML 5 Developer's Cookbook, By Chuck Hudson, Tom Lead better
2	SQL, PL/SQL The Programming Language Of Oracle - 4th Revised Edition By Ivan Bayross
Practical content:	
List of programs specified by the subject teacher based on above mentioned topics.	
MOOC/ Certification Courses:	
1	https://www.w3schools.com/
2	https://www.tutorialspoint.com/index.htm
3	https://www.coursera.org/specializations/web-design
4	https://www.coursera.org/learn/html-css-javascript-for-web-developers
Question Paper Scheme:	
	University Examination Duration: 3 Hours Note for Examiner: - (I) Questions 1 and 4 are compulsory with no options. (II) Internal options should be given in questions 2, 3, 5 and 6. **SECTION - I** Q.1 –3 Marks Q.2 –6 Marks Q.3 –6 Marks **SECTION - II** Q.4 –3 Marks Q.5 –6 Marks Q.6 –6 Marks