GVP College of Engineering

Department of Information Technology

2015-16 I Semester

SCHEME OF COURSE WORK

Course Details:

Course Title	Introduction to Computing				
Course Code	15CT1101	**L**	**T**	**P**	**C**	3	0	0	3
Program:	B.Tech.				
Specialization:	Information Technology				
Semester	I				
Prerequisites	Nil				
Courses to which it is a prerequisite	Computer Organization, Operating system				

Course Outcomes (Cos):

At the end of the course, a student will be able to

1	Summarize the basics of Computer and Recognize I/O devices.
2	Gain the Knowledge of memory and compute different number codes.
3	Distinguish different types of Software's.
4	Classify different types of Languages and analyze the solution for a given problem.
5	Analyze different protective measures for keeping data secure.

Programme Outcomes (POs):

A graduate of Computer Science & Engineering

1	can apply mathematics, science, and Computer science knowledge to solve engineering problems
2	will demonstrate the ability to identify the requirements for engineering problems and analyze them.
3	will demonstrate the ability to design & develop the software applications that meet the desired specifications within the realistic constraints to serve the needs of the society.
4	will develop the ability to think innovatively to foster research and development in various fields of Computer science.
5	will be able to use various tools to solve engineering problems and to evaluate solutions
6	will be able to apply the knowledge to analyze and understand societal, health, safety, legal, and cultural issues relevant to the Computer science
7	will have an ability to analyze the local and global impact of computing on individual as well as on society.
8	will demonstrate professional ethical practices and social responsibilities in global and societal contexts
9	will demonstrate the abilities to carry out tasks by working independently and also in diverse and multidisciplinary teams.
10	will be able to communicate effectively in both verbal and written forms.
11	will acquire project management and finance control abilities.
12	will be able to recognize the need for updating the knowledge in the chosen field and engage in lifelong learning.

Course Outcome versus **Program Outcomes:**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO-1	3	2											3		
CO-2	3	3													
CO-3	3	3											2		
CO-4	3	3													
CO-5	3	2											3		

GVP College of Engineering

Department of Information Technology

2015-16 I Semester

S - Strongly correlated, *M* - *Moderately* correlated, *Blank* - *No correlation*

Assessment Methods:	Assignment / Quiz / Mid-Test / End Exam

Teaching-Learning and Evaluation

Week	**TOPIC / CONTENTS**	**Course Outcomes**	**Sample questions**	**TEACHING-LEARNING STRATEGY**	**Assessment Method & Schedule**
1	What is Computer? Characteristics of Computers, Generations of Computers & Classification of Computers	CO1	1) Describe the Characteristics of a Computer? 2) Explain briefly about the Generations of Computer?	▫ Lecture / Discussion	Assignment 1 (Week-5) Mid-Test 1
2	Basic Computer Organization, Applications of Computers, Input Devices, Output Devices Soft copy Devices & Hard copy Devices	CO1	1) Draw the functional diagram of a Computer? 2) Explain briefly about Applications of Computer?	▫ Lecture / Discussion	Assignment 1 (Week-5) Mid-Test 1
3	Introduction, Memory Hierarchy Processor Registers, Cache Memory Primary Memory & Secondary Storage Devices	CO1 and CO2	1) Explain briefly about Cache memory? 2) Describe about memory hierarchy in detail?	▫ Lecture/ Discussion	Assignment 1 (Week-5) Mid-Test 1
4	Magnetic Tapes , Floppy Disks, Hard Disks, Optical Drives, USB Flash Drives, Memory Cards, Mass Storage Devices & Basic Processor Architecture	CO1 and CO2	1) Explain about the Mass storage devices? 2)Describe about different types of Disks & Drives?	▫ Lecture/ Discussion	Assignment 1 (Week-5) Mid-Test 1
5	Binary Number System, Working with Binary Numbers, Octal Number System & Hexadecimal Number System	CO1 and CO2	1) Convert decimal '234' to binary and octal representations?	▫ Lecture/ Discussion ▫ Problem solving	Quiz1 (Week-8) Mid-Test 1
6	Working with Fractions, Signed Number Representation in Binary form, BCD Codes & Other Codes	CO1 and CO2	1) Explain briefly about BCD codes & other codes?	▫ Lecture/ Discussion ▫ Problem solving	Quiz1 (Week-8) Mid-Test 1
7	Introduction to Computer Software, Classification of Computer Software, System Software, Application Software Firmware & Middleware	CO1 and CO3	1) Explain about computer software & its classifications? 2) Distinguish between system software and application software?	▫ Lecture/ Discussion	Quiz 1(Week-8) Mid-Test 1
8	Acquiring Computer Software, Design and Implementation of Correct, Efficient & Maintainable Programs	CO1 and CO3	1) Explain how we can acquire computer software as efficient?	▫ Lecture/ Discussion	Quiz1 (Week-8) Mid-Test 1
9	**Mid-Test 1**			Revision and discussion	

GVP College of Engineering

Department of Information Technology

2015-16 I Semester

10	Introduction, Evolution of Operating System, Process Management, Memory Management, File Management & Device Management	CO1 and CO3	1) Explain briefly about process management? 2) Define an operating system and Give examples for OS?	▫ Lecture/ Discussion	Assignment 2 (Week-14) Mid-Test 2
11	Security Management, Command Interpreter & Popular Operating Systems	CO1 and C03	1) Explain briefly about security management?	▫ Lecture/ Discussion	Assignment 2 (Week-14) Mid-Test 2
12	Algorithm, Control Structures used in Algorithms, Some more Algorithms, Flow charts & Pseudo Code	CO3 and CO4	1) Define an Algorithm and explain Control Structures used in the Algorithm?	▫ Lecture/ Discussion	Assignment 2 (Week-14) Mid-Test 2
13	Programming Languages, Generations of Programming Languages & Categorization of High Level Languages	CO3 andCO4	1) Explain different programming languages? 2) Describe different Categorization of High Level Languages?	▫ Lecture/ Discussion	Assignment 2 (Week-14) Mid-Test 2
14	Some Popular High Level Languages & Factors Affecting Selection of Programming Languages	CO3 and CO4	1) Describe Some Popular High Level Languages?	▫ Lecture/ Discussion	Assignment2 (Week-14) Mid-Test 2
15	Understanding the needs for Security Measures: Basic Security Concepts	CO1 and CO5	1) Explain the needs of security measures?	▫ Lecture/ Discussion	Quiz 2 (Week-17) Mid-Test 2
16	Threats to Users, Threats to Hardware, Threats to Data & Taking Protective Measures: Protecting Yourself	CO2 and CO5	1) Define Threats to users, hardware & data?	▫ Lecture/ Discussion	Quiz 2 (Week-17) Mid-Test 2
17	Keeping Your Data Secure & Safeguarding Your Hardware	CO2 and CO5	1) Explain how we can safeguard our hardware?	▫ Lecture/ Discussion	Quiz 2 (Week-17) Mid-Test 2
18	**Mid-Test 2**			Revision and discussion	
19/20	**END EXAM**				

Faculty Member