GVP College of Engineering

Department of Computer Science and Engineering

2014-15 I Semester

SCHEME OF COURSE WORK

Course Details:

Course Title	Introduction to Computer Science and Information Technology		
Course Code	13CT1101	**L T P C**	4 0 0 3
Program:	B.Tech.		
Specialization:	Computer Science & Engineering, Information Technology		
Semester	I		
Prerequisites	Nil		
Courses to which it is a prerequisite	Computer Organization		

Course Outcomes (Cos):

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

1	Identify components of a computer.
2	Apply concepts of number systems.
3	Explain Operating System concepts.
4	Discuss storage media and Network related components
5	Analyze virus effects and mitigate them.

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
CO-1	S		M	M	M							
CO-2	S	M	M		M							
CO-3	M	M	M									
CO-4	M	M			M							
CO-5	S		M		M							

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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	Introduction to computers	CO1, CO3 and CO4	1) Describe the purposes of a Computer? 2) Differentiate between computer Software & Hardware?	▫ Lecture / Discussion ▫ Demonstration	Quiz (Week-3) Assignment (Week-6 to Week-8) Mid-Test 1
2	Computer Architecture	CO1 and CO4	1) Draw the functional diagram of a Computer 2) Explain briefly about registers.	▫ Lecture / Discussion	Quiz (Week-3) Assignment (Week-6 to Week-8) Mid-Test 1
3	Computer Architecture	CO1 and CO4	1) Explain the structure of ALU with a diagram. 2) Describe about memory hierarchy in detail.	▫ Lecture/ Discussion	Quiz (Week-3) Assignment (Week-6 to Week-8) Mid-Test 1
4	Data Representations	CO2	1) Convert decimal 234 to binary and octal representations.	▫ Lecture/ Discussion ▫ Solving Exercises/Problem	Quiz (Week-6) Assignment (Week-6 to Week-8) Mid-Test 1
5	Data Representations	CO2	1) Explain Error Detection & Corrections	▫ Lecture/ Discussion ▫ Problem solving	Quiz (Week-6) Assignment (Week-6 to Week-8) Mid-Test 1
6	I/O Devices	CO1 and CO4	1) List out any five peripheral devices with brief description. 2) Explain purpose of different printers.	▫ Lecture/ Discussion	Quiz (Week-8) Assignment (Week-6 to Week-8) Mid-Test 1
7	I/O Devices	CO1 and CO4	1) Explain different ports on the mother board.	▫ Lecture/ Discussion	Quiz (Week-8) Assignment (Week-6 to Week-8) Mid-Test 1
8	Storage Media	CO1 and CO4	1) Explain the purpose of Different types of storage media.	▫ Lecture/ Discussion/ Demonstration	Quiz (Week-8) Assignment (Week-6 to Week-8) Mid-Test 1
9	**Mid-Test 1**			Revision and discussion	

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2014-15 I Semester

10	Software Concepts	CO1, CO3, and CO5	1) Distinguish between system software and application software	▫ Lecture/ Discussion	Quiz (Week-12) Assignment (Week-15 to Week-17) Mid-Test 2
11	Software Concepts	CO1, CO3, and CO5	1) Explain different programming languages	▫ Lecture/ Discussion	Quiz (Week-12) Assignment (Week-15 to Week-17) Mid-Test 2
12	Operating Systems	CO3 and CO4	1) Define an operating system. Give examples for OS.	▫ Lecture/ Discussion	Quiz (Week-15) Assignment (Week-15 to Week-17) Mid-Test 2
13	Operating Systems	CO3 and CO4	1) Explain the function of a Memory Manager in OS.	▫ Lecture/ Discussion	Quiz (Week-15) Assignment (Week-15 to Week-17) Mid-Test 2
14	Networking	CO1 and CO4	1) Distinguish between LAN and WAN.	▫ Lecture/ Discussion	Quiz (Week-15) Assignment (Week-15 to Week-17) Mid-Test 2
15	Networking	CO1 and CO4	1) Draw a bus network and explain how it works	▫ Lecture/ Discussion	Quiz (Week-15) Assignment (Week-15 to Week-17) Mid-Test 2
16	Computer Viruses: Attack, Prevention	CO3 and CO5	1) Define virus? What are its characteristics?	▫ Lecture/ Discussion	Quiz (Week-18) Assignment (Week-15 to Week-17) Mid-Test 2
17	Computer Viruses: Cure	CO3 and CO5	1) Various types of virus curing techniques.	▫ Lecture/ Discussion	Quiz (Week-18) Assignment (Week-15 to Week-17) Mid-Test 2
18	**Mid-Test 2**			Revision and discussion	
19/20	**END EXAM**				

Faculty Member