



# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute affiliated to RGPV, Bhopal)

## Department of Computer Science and Engineering

### Scheme of Evaluation

#### B. Tech. I Semester (*Computer Science and Engineering*)

(for batch admitted in academic session 2022-23)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.	Duration of Exam.
				Theory Slot				Practical Slot				L	T	P				
				End Term Evaluation		Continuous Evaluation		End Sem. Exam	Continuous Evaluation									
				End Sem. Exam	\$Proficiency in subject /course	Mid Sem. Exam.	Quiz/Assignment		Lab Work & Sessional	Skill Based Mini Project								
1.	150121	DC	Digital Electronics	50	10	20	20	-	-	-	100	3	-	-	3	Blended	PP	2 Hrs
2.	150122	DC	Computer Programming	50	10	20	20	60	20	20	200	2	1	2	4	Blended	AO	2 Hrs
3.	150123	DC	Emerging Technologies in Computer Science	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
4.		BSC	Engineering Mathematics-I	50	10	20	20	-	-	-	100	3	1	-	4	Offline	PP	2 Hrs
5.		ESC	Basic Electrical & Electronics Engineering	50	10	20	20	60	20	20	200	2	1	2	4	Blended	MCQ	1.5 Hrs
6.	150124	DLC	CSE workshop	-	-	-	-	60	20	20	100	-	-	2	1	Offline	SO	-
<b>Total</b>				<b>250</b>	<b>50</b>	<b>100</b>	<b>100</b>	<b>180</b>	<b>60</b>	<b>60</b>	<b>800</b>	<b>12</b>	<b>04</b>	<b>06</b>	<b>19</b>	-	-	-
7.	3000002	<b>Natural Sciences &amp; Skills</b>	Engineering Chemistry	50	10	20	20	30	10	10	150	1	-	2	GRADE	Blended	MCQ	1.5 Hrs
<b>Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch &amp; Innovations.</b>																		

**\$Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject**

**Natural Sciences& Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language**

**MCQ: Multiple Choice Question    AO: Assignment + Oral    OB: Open Book    PP: Pen Paper    SO: Submission + Oral**

Mode of Teaching				Mode of Examination				Total Credits	
Theory			Lab	Theory			Lab		
Offline	Online	Blended		Offline	PP	AO	MCQ		SO
		Offline	Online						
4	-	8	4	3	10	4	4	1	19
21		42	21	16	53	21	21	5	



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## Department of Computer Science and Engineering

### Scheme of Evaluation

#### B. Tech. II Semester (*Computer Science and Engineering*)

(for batch admitted in academic session 2022-23)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.	Duration of Exam.
				Theory Slot				Practical Slot				L	T	P				
				End Term Evaluation		Continuous Evaluation		End Sem. Exam	Continuous Evaluation									
				End Sem. Exam	\$Proficiency in subject /course	Mid Sem. Exam.	Quiz/Assignment		Lab Work & Sessional	Skill Based Mini Project								
1.	150221	DC	Data Structures	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP	2 Hrs
2.	150222	DC	Python Programming	50	10	20	20	60	20	20	200	3	-	2	4	Blended	AO	2 Hrs
3.	150223	DC	Computer System Organization	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP	2 Hrs
4.	150224	DC	Computer Graphics	50	10	20	20	60	20	20	200	3	-	2	4	Blended	PP	2 Hrs
5.		BSC	Engineering Mathematics –II	50	10	20	20	-	-	-	100	3	-	-	3	Offline	PP	2 Hrs
6.	150225	DLC	Hardware and Troubleshooting Lab	-	-	-	-	60	20	20	100	-	-	2	1	Offline	SO	-
<b>Total</b>				<b>250</b>	<b>50</b>	<b>100</b>	<b>100</b>	<b>240</b>	<b>80</b>	<b>80</b>	<b>900</b>	<b>13</b>	<b>02</b>	<b>08</b>	<b>19</b>	-	-	-
7.	3000001	Natural Sciences & Skills	Engineering Physics	50	10	20	20	30	10	10	150	1	-	2	GRADE	Blended	MCQ	1.5 Hrs
<b>Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch &amp; Innovations.</b>																		

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Mode of Teaching				Mode of Examination				Total Credits	
Theory		Lab		Theory			Lab		
Offline	Online	Blended		Offline	PP	AO	MCQ		SO
		Offline	Online						
3	-	8	4	4	14	4	-	1	19
16		42	21	21	74	21		5	

**INTRODUCTION TO COMPUTER PROGRAMMING**  
**230102**

**COURSE OBJECTIVES**

- To familiar with program readability/understanding including program style/formatting and self-documenting code.
  - To familiar with debugging process.
  - To design and implement basic programming solutions including statements, control structures, and methods.
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**Unit I**

Introduction to Programming, Machine Level Languages, Assembly Level Languages, High Level Languages, Program Execution and Translation Process, Problem solving using Algorithms and Flowcharts. Introduction to C Programming: Data Types, Constants, Keywords, Operators & Expressions, Precedence of operators and input/output functions.

**Unit II**

Control Statements and Decision Making: The goto statement, The if statement, The if-else statement, Nesting of if statements, The conditional expression, The switch statement, The while loop, The do...while loop, The for loop, The nesting of for loops, The break and continue statement.

**Unit III**

Arrays, Strings & Pointers: One dimensional Arrays, Passing Arrays to Functions, Multidimensional Arrays, Strings, Basics of Pointers & Addresses, Pointer to Pointer, Pointer to Array, Array of Pointers, Types of pointers, Pointer to Strings.

**Unit IV**

Functions & Structures: Function Basics, Function Prototypes, Passing Parameter by value and by reference, Passing string to function, Passing array to function, Function returning address, Recursion, Structures & Union, Pointer to Structure, Self-Referential Structures, Dynamic memory allocation by malloc/calloc function, Storage Classes.

## **Unit V**

File Handling: Defining and Opening a file, Closing Files, Input/output Operations on Files, Predefined Streams, Error Handling during I/O Operations, Command Line Arguments.

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## **RECOMMENDED BOOKS**

- Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall of India.
  - Paul Deitel and Harvey M. Deitel , How to Program, Pearson Publication.
  - Yashavant Kanetkar , Let Us C, BPB publication.
  - E. Balagurusamy, Programming in ANSI C, Tata McGraw-Hill.
  - Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill.
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## **COURSE OUTCOMES**

After completion of the course students would be able to:

CO1: identify situations where computational methods and computers would be useful.

CO2: describe the basic principles of imperative and structural programming.

CO3: develop a pseudo-code and flowchart for a given problem.

CO4: analyze the problems and choose suitable programming techniques to develop solutions.

CO5: design, implement, debug and test programs.

CO6: design computer programs to solve real world problems.

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