



Programme Code	UGCMS
Programme name	BSc. Computer Science Honours

Sl no	Course code	Title of the course	Semester	Experiential learning	Participative learning	Problem solving methodologies	Remarks
1	UGCMSCC01	Programming Fundamentals using C/C++: Theory & Lab	I	✓	✓	✓	This course provides the basic logical and conceptual understanding of computer programming for application development with hands-on practical training of implementation. This provides the experiential and problem solving learning. Student also solve problem as teams to get the perspective of participative learning.
2	UGCMSCC02	Computer System Architecture: Theory & Lab	I	✓	✓	✓	It provides the architectural details and knowledge with hands-on experiments of basic computer hardware. This provides the experiential and problem solving learning. Student also solve problem as teams to get the perspective of participative learning.
3	UGCMSCC03	Programming in JAVA: Theory & Lab	II	✓	✓	✓	This course will provide the object oriented advanced logical and conceptual understanding of computer programming using Java for application development with hands-on practical training of implementation with provides the participative, problem solving and experiential learning.



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4	UGCMSCC04	Discrete Structures: Theory & Tutorial	II	✓		✓	This course gives the understanding of discrete mathematical analysis of computing methods and logical operations of computing systems. By the means of problem solving the students gain their <u>experiential learning</u> .
5	UGCMSCC05	Data Structures: Theory & Lab	III	✓	✓	✓	This course provides the understanding of the underlined structural and logical organisation of data for any computing system with hands-on practical training of implementation which provides the experiential, participative learning <u>with the help of problem solving methodologies</u> .
6	UGCMSCC06	Operating Systems: Theory & Lab	III	✓	✓	✓	It gives the base knowledge of functionality and design aspects of operating system of any computing system with hands-on practical training which provides the experiential and problem solving learning. Student also solve problem as teams to <u>get the perspective of participative</u>
7	UGCMSCC07	Computer Networks: Theory & Lab	III	✓		✓	This course helps to understand the principals and functionalities of networking system of any computing environment with hands-on practical training. By the means of problem solving the students <u>gain their experiential learning</u> .
8	UGCMSSEC01	Value Education	III				



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9	UGCMSCC08	Design and Analysis of Algorithms: Theory & Lab	IV	✓	✓	✓	It provides the understanding of the design aspects of algorithms and computational cost of algorithms for efficient development of softwares with hands-on practical training which provides the experiential, participative learning with the help of <u>problem solving methodologies</u> .
10	UGCMSCC09	Software Engineering: Theory & Lab	IV	✓		✓	It provides the basic concept of systematic software development with hands-on practical training of implementation which gives the <u>experimental learning with the help of problem</u>
11	UGCMSCC10	Database Management Systems: Theory & Lab	IV	✓	✓	✓	It gives the knowledge of the underlined structural and logical organisation of database system to efficiently handle large amount of information. With the help of practical lab work and team based practical learning the students get the opportunity of experiential, participative, learning with the help of <u>problem solving methodologies</u>
12	UGCMSSEC02	Programming in Python	IV	✓	✓	✓	This course provides the object oriented concepts of computer programming using Python for application development. This provides the experiential and problem solving learning. Student also solve problem as teams to get the perspective of <u>participative learning</u> .
13	UGCMSCC11	Internet Technologies: Theory & Lab	V	✓	✓	✓	It provides the base knowledge of functionality and design aspects of Internet and the technologies used to run the same with hands-on practical training. It provides the experiential, participative and problem solving learning.

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14	UGCMSCC12	Theory of Computation: Theory & Tutorial	V		✓		This course gives the understanding of the basic underlined structural and logical aspects of computational behaviours in different states of cognitive reasoning. With the help of class participation during theoretical teaching students able to learn through <u>participation</u> .
15	UGCMSDSE01	Microprocessor: Theory & Lab	V	✓		✓	This course provides the knowledge about the architectural details and functionality of processor with hands-on experiments which provides the <u>problem solving</u> and <u>experiential learning</u> .
16	UGCMSDES02	Numerical Methods: Theory & Lab	V	✓		✓	It gives the knowledge of methemetical methods and computing mechanisms with hands-on practicals which provides the <u>problem solving</u> and <u>experiential learning</u> .
17	UGCMSDES03	Cloud Computing: Theory & Lab	V	✓	✓	✓	It provides the base knowledge of recent technologies of cloud based computing methods and functionalities. With the help of practical lab work and team based practical learning the students get the opertunity of experiential, participative, learning with the help of <u>problem solving methodologies</u> .
18	UGCMSCC13	Artificial Intelligence: Theory & Lab	VI	✓	✓	✓	It gives the basic concept and recent developments of Artificial Intelligence algorithms with hands-on practical training which provides the experiential, participative and <u>problem solving learning</u> .


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19	UGCMSCC14	Computer Graphics: Theory & Lab	VI	✓		✓	This course provides the basic concept of <u>graphical representation of computing outcomes along with graphical user interfaces, methods, applications and developments</u> which provides the <u>problem solving and experiential learning</u> .
20	UGCMSDSE04	Machine Learning: Theory & Lab	VI	✓	✓	✓	It gives the understanding of the basics concept and recent developments of Machine Learning algorithms with hands-on practical training. This provides the experiential and problem solving learning. Student also solve problem as teams to <u>get the perspective of participative learning</u> .
21	UGCMSDSE05	Data Mining: Theory & Lab	VI	✓	✓	✓	The course gives the basics concept and implementaion of different Machine Learning algorithms to handle varieties of data with hands-on practical training. This provides the experiential and problem solving learning. Student also solve problem as teams to <u>get the perspective of participative learning</u> .
22	UGCMSDSE06	Dissertation or Project work	VI	✓	✓	✓	It enables students to take the responsibility to complete a research oriented challenging task inside a given time frame, to work in a collaborative environment. This provides the <u>experiential, perspective and problem solving learning</u> .


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