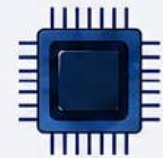
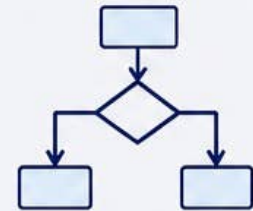




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Syllabus



Sant Gadge Baba Amravati University, Amravati

FACULTY: Science and Technology

Teaching and Learning Scheme: for the Degree of Bachelor of Science with the Major: Computer Science (112)/Information Technology (123)/Computer Application (Regular) (109)/ Computer Application (Vocational) (110)/Data Analytics (134)/Data Science and Analytics (135)/ Web Designing and Development (138)

**(Three Years- Six Semesters Bachelor's Degree Programme)
(Four Years- Eight Semesters Bachelor's Degree Programme (Honors)
(Four Years- Eight Semesters Bachelor's Degree Programme (Honors with Research)**

Major/Minor Course: Programming with C

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
4.5	II	109203/ 110203/ 112203/123203/ 134203/135203/ 138203	Programming with C	2	30	2 Hrs.	30

Course Objectives:	1.To provide students with understanding of code organization and functional hierarchical decomposition with using data types. 2. Programming is about writing the instructions which a computer follows to enable it to store knowledge, process knowledge, and communicate knowledge with the outside world.						
Course Outcomes:	On completion of the following syllabus the students will be able to - 1. Understand the Programming concepts. 2. Understand development of C language. 3. Write Algorithms for the task/problem. 4. Able to design flowcharts of the problem. 5. Able to write Simple C Programs.						
Unit System	Contents				Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies

Unit I	Algorithm, flowcharting, Types of programming languages. History of C language, Advantages, Structure of C program, Character set, Identifiers, Keywords, Constants and Variables, Symbolic constants, Qualifiers, Type conversion. Operators and Expressions	8 Hrs.	8 Marks	Use any pedagogical technique suitable for the topic
Unit II	Formatted I/O: scanf(), printf(), Unformatted I/O : getch(), getchar(), gets(), putchar(), puts(). Control structures: Branching: if, if-else, Conditional operator(? :), nested if, switch. Looping: while, do-while, for statements, comma operator, goto, break, continue, nested loops	7 Hrs.	7 Marks	
Unit III	Arrays - Declaration and initialization of one and two dimensional array. Structure - Definition, declaration, initialization, array of structure, nested structure, union. Pointers - Declaration, initialization, pointers arithmetic	8 Hrs.	8 Marks	
Unit IV	Functions in C: Definition of function, function prototype, categories of function, actual argument, formal argument, function calling: call by value, call by reference, function parameters, local and global variable, functions with array, function recursion. String functions - String functions: strlen(), strcpy(), strcmp() &strcat()	7 Hrs.	7 Marks	
References:	Text books: 1. Programming in C: E Balagurusamy: TMH Publication. Reference Books: 1) ANSI C- Dennis Ritchie 2) Programming in C - V. Rajaraman 3) Programming with C: Venugopal K.R. TMH, Publication. 4) Programming with C: Byson Gottfried , Schaum Series Publication. Weblink to Equivalent MOOC on SWAYAM if relevant: 1. https://onlinecourses.swayam2.ac.in/cec19_cs06/preview 2. https://onlinecourses.swayam2.ac.in/nou20_cs03/preview 3. https://www.classcentral.com/course/swayam-computer-fundamentals-13950 4. https://onlinecourses.nptel.ac.in/noc19_cs42/preview 5. https://onlinecourses.swayam2.ac.in/aic20_sp06/preview 6. https://onlinecourses.swayam2.ac.in/cec20_cs02/preview 7. https://www.classcentral.com/course/swayam-introduction-to-programming-in-c-2486 8. https://swayamprabha.gov.in/asset/new_team/images/course_files/R12-Introduction%20to%20Programming%20in%20C%20.pdf Weblink to Equivalent Virtual Lab if relevant: 1. https://www.programiz.com/c-programming/online-compiler/			

	2. https://www.onlinegdb.com/online_c_compiler 3. https://www.tutorialspoint.com/compile_c_online.php Any pertinent media (recorded lectures, YouTube, etc.) if relevant: 1. https://www.youtube.com/watch?v=eEo_aacpwCw 2. https://www.youtube.com/watch?v=OGM2BJ29Syg 3. https://www.youtube.com/playlist?list=PLWPirh4EWFpF_2T13UeEgZWZHc8nHBuXp
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Assessment Rubric: Major/Minor- Internal for Theory Course

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI THEORY EXAMINATION B.Sc. I, SEMESTER – II (NEP)			
Theory	Course Code: 109203/ 110203/ 112203/123203/ 134203/135203/ 138203	Course Title: Programming with C	Max Marks: 20
Sr. No.	Assessment Criteria	Marks	
1	Any Two of the Activity(weekly or monthly assignment/ Unit Test/Class Test) (CAT-1)	10	
2	Any One of the Activity includes Open Book Test, MCQ Tests, / Theory related Class activity/Task etc.) etc. (CAT-2)	5	
3	Participation in any one Activity includes Quiz, Seminar, Group Discussion, Industry visit, CaseStudy, Mini project, innovative work, etc. based on Theory Course. Involvement in subject related activities such as Conference, Workshop, Coding Competitions etc. (CAT-3)	5	