

## Department of Computer Science & Engineering

### Course Outcomes of all courses of B Tech 4<sup>th</sup> semester CSE

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C210 Discrete Mathematics	C210.1	<b>Develop</b> a concept mathematical logic, logical equivalence & quantifiers, Boolean functions and can <b>Apply</b> Boolean algebra in switching circuits & logic circuits. (Level 3,6)
	C210.2	<b>Apply</b> set theory, <b>Explain</b> relation and functions and can <b>develop</b> Lattices & Hasse diagram (Level 2,3,6)
	C210.3	<b>Define</b> algebraic structures and can state Lagrange's theorem, Isomorphism, Automorphism, Homomorphism. (level 1)
	C210.4	<b>Analyze</b> graph theory, types of graphs, concept of tree and can <b>solve</b> Matrix representation of graphs. (Level 4,6)
	C210.5	<b>Solve</b> problems related to combinatorics in various fields in computer science, specially networking. (Level 6)

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Course	COURSE OUTCOMES	
C211 Computer System Architecture	C211.1	<b>Create</b> the basic hardware components of a computer system. (Level 6)
	C211.2	<b>Evaluate</b> the binary and hexadecimal number systems including computer arithmetic. (Level 5)
	C211.3	<b>Analyze</b> the functional units of the processor such as the register file and arithmetic logical unit. (Level 4)
	C211.4	<b>Apply</b> the basics of systems topics: parallel, pipelined, superscalar, and RISC/CISC architectures. (Level 3)
	C211.5	<b>Understand</b> the representation of data, addressing modes, an instruction sets. (Level 2)

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C212 Database Management Systems	C212.1	<b>Develop</b> the basic concepts of DBMS and relational data model. ( <b>Level 6</b> )
	C212.2	<b>Understand</b> the relational database theory & be able to write relational algebra expressions for queries ( <b>Level 2</b> )
	C212.3	<b>Understand</b> DML, DDL and to construct queries using SQL by knowing the importance of data. ( <b>Level 2</b> )
	C212.4	<b>Analyze and Evaluate</b> basic database storage structures and access new techniques. ( <b>Level 4,5</b> )
	C212.5	<b>Analyze and Extract</b> knowledge using database techniques. ( <b>Level 4</b> )

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C213 Object Oriented Programming (with Java)	C213.1	<b>Understand</b> the concepts of declaring data variable along with its type and flow of control of the programs. ( <b>Level 2</b> )
	C213.2	<b>Analyze</b> functional and procedural abstraction and its importance in good program design. ( <b>Level 4,6</b> )
	C213.3	<b>Understand</b> the basics concepts of exception handling, and Strings ( <b>Level 2</b> )
	C213.4	<b>Design</b> a programming level independent solution to the problem using programming language construct. ( <b>Level 6</b> )
	C213.5	<b>Design, write, develop,</b> execute and debug a JAVA programs onto Java programming construct. ( <b>Level 6</b> )

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C214 Design & Analysis Algorithm	C214.1	<b>Distinguish</b> the correctness of algorithms using inductive proofs and invariants. ( <b>Level 4</b> )
	C214.2	<b>Analyze</b> and match worst-case running times of algorithms using asymptotic analysis. ( <b>Level 4</b> )
	C214.3	<b>Analyze</b> the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. ( <b>Level 4</b> )
	C214.4	<b>Distinguish</b> and <b>describe</b> the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. ( <b>Level 4</b> )
	C214.5	<b>Evaluate</b> the greedy paradigm and explain when an algorithmic design situation calls for it. ( <b>Level 5</b> )

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C215 Computer Organization & Architecture Lab	C215.1	<b>Construct</b> the hardware part of the computer system and will be able to partition the memory and format the system. ( <b>Level 6</b> )
	C215.2	<b>Apply</b> different types of OS and BIOS setup and Configuration. ( <b>Level 3</b> )
	C215.3	<b>Test</b> the Circuit using Multimeter and perform continuity test mode, able to draw the schematic. ( <b>Level 6</b> )
	C215.4	<b>Design</b> and simulate digital circuit like multiplexer, demultiplexer and ALU in VHDL. ( <b>Level 6</b> )
	C215.5	<b>Apply</b> terminal Windows for Linux (multiuser and a free and open-source) and DOS (Single User) user OS. ( <b>Level 3</b> )

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C216 Object Oriented Programming (with JAVA) Lab	C216.1	<b>Apply</b> an integrated development environment to write, compile, run, and test simple object-oriented Java programs. <b>(Level 3)</b>
	C216.2	<b>Implement</b> Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity. <b>(Level 6)</b>
	C216.3	<b>Identify</b> classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem. <b>(Level 2)</b>
	C216.4	<b>Illustrate</b> how to achieve reusability using inheritance, interfaces and packages and describes faster application development can be achieved. <b>(Level 2)</b>
	C216.5	<b>Understanding</b> and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development. <b>(Level 6)</b>

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C217 Database Management System Laboratory	C217.1	To <b>understand</b> efficient DB handling codes in DML, DDL. <b>(Level 2)</b>
	C217.2	Will be able to <b>construct</b> queries using SQL by knowing the importance of data & its requirements in any applications. <b>(Level 6)</b>
	C217.3	<b>Develop</b> codes using efficient database storage structures and access techniques: file and page organizations, indexing methods including B-tree and hashing, transaction processing and concurrency control. <b>(Level 3)</b>
	C217.4	To <b>design</b> a programs in PL/SQL using cursor, functions, triggers. <b>(Level 6)</b>
	C217.5	<b>Design</b> programs in PL/SQL, to generate the Report. <b>(Level 6)</b>





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# Chhatrapati Shivaji Institute of Technology

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On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C218 Virtual laboratory (PHP/MySQL)	C218.1	<b>Develop</b> dynamic web designing applications and database handling applications using php. <b>(Level 6)</b>
	C218.2	<b>Design</b> and <b>develop</b> dynamic web page components, interfaces & portals – (Project-based Learning technique). <b>(Level 6)</b>
	C218.3	<b>Create</b> an associative array using the countries as keys, the cities as values and display the data as a table. <b>(Level 6)</b>
	C218.4	<b>Create</b> pages for signup and sign-in process using PHP MySQL database operations. <b>(Level 6)</b>
	C218.5	<b>Create</b> pages for profile updation and deletion of an employee using PHP MySQL. <b>(Level 6)</b>