

DON BOSCO INSTITUTE OF TECHNOLOGY, KURLA, MUMBAI

Department of Computer Engineering, (Even semester, 2016-17)

SE Comps

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| Course Name: | AM-IV |
| Course Code: | CSC401 |
| Faculty Name: | Sonali J. |
| Year | 2 Sem IV |

| CO Number | Course Outcome |
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| CSC401.1 | Students will be able to (i) Obtain Eigen values and Eigen vectors for a given square matrix (ii) Identify discrete and continuous random variables (iii) Obtain mean and variance and mgf of discrete and continuous random variables (iv) Identify population, sample (small and large) (v) Define Karl Pearson's correlation coefficient and Spearman's rank correlation coefficient (vi) Define Singularities of complex valued functions |
| CSC401.2 | Students will be able to (i) Infer properties of Eigen values and Eigen vectors (ii) Check if a matrix is derogatory or not (iii) Calculate conditional Probabilities using Bayes' theorem (iv) Obtain pdf and cdf of discrete and continuous random variables (including special discrete – Binomial and Poisson and special continuous – normal) (v) Calculate various probabilities of random variables following Binomial Poisson and Normal distributions (vi) Karl-Pearson's Coefficient of Correlation and Spearman's Rank Correlation and regression lines (vii) Infer if a hypothesis testing is one-tailed or two tailed, identify critical region and the corresponding z—values based on the required probabilities on the population (viii) Optimize a function using methods of LPP and NLPP (obtain standard form, dual) (Lagrangian multipliers) (ix) Find line integral of a function of complex variable. (x) Find Taylor's & Laurent's series expansion |
| CSC401.3 | Students will be able to (i) Obtain functions of square matrices (ii) Check if a given matrix is diagonalizable and construct diagonal matrices using the concept of similarity (iii) Verify Cayley- Hamilton theorem (iv) Check if a matrix is derogatory or not. (v) Obtain MGF and hence obtain the mean and variance (up to first 4 moments) of a random variable (vi) Obtain probabilities using correct interpretation of Binomial distribution, Poisson and normal approximations to binomial distribution and also Binomial approximation to normal distribution (vii) Obtain solutions of LPP using simplex and dual simplex methods (viii) Use methods of sampling to test hypotheses (ix) Karl-Pearson's Coefficient of Correlation and Spearman's Rank Correlation and regression lines (x) Obtain line integral of a function of complex variable (xi) Obtain Laurent's series expansion (xii) Evaluate residues of a complex functions (xiii) Evaluate Integral using Cauchy's Integral Theorem |
| CSC401.4 | Students will be able to (i) Evaluate Integrals using Cauchy's Integral Theorem, Cauchy's Integral Formula & Residue theorem (ii) Evaluate definite integral of real variables using Residue theorem |

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| Course Name: | AOA |
| Course Code: | CSC402 |
| Faculty Name: | Ditty Varghese |
| Year | 2 Sem IV |

| CO Number | Course Outcome |
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| CSC402.1 | Ability to describe the properties of an algorithm, to know why it is necessary to analyze algorithms and be familiarized with conventions/specifications of algorithmic analysis. |
| CSC402.2 | Ability to apply, design and analyze different programming problems using different algorithmic strategies and techniques such as divide and conquer, greedy, dynamic, backtracking and branch & bound. |
| CSC402.3 | Ability to discuss, design and analyze different string matching algorithms and relate it with real time scenarios. |
| CSC402.4 | Ability to select appropriate problem solving strategies by comparing, contrasting and evaluating which strategy is better. |

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| Course Name: | COA |
| Course Code: | CSC403 |
| Faculty Name: | Sejal Chopra |
| Year | 2 Sem IV |

| CO Number | Course Outcome |
|-----------|---|
| CSC403.1 | Ability of the student to understand and describe the basics of computer architecture |
| CSC403.2 | Ability to estimate the output of ALU operations for fixed or floating point representations and system performance |
| CSC403.3 | Ability to classify and compare pipelined and parallel processing architectures with analysis of different hazards. |
| CSC403.4 | Ability to design, construct and manage control unit or memory system. |
| CSC403.5 | Ability to design an optimum processor architecture executing a specific program. |
| CSC403.6 | Ability to engage students in self-learning activity/independent activity to prepare a report on "Recent Developments in processor architecture and organisation. |

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| Course Name: | DBMS |
| Course Code: | CSC404 |
| Faculty Name: | Priya Kaul |
| Year | 2 Sem IV |

| CO Number | Course Outcome |
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| CSC404.1 | To explain the basic principles of DBMS, RDBMS and design the logical schema of databases using E-R method |
| CSC404.2 | To apply Relational Algebra, SQL and PL/SQL for creating and querying a database |
| CSC404.3 | To analyze and improve the design of database by applying normalization and Security features |
| CSC404.4 | To illustrate the concept of Transaction Management, Concurrency and Query processing. |

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| Course Name: | TCS |
| Course Code: | CSC405 |
| Faculty Name: | Shainila Mulla |

| Year | 2 | Sem | IV |
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| CO Number | Course Outcome | | |
| CSC405.1 | An ability to apply knowledge of computing and mathematics appropriate to the discipline | | |
| CSC405.2 | Depending on the complexity of the problem: Construct a transition table for a given machine, Draw the state transition diagram, Simulate an example on the machine and return an output. Problem Decomposition & stepwise refinement | | |
| CSC405.3 | Make informed choices among alternative solutions | | |
| CSC405.4 | Compiling information together in a different way by combining elements in a new pattern | | |
| CSC405.5 | Representation & reconstruction of the design according to the specifications | | |
| Course Name: | CG | | |
| Course Code: | CSC406 | | |
| Faculty Name: | Dipti Jadhav | | |
| Year | 2 | Sem | IV |
| CSC406.1 | Ability to understand the basics of computer graphics, different graphics systems and applications of computer graphics. | | |
| CSC406.2 | Design and Implement various algorithms for scan conversion and filling of basic objects and their comparative analysis.(Using OpenGL,C) | | |
| CSC406.3 | Understand, Design & Implement 2D and 3D geometric transformations on graphics objects and their application in composite form.(Using OpenGL,C) | | |
| CSC406.4 | Extract scene with different clipping methods and its transformation to graphics display device by designing and implementing clipping algorithms.(Using OpenGL,C) | | |
| CSC406.5 | Ability to render projected objects to naturalize the scene in 2D view and use of illumination models for this | | |
| CSC406.6 | Ability to create interactive graphics applications in (C/OpenGL) using one or more graphics application programming interfaces. | | |
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| TE Comps | | | |
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| Course Name: | SPCC | | |
| Course Code | CPC601 | | |
| Faculty Name: | Mayura Gavhane | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPC601.1 | Explain the basics of system programs like editors, compiler, assembler, linker, loader, interpreter, debugger and analyze various concepts of assembler | | |
| CPC601.2 | Interpret how linker and loader create an executable program from an object module created by assembler and Able to apply macros to increase readability and productivity. | | |
| CPC601.3 | Describe different phases of Compiler and be able to design lexical analyzer and different types of parsers using powerful compiler generation tools such as Lex and YACC | | |
| CPC601.4 | Relate role of intermediate code generation, code generation and run | | |
| Course Name: | SE | | |
| Course Code | CPC601 | | |
| Faculty Name: | Nilakshi Joshi | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPC602.1 | The student will demonstrate and apply basic knowledge in software engineering. | | |
| CPC602.2 | The student will plan, design, develop and validate the software project. | | |
| CPC602.3 | The student will apply basic principles of software project management for software project. | | |
| CPC602.4 | The student will apply software engineering methodology to create high quality WebApp. | | |
| CPC602.5 | The student will have understanding of sound engineering principle. | | |
| Course Name: | DD | | |
| Course Code | CPC603 | | |
| Faculty Name: | Kadambari Deherkar | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPC603.1 | Ability to demonstrate understanding towards principles and foundations of distributed databases which includes architecture, design issues, issues and technique related to distributed query and transaction processing | | |
| CPC603.2 | Ability to design distributed schema in terms of fragmentation and allocation | | |
| CPC603.3 | An ability to provide solution for a given case by identifying and defining computing requirements appropriate to its solution. | | |
| CPC603.4 | Ability to integrate different databases using XML | | |
| CPC603.5 | Ability to function effectively in a team | | |
| Course Name: | MCC | | |
| Course Code | CPC604 | | |
| Faculty Name: | Kalpita Wagaskar | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPC604.1 | To understand the basic mobile communication framework. | | |
| CPC604.2 | To make the students familiar with GSM,GPRS and CDMA Cellular architecture. | | |
| CPC604.3 | Setup and configure wireless access points and know the concept of Mobile IP. | | |
| CPC604.4 | To Implement small android based applications and simulation. | | |
| CPC604.5 | To put forth the concepts of mobility management and WLANs | | |
| CPC604.6 | To discuss the security issues in mobile computing | | |
| Course Name: | PM | | |
| Course Code | CPE6012 | | |
| Faculty Name: | Shainila Mulla | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPE6012.1 | Student will be able to define characteristics of a project and apply the project management principles across all phases of a project | | |
| CPE6012.2 | Student will be able to interpret project management principles,analyze the risk in environment and the management challenges for effective project management. | | |
| CPE6012.3 | Student will be able to demonstrate use of tools and techniques for the management of a project plan and controlling the schedule and budget. | | |
| CPE6012.4 | Student will be able to apply theoretical knowledge on project management to simplify software development process. | | |
| Course Name: | German | | |
| Course Code | CPE6013 | | |
| Faculty Name: | Ajit Adsul | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPE6013.1 | Learner will be able to read and understand Basic grammar, pronunciation and basic expression. | | |
| CPE6013.2 | Learner will be able to understand Greetings, beginning of conversation, introduction of oneself, numbers, counting and dates. | | |
| CPE6013.3 | Learner will be able to reading, comprehension and writing Dialogs, Monologs, Biologs. | | |
| CPE6013.4 | Learner can able to understand and speak about Family structure, Culture. | | |
| CPE6013.5 | Learner will be able to Draft e-mails and create simple presentation. | | |
| Course Name: | NPL | | |
| Course Code | CPL601 | | |
| Faculty Name: | Shafaque Syed & Sana Shaikh | | |
| Year | 3 | Sem | VI |
| CO Number | Course Outcome | | |
| CPL601.1 | Ability to analyze, summarize and execute different networking commands and Network configuration files with their related options | | |
| CPL601.2 | Ability to demonstrate the configuration of Linux network, Ethernet card, Linux as a router and remote login services. | | |
| CPL601.3 | Ability to simulate servers such as Web Server and Linux File Transfer Protocol(FTP) server by installing and configuring their Network Configuration files. | | |
| CPL601.4 | Ability to develop TCP and UDP client-server applications for iterative and concurrent servers. | | |
| CPL601.5 | Ability to learn new tools, algorithms, and/or techniques that contribute to develop improved communication and collaboration in meeting network administrative skills as a Team member or a Team leader. | | |

| BE Comps | | | | |
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| Course Name: | DWM | | | |
| Course Code | CPC801 | | | |
| Faculty Name: | Priya Kaul | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPC801.1 | To describe the basic principles, concepts and applications of data warehousing and data mining | | | |
| CPC801.2 | To design a data warehouse for any organization using dimensional modelling and perform OLAP operations for strategic decision making | | | |
| CPC801.3 | To demonstrate the appreciation of Data Mining algorithms like Classification, Clustering and Association in real time scenarios | | | |
| CPC801.4 | To explain Data Extraction, Transformation and Loading process in data warehousing. | | | |
| CPC801.5 | To simulate basic Data Mining algorithms using Modern tools like WEKA, R | | | |
| Course Name: | HMI | | | |
| Course Code | CPC802 | | | |
| Faculty Name: | Dipti Jadhav | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPC 802.1 | Provide the future user interface designer with concepts and strategies for making design decisions. | | | |
| CPC 802.2 | Analyzing existing interface designs, and improve them and Design innovative and user friendly interfaces. | | | |
| CPC 802.3 | Apply HMI in their day-to-day activities. | | | |
| CPC 802.4 | Design and Evaluate application for social and technical task. | | | |
| Course Name: | PDS | | | |
| Course Code | CPC803 | | | |
| Faculty Name: | Shafaque Syed | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPC803.1 | To understand and appreciate the challenges and opportunities faced by parallel and distributed systems. | | | |
| CPC803.2 | Understand and apply the principles and concept in analyzing and designing the parallel and distributed system. | | | |
| CPC803.3 | Understand the middleware technologies such as RPC, RMI and object based middleware and implement them for applications. | | | |
| CPC803.4 | Apply the key algorithms for coordination, communication and synchronization. | | | |
| Course Name: | DF | | | |
| Course Code | CPE8034 | | | |
| Faculty Name: | Kalpita Wagaskar | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPE8034.1 | To create awareness about various cyber crimes and the the role digital forensics play in accordance with the various bodies of law for dealing with crimes. | | | |
| CPE8034.2 | To study the techniques of initial response and forensics duplication in Windows and Linux systems with duplication of hard disk. | | | |
| CPE8034.3 | To understand and analyze the techniques of preserving and recovering electronic evidence from the system and its peripherals. | | | |
| CPE8034.4 | To understand the attacks on networks and recovery of the same using forensic techniques. | | | |
| CPE8034.5 | To study the techniques of system investigations using data analysis of Live Windows and Linux systems and know the ethical and hacker tools to avoid future crimes. | | | |
| Course Name: | BDA | | | |
| Course Code | CPE8035 | | | |
| Faculty Name: | Sana Shaikh | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPE8035.1 | Explain the key issues in big data management and its associated applications in intelligent business | | | |
| CPE8035.2 | Develop problem solving and critical thinking skills in fundamental enabling techniques like Hadoop and Map Reduce and NoSQLin big data analytics. | | | |
| CPE8035.3 | Interpret business models and scientific computing paradigms, an apply software tools for big data analytics. | | | |
| CPE8035.4 | Solve complex real world problems in various applications like recommender systems, social media applications, health and medical systems etc. | | | |
| Course Name: | Cloud Computing Lab | | | |
| Course Code | CPL801 | | | |
| Faculty Name: | Ditty Varghese | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPL801.1 | To describe the basic cloud architecture and the different types of Cloud computing. | | | |
| CPL801.2 | To create and run virtual machine on open source OS | | | |
| CPL801.3 | To implement and explore infrastructure storage as a service. | | | |
| CPL801.4 | To install and explore security features of Cloud through mini projects. | | | |
| Course Name: | Project -II | | | |
| Course Code | CPP802 | | | |
| Faculty Name: | Dipti Jadhav | | | |
| Year | 4 | Sem | VIII | |
| CO Number | Course Outcome | | | |
| CPP802.1 | Implement the steps of design iteration including consideration of user or evaluator feedback, observed performance of prototype subsystems, refinement of requirements, and refactoring of a design to arrive at a final detailed design. | | | |
| CPP802.2 | Implement final design details in complete hardware and software solutions. | | | |
| CPP802.3 | Develop a plan to successfully and incrementally integrate, test, and result analysis to end up with a complete system. | | | |
| CPP802.4 | Develop a technical report for the final product. | | | |