



S.Y.B.Tech – Sem-I(2022 Pattern)

Subject 1: Discrete Mathematics (INT222001)

At the end of this course, Students will be able to

- COINT222001.1** Select suitable graph technique to solve real life problems related to graph theory.
- COINT222001.2** Apply mathematical propositions and formal proof techniques to check the truthfulness of real life situation.
- COINT222001.3** Solve problems using Minimum Spanning Tree Algorithms.
- COINT222001.4** Solve problems related to discrete objects using concepts of relation and function.
- COINT222001.5** Use concepts of Number Theory & Algebraic Structure to solve a given problem.

Subject 2: Data Structures and Algorithms (INT222002) & Data Structures and Algorithms Lab (INT222007)

- COINT222002.1** Select appropriate searching and sorting techniques in the application development.
- COINT222002.2** Apply appropriate linear data structures for problem solving and programming.
- COINT222002.3** Use appropriate tree data structures for problem solving and programming.
- COINT222002.4** Use appropriate graph data structures for problem solving and programming.
- COINT222002.5** Implement Abstract Data Type (ADT) and data structures for given application.

Subject 3: Programming Paradigms and Methodology (INT222003)

- COINT222003.1** Acquire the skills for expressing syntax and semantics in formal notation
- COINT222003.2** Understand the basic building blocks of programming Languages.
- COINT222003.3** Understand Network and Database programming.
- COINT222003.4** Apply a suitable programming paradigm for a given computing application
- COINT222003.5** Explore Parallel and Functional Programming.

Subject 4: Digital Electronics and Logic Design (INT222004) & Digital Electronics and Logic Design Laboratory (INT222009)

- COINT222004.1** Simplify and Minimize a given Boolean expressions using K Map and Quine Mc-Cluskey method.
- COINT222004.2** Design and implement combinational circuits using AND OR logic.
- COINT222004.3** Design and implement combinational circuits using SSI and MSI logic.
- COINT222004.4** Explain applications of Flip Flops.
- COINT222004.5** Design and implement sequential logic circuits using Flip Flops.



Subject 5: Digital Communication (INT222005)

- COINT222005.1 Understand basics of Information and Communication Theory
- COINT222005.2 Understand different Line coding techniques
- COINT222005.3 Understand basics of Cryptography aspect in communication
- COINT222005.4 Use different error detection and correction codes in digital communication
- COINT222005.5 Analyze quality of digital communication in presence of noise

Subject 6: Ethics and Values in Information Technology (INT222006)

- COINT222006.1 Apprehend ethics in the business relationships and practices of IT.
- COINT222006.2 Adapt the global ethical principles in IT Profession.
- COINT222006.3 Implement trustworthy computing to manage risk and security vulnerabilities.
- COINT222006.4 Analyze concerns of privacy and privacy rights in information gathering practices in IT.

Subject 7: Java Programming Lab (INT222008)

- COINT222008.1 Implement classes, objects, methods and explore object creation, initialization.
- COINT222008.2 Implement different types of exception handling techniques and perform generic programming.
- COINT222008.3 Implement Database connectivity.
- COINT222008.4 Implement the concept of Abstract Class and Inheritance.

Subject 8: Soft Skills Lab (INT222010)

- COINT222010.1 Introspect about individual's goals, aspirations by evaluating one's SWOC and think creatively.
- COINT222010.2 Develop effective communication skills.
- COINT222010.3 Constructively participate in group discussion, meetings and prepare and deliver Presentations.
- COINT222010.4 Practice professional etiquette, present oneself confidently and successfully handle personal interviews.
- COINT222010.5 Function effectively in multi- disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership quality.

S.Y.B.Tech – Sem-II(2022 Pattern)

Subject 1: Applied Mathematics-III (SMH222111)

At the end of this course, Students will be able to

- COSMH222111.1 Understand basic concept of Statistic.
- COSMH222111.2 Understand basic concept of probability distribution.
- COSMH222111.3 Apply the basic concepts of statistics to real life problems.
- COSMH222111.4 Apply the basic concepts of probability distribution theory to real life problems.
- COSMH222111.5 Analyze real life problems by using theory of statistics and Probability distribution.



Subject 2: Database Management System (INT22012) & Database Management System Laboratory (INT22017)

- COINT22012.1 Use emerging database technologies for large-scale data management.
- COINT22012.2 Recognize the processes applied for Transaction Management and query optimization as well as formulate database queries using PL/SQL
- COINT22012.3 Explain Database recovery methods and architectures
- COINT22012.4 Formulate database queries using SQL DML/DDDL/DCL commands.
- COINT22012.5 Compare various database models such as ER, EER and RDBMS to create logical design of database.

Subject 3: Computer Organization and Architecture (INT222013) & Assembly Language Programming Lab (INT222018)

- COINT222013.1 Describe the functions & organization of building blocks of computer.
- COINT222013.2 Understand processor instruction characteristics and concepts related to Assembly Language Programming.
- COINT222013.3 Describe characteristics of memory system and I/O devices.
- COINT222013.4 Understand concept of memory management using segment registers and features of Privileged Instructions.
- COINT222013.5 Understand concepts of Parallel and multicore processing.

Subject 4: Computer Graphics (INT222014) & Computer Graphics Laboratory (INT222019)

- COINT222014.1 Implement line and circle generation algorithms.
- COINT222014.2 Understand the concept of Clipping, Projections & Hidden Surface removal.
- COINT222014.3 Express comprehensive knowledge of Illumination models, Colour models and shading.
- COINT222014.4 Apply polygon filling, 2D and 3D transformations and viewing into the real world applications.
- COINT222014.5 Demonstrate the knowledge of curves, fractals and animation to build graphics application.
- COINT222014.6 Explore OpenGL API for rendering 2D graphics.

Subject 5: Financial Management(INT222015)

- COINT222015.1 Understand terminologies such as Capex, Opex, Return on Investment, profitability.
- COINT222015.2 Interpret the Balance sheet of a Company for Small, Medium and Large Size
- COINT222015.3 Understand information about formal courses on Finance and Accounting
- COINT222015.4 Analyze financial statements, their importance and impact on business
- COINT222015.5 Present a case study, based on their own findings and thereby learn importance of good Financial Management over and above Engineering and Technology



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Subject 6: Computer Organization and Architecture (INT222013) & Assembly Language Programming Lab (INT222018)

COINT222013.1 Describe the functions & organization of building blocks of computer.

COINT222013.2 Understand processor instruction characteristics and concepts related to Assembly Language Programming.

COINT222013.3 Describe characteristics of memory system and I/O devices.

COINT222013.4 Understand concept of memory management using segment registers and features of Privileged Instructions.

COINT222013.5 Understand concepts of Parallel and multicore processing.

Subject 7: Film and Art Appreciation (INT222016)

COINT222016.1 Demonstrate an understanding of the terminology and conventions of visual expression

COINT222016.2 Critically analyze and interpret works of art in terms of form and content.

COINT222016.3 Communicate knowledge of art practices, meaning, values, and methods within diverse historical and cultural contexts.

COINT222016.4 Evaluate and critique works of art as assigned in class.

Subject 8: Project Based Learning (INT222020)

COINT222020.1 Apply principles from several disciplines.

COINT222020.2 Demonstrate long-term retention of knowledge and skills acquired.

COINT222020.3 Implement and integrate various modules of the project.

COINT222020.4 Understand Ethics in IT as well as roles and responsibilities of team members.

COINT222020.5 Prepare the documentation of the Project Development process.