Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS2-01 Advanced Engineering Mathematics

List of Course Outcomes

After completing this course the student will be able to:

CO 1: Implement numerical difference method, interpolation techniques, numerical differentiation and integration.

CO 2: Find solutions for first and second order differential equations, polynomial and transcendental equations.

CO 3: Understand the Laplace Transformation concept to utilize it in real world applications.

CO 4: Solve field problems by using Fourier Transformation.

CO 5: Exercise the use of Z-transformation and its applications to different equations.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS1-02 Technical Communication

List of Course Outcomes

After completing this course the student will be able to:

CO 1: Present effective technical communication skills through listening, speaking, reading and writing with the help of different tools.

CO 2: Analyze, organize and summarize technical documents by critically reading them.

CO 3: Implement grammar, technical writing and editing skills to write effective academic and technical documentations.

CO 4: Sharply utilize relevant scientific content to write reports, project proposals and technical articles.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS3-04-: Digital Electronics

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Different type of number system and their conversion, Basic logic Gates and Boolean algebra, various type of code and their inter conversion.

CO2: Min term, Max term, SOP, POS Minimization of Boolean expressions uses Karnaugh map and Mc Cluskey method.

CO3: Know about the logic families and realization of logic gate.

CO4: Design and analyze combinational and sequential circuit.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS4-05: Data Structure and Algorithm

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Describe basic concepts of Stack and its applications.

CO2: Describe basic concepts of Function, Queue and Link-list.

CO3: Design tree based data structures such as Binary Tree, BST, AVL Tree , Searching and Sorting techniques .

CO4: Design and Implement graph and hashing based data structure.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS4-06: Object Oriented Programming

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Relate the different programming paradigms, Characteristics, Concepts of OOP and their structure.

CO2: Compare dynamic memory management techniques and apply using pointers, constructors, destructors, friend function.

CO3: Describe the concept of function overloading, operator overloading, virtual functions and polymorphism to solve complex problems

CO4: Classify inheritance with the understanding of early and late binding and design solutions

CO5: Model solutions for exception handling and demonstrate the templates and file handling.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CAI4-23: Software Engineering
List of Course Outcomes

After completion of the course, students would be able to:

CO1: Understand Software Engineering lifecycle by understanding requirement specifications, verifications and validations.

CO 2: Analyze varying factors for Software Project Management through Estimation models and risk analysis.

CO 3: Examine the requirements to generate appropriate prototypes and data dictionaries along with various models and diagrams.

CO 4: Examine the various design fundamentals and development solutions with detailed idea of designing documentation.

CO 5: Work with a better understanding of Object oriented analysis and design to demonstrate the Software Project Management Skills.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS4-21 : Data Structures and Algorithms Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Understanding an array storage concept and illustrate the concept of row major and column major array storage.

CO 2: Understanding of Depth first and breadth first traversal of graphs representation using adjacency matrix and list.

CO 3: Binary tree implementation with different operations like addition, deletion, traversal.

CO 4: Simulate a stack, queue, circular queue and dequeue using a one dimensional array as storage element.

CO 5: Examination of different sorting algorithm.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS4-22: Object Oriented Programming Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Use C++ libraries, create variables and structures.

CO 2: Understand the concept of structures, class and objects and create programs using them and implement code reusability, operator overloading and inheritance.

CO 3: Design programs having an understanding of Arrays and memory allocation.

CO 4: Identify the utilities of data members and member functions to implement them accordingly.

CO 5: Apply various handling techniques and templates on object oriented programming.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS4-23 Software Engineering Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Understand the need and working of UML diagrams and DFDs for projects.
CO 2: Implement test cases and OOP concepts using JAVA and testing.
CO 3: Use various tools required in the software life cycle.
CO 4: Analyse and design Software requirement specifications.
CO 5: Develop and demonstrate structural and behavioral UML diagrams using ProjectLibre project management tools.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-III Semester
B.Tech. Artificial Intelligence and Data Science
3CS4-24 Digital Electronics Lab

List of Course Outcomes

After the completion of this course students will be able to:

CO 1: Implement and realize truth tables of various types of logic gates using bread board.

CO 2: Design and verify the truth tables of SOP and POS logic circuits.

CO 3: Implement and analyze combinational circuits and sequential circuits.

CO 4: Understand the precautions required for the errorless functioning of the equipments.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS2-01: Discrete Mathematics Structures

List of Course Outcomes

After completion of this course student will be able to:

CO1: Be familiar with fundamental mathematical concepts such as sets and apply them.

CO2: Understand fundamental of functions such as (domain, co-domain, range, image, inverse image and composition) and types of functions.

CO3: Use of mathematical propositions and proof techniques to check the truthfulness of a real life situation and to apply the notion of mathematical thinking, mathematical proofs and logics such as predicate logic, propositional logic and inference rules.

CO4: Use graph theory and trees to formulate the problems and solve them.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS1-03: Managerial Economics and Financial Accounting

List of Course Outcomes

After completion of this course student will be able to:

CO1: Explain the basic fundamental of economics

CO2: Define law of demand and its exceptions, to use different forecasting methods for predicting demand for various products and services.

CO3: Assess the functional relationship between Production and factors of production and list out various costs associated with production.

CO4: Implement various techniques for assessing the financial position of the business.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS3-04: Microprocessor & Interfaces

List of Course Outcomes

After completion of this course student will be able to:

CO1: Assess and solve basic binary math operations using the microprocessor and explain the microprocessor's and Microcontroller's internal architecture.

CO2: Apply knowledge and demonstrate programming proficiency using the various addressing modes and data transfer instructions.

CO3: Compare accepted standards and guidelines to select appropriate Microprocessor and analyze assembly language programs.

CO4: Evaluate assembly language programs and download the machine code that will provide solutions real-world control problems.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-05: Database Management System

List of Course Outcomes

After completion of this course student will be able to:

CO1: Describe data models and schemas in DBMS and also the fundamental elements of RDBMS.

CO2: Apply logical DBMS design principles, including E-R diagrams and database normalization and SQL.

CO3: Construct simple and moderately advanced database queries using Relational Algebra.

CO4: Understand the concept of Transaction and Concurrency Control and the concept of Failure and Recovery.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CSR4-06: Theory of Computation

List of Course Outcomes

After completion of this course student will be able to:

CO1: Discuss the concept of formal grammar, formal language, regular expression and automata machine.

CO2: Design finite automata and push down automata **(**PDA) machines for given formal languages or computational real-world problem statements.

CO3: Understand the capability of Turing machine and design Turing Machine for context-sensitive languages or computational real-world problem statements.

CO4: Choose and design appropriate automata for modeling the solution for various computational engineering problems.

CO5: Understand the concepts of tractable & untraceable problems and able to decide a given problem is tractable or not.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-07: Data Communication and Computer Network

List of Course Outcomes

After completion of this course student will be able to:

CO1: Describe the functions of each layer in OSI and TCP/IP model.

CO2: Describe the functions of data link layer and protocols used in MAC sub layer.

CO3: Build the skills of IP addressing, Routing Mechanisms and Congestion Control technique.

CO4: Identify the essential principles of a transport layer protocol and session layer protocol and illustrate the features of various application layer protocols such as HTTP, DNS, SMTP, etc.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-21: Microprocessor & Interfaces Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Demonstrate ability to handle arithmetic operations using assembly language programming in TASM and training boards.

CO2: Demonstrate ability to handle logical operations using assembly language programming in TASM.

CO3: Demonstrate ability to handle string instructions using assembly language programming in TASM.

CO4: Demonstrate ability to handle sorting operations and using assembly language programming in TASM.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-22: Database Management System Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the basic concepts of Database Systems and Applications. Arrange the data in a computational way.

CO2: Use the basics of SQL and construct queries using SQL.

CO3: Design the ER diagrams as well as interpret the Design of database.

CO4: Design a commercial relational database system (Oracle, MySQL) by writing SQL using the system. Acquire skills in using SQL commands for data definition and data manipulation.

CO5: Analyze and Select storage and recovery techniques of database system. Formulate the queries required to solve the issues in DBMS. Develop solutions for database applications using procedures, cursors and triggers.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-23 Network Programming Lab

List of Course Outcomes

After completion of this course student will be able to:

CO 1: Define the fundamentals of underlying principles of computer networking.

CO 2: Understand the key topology which supports the internet.

CO 3: Create socket and analyze different client server model.

CO 4: Demonstrate the installation and configuration of network simulator.

CO 5: Applying Network routing algorithm and evaluate the process of implementing simple routed internetwork.

CO 6: Evaluate the error using various error correcting techniques.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-24 Linux Shell Programming Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: List the basic commands of UNIX operating system and use them in Linux environment

CO2: Understand commands related to process control and apply them to manage processes.

CO3: Understand the concepts of control structure, loops, case and functions in shell programming and apply them to create shell scripts.

CO4: Associate the concepts of arrays with Linux and apply them to create, compile and execute C programs in Linux terminal.

CO5: Compare different editors and use them to create shell script and C program for given problem.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-IV Semester
B.Tech. Artificial Intelligence and Data Science
4CS4-25: Java Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand and apply various object oriented features like inheritance, data abstraction, encapsulation and polymorphism to solve various computing problems using Java language.

CO2: Develop Java programs for real applications using java constructs and libraries.

CO3: Implement Exception Handling and Multithreading in java.

CO4: Develop and deploy Applet in java.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year- V Semester
B.Tech. – Artificial Intelligence and Data Science
5CAI3-01: Data Mining-Concepts and Techniques
List of Course Outcomes

After completion of the course, students would be able to:

CO1: Understand the role of data warehousing and data mining in decision making with the knowledge of Data Mining.
CO2: Prepare data required for data mining with the use of different methodologies based on predictive modeling.
CO3: Apply appropriate clustering algorithm and classifications to cluster data and evaluating it based on Descriptive Modeling
CO4: Extract and discover patterns from abundant amounts of data using Pattern recognition and mining techniques.
CO5: Exemplify the learned skills and expanding the knowledge of data mining concepts by understanding data mining trends.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-02: Compiler Design

List of Course Outcomes

After the completion of this course students will be able to :

CO1: Explain the working of compilers, interpreters and LEX.

CO2: Analyse parsing and ambiguity of grammar.

CO3: Understand the Formation, Syntax and Semantics of Three-address code for the given line of code**.**

CO4: Understand the organization and management of various data structures for understanding storage allocation strategies.

CO5: Implement the various code optimization techniques.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-03: Operating System

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Define basic functioning and properties of OS, process and file management along with scheduling algorithms.

CO2: Understand the features associated with memory management.

CO3: Analyze the concept of deadlock, deadlock prevention algorithms and device management.

CO4: Understand the role of OS in File management and utilize it for accessing and storing file.

CO5: Perform various operations on OS like UNIX, LINUX, and Android etc by referring various case studies.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year- V Semester
B.Tech. – Artificial Intelligence and Data Science
5CS4-04: Computer Graphics & Multimedia

List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Explain the applications, areas and devices associated with Computer Graphics along with graphic standards.

CO 2: Apply and compare algorithms for drawing 2D images with the understanding of concepts like aliasing and various attributes.

CO 3: Transform and analyze 2D graphics by using clipping and transformation concepts and logics.

CO 4: Understand basic operations that can be performed on 3D graphics by evaluating various algorithms.

CO 5: Exemplify illumination and color models in computer graphics to develop 2D and 3D graphics.

CO 6: Put in application and illustrate graphic animation through animation and realism methodologies.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-05: Analysis of Algorithm

List of Course Outcomes

After the completion of this course students will be able to:

CO1: Review algorithms and analyze Divide and conquer.
CO2: Explain Greedy Method and Dynamic programming.
CO3: Illustrate Branch and Bound and Pattern matching Algorithms.
CO4: Explain Assignment Problems and Randomized algorithm.
CO5: Understand problem classes Np, Np-Hard and Np- Complete.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year- V Semester
B.Tech. – Artificial Intelligence and Data Science
5AID5-13: Programming for Data Science

List of Course Outcomes

After completion of the course, students would be able to:

CO1 : Gain basic knowledge on data science

CO2 : Use suitable forms of analysis to convert real time data.

CO3 : Utilize statistical inferences to get the insights of data.

CO4 : Develop suitable models using machine learning techniques and analyze its performance

CO5 : Understand the requirements and generate the results.

CO6 :. Access and analyze the quality of results generated.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-21 Computer Graphics and Multimedia Lab

List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Generate and transform various geometric shapes and drawings using predefined functions.

CO 2: Convert basic 2D geometrical primitives, area fillings and clippings using algorithms.

CO 3: Design different kinds of viewings and projections for 3D objects and scenes using transformation methods.

CO 4: Exemplify the knowledge by generating fractal images.

CO 5: Create an advanced graphic animation.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-22 Compiler Design Lab
List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Identify keywords and generate count of keywords, operators and characters in a file.

CO 2: Create Symbol table and execute various operations on them.

CO 3: Identify valid entities and count blank spaces, words, lines, no. of consonants and vowels in the file by writing a LEX program.

CO 4: Utilize YAAC tool to examine and evaluate given expression to identify the validity of given string.

CO 5: Find first of any grammar by writing a C program.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-23 Analysis of Algorithms Lab
List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Sort given set of elements and determine the time required to sort the elements and plot a graph for varying values by using techniques like Quick Sort and Merge Sort.

CO 2: Identify topologies of digraph vertices.

CO3: Use Algorithms like Warshall's, Dijkstra's, Prim's, Floyd's and Kruskal's to determine transitive closure, shortest path and minimum cost spanning tree from various suitable graphs.

CO 4: Create a program to traverse a graph to generate the required outputs by using traversal methods like BFS and DFS.

CO 5: Utilize Back Tracking method to implement N Queen's problem.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-V Semester
B.Tech. Artificial Intelligence and Data Science
5CS4-24 Advance JAVA Lab
List of Course Outcomes

After completion of the course, students would be able to:

CO 1: Create widgets and handlers using Abstract Windowing Toolkit and Swings.

CO 2: Utilize JAVA Database Connectivity and other features to create programs.

CO 3: Formulate applications using RMI and have an understanding of the working of JNDI and J2EE.

CO 4: Apply JAVA Servlet and Filters to formulate applications like Filter applications, Session handling and Event handling.

CO 5: Build dynamic web pages using JSP, Tags, XML and SQL Libraries.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS3-01: Digital Image Processing

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the fundamental elements of image and steps involved in image processing.

CO2: Define image transformation and filtering along with their various features.

CO3: Analyze and apply image restoration methods and Filtering processes.

CO4: Understand and apply Image compression through various compression techniques.

CO5: Utilize image segmentation methods and exemplify Digital image processing transformations.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-02: Machine Learning

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the concept of supervised learning and its algorithms.

CO2: Understand the concept of unsupervised learning and its algorithms.

CO3: Implement Statistical learning theory through various machine learning algorithms.

CO4: Solve real time complex problems by applying semi-supervised and reinforcement learning.

CO5: Analyze and understand various filtering techniques and various concepts related to neural networks and deep learning.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-03: Information Security System

List of Course Outcomes

After completion of this course student will be able to:

CO1: Explain various aspects and need of Information Security System.
CO2: Classify security attacks and various encryption techniques.
CO3: Analyze modern block cipher along with DES and AES.
CO4: Define Public key cryptosystems and its applications.
CO5: Understand Cryptographic hash functions, Authentication codes and concept of Digital Signatures.
CO6: Explain key management schemes and distribution techniques and various protocols associated with them.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-04: Computer Architecture and Organization

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the theory and architecture of central processing unit.

CO2: Analyze some of the design issues in terms of speed, technology, cost, performance and design a simple CPU with applying the theory concepts.

CO3: Use appropriate tools to design verify and test the CPU architecture

CO4: Learn the concepts of parallel processing, pipelining and inter-process communication.

CO5: Understand the architecture and functionality of central processing unit.

CO6: Exemplify in a better way the I/O and memory organization and define different number systems, binary addition and subtraction, 2's complement representation and

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-05: Principles of Artificial Intelligence

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand various approaches of AI.
CO2: Analyze problem solving by using various Search Algorithms.
CO3: Grasp various methodologies widely used in Game playing.
CO4: Analyze the role of Knowledge Base and Reasoning in Artificial Intelligence.
CO5: Classify learning paradigms, its different forms and applications.
CO6: Acquire knowledge of Natural Language processing and various issues involved in it.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-06: Cloud Computing

List of Course Outcomes

After completion of this course student will be able to:

CO1: Understand the basics of cloud computing and all the factors involved in it like migration factors, history of cloud etc.

CO2: Access and analyze Cloud Computing architecture, programming models and software.

CO3: Comprehend Virtualization Technology, its implementation and various tools involve in it.

CO4: Get the point of the cloud security issues, its challenges, risk factors and methodologies to secure clouds.

CO5: Analyze the Cloud platform industry and various companies working in this business.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-21: Digital Image Processing Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: To understand the Manipulate Color image segmentation algorithms.
CO2: To investigate Compare image coding and compression techniques.
CO3: To Examine image enhancement techniques.
CO4: To Understand Computer vision for skin tumor image.
CO5: To study Morphological operations.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

II Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-22: Machine Learning Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Define Data Frame, Statistical Learning, Feature extraction and Feature Selection.

CO2: Examine real world problem and solve them using various supervised machine learning models.

CO3: Examine real world problems and solve them using various unsupervised machine learning models.

CO4: Study the Implementation of Apriori algorithm and f-p growth algorithm to develop application involving Market basket analysis.

CO5: Implement Recommendation System.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-23: Python Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Define and demonstrate the use of built-in data structures "lists" and "dictionary".

CO2: Design and implement a program to solve a real world problem.

CO3: Design and implement GUI application and how to handle exceptions and files.

CO4: Design and implement a program to solve sorting problems.

CO5: Study Merge sort, Selection sort, Insertion sort.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.

Modi Institute of Technology, Kota

An Engg. College Approved by AICTE & Affiliated to RTU
Branches: **B.Tech**- ME / EE / ECE / CSE / AI &DS & **M.Tech** – Digital Communication
Nayagaon, Rawatbhata Road, P.O. Borabas, Kota – 324010; Tel.:7665439788;
Website: www.mitkota.com Email: mitkota1@gmail.com

III Year-VI Semester
B.Tech. Artificial Intelligence and Data Science
6CS4-24: MAD Lab

List of Course Outcomes

After completion of this course student will be able to:

CO1: Explain Android Platform, Architecture and features
CO2: Design User Interface and develop activity for Android App.
CO3: Implement various basic concepts of Android during application development
CO4: Select and use best GUI components which are user friendly.
CO5: Design gaming application to handle images and videos according to size.

Mr. Vijay Varshney (O/C Exam)	Mr. Pankaj Jain HOD(First Year)	Mrs. Seema Arya HOD (CSE)
Mr. Jitendra Yadvendra HOD (EE)	Mr. Abhishek Chattri Dy. Registrar	Dr. Barkha Gupta HOD(ME)

Dr. Vikas Soni
Principal

Cc to:-

Hon'ble Vice-Chairman Sir For kind information.
Hon'ble Group Director Sir For kind information.
Undersigned.
HOD's & I/C'S./ First Year Coordinator.
Registrar Office/NAAC Coordinator/All Member Concerned/ Accountant.