NITTE
EDUCATION TRUST

N.M.A.M. INSTITUTE OF TECHNOLOGY
(An Autonomous Institution affiliated to Visvesvaraya Technological University, Belagavi)
Nitte – 574 110, Karnataka, India

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Ref. No.: NMAMIT/COE/2024-25/3

Date: 20-8-2024

Circular

Sub: Equivalent Courses of 175 and 200 Credits scheme in 160 Credits scheme and Syllabus to be followed for Subsequent Supplementary Examinations.

As per the Recommendations of 5th Joint Board of Studies (Dated 2-8-2024) for different Engineering Programs (Autonomous scheme) of NMAM Institute of Technology, Nitte, students who have previously registered for the **175 and 200 Credits scheme courses** (Admission batch of 2016, 2017, 2018, 2019 and 2020) must refer to the suggested **equivalent courses offered in 160 Credits scheme** and study the same syllabus **for all upcoming Supplementary Examinations**.

If there is no equivalent course available in 160 Credits scheme, then they have to follow the syllabus of latest scheme available. **A detailed list of equivalent courses is given in Annexure–1.**

Students who are appearing for the Supplementary examinations and Faculty handling these courses during supplementary semesters need to follow the same without fail. If any of the backlog courses of 175 & 200 Credits scheme is not listed in Annexure-1, then the concerned students are required to write an email to the Controller of Examinations to update the list of courses. Students of 160 Credits scheme (Admission batch of 2021) will continue to follow their scheme & syllabus without any changes.

Note: *Course equivalence is prepared only for conducting supplementary semester classes and examinations. However, the course credits and course titles with their code remain the same as earlier for grading purpose.*

This is for the information of all concerned and necessary action.

Sd/-

Sd/-

Controller of Examinations

PRINCIPAL

Cc: Principal's table, Vice Principal & Dean (Academics), Vice Principal & Controller of Examinations, All HODs, Academic Section, OAC.

Notice Board.

Equivalent Theory Courses for Schemes of 200, 175 & 160 Credits (Autonomous Batch)
(Provisional List – Approved by 5th Joint BOS, dated 2-8-2024)

NOTE:
1) In the 160 Credits Scheme column, the equivalent theory courses for 175 and 200 Credits are mentioned. For such courses, Supplementary examinations will be conducted as per the 160 Credits scheme syllabus. Old scheme students must refer to and study the equivalent course syllabus mentioned in the 2021 scheme to appear in upcoming Supplementary examinations.
2) In the 175 Credits Scheme column, the courses of 2018, 2019 and 2020 admission batch are listed with course code "20XXYYY".
3) In the 200 Credits Scheme column, the courses of 2016 & 2017 admission batch are listed with Course code "16XXYYY" or "17XXYYY".
4) If the courses for 175 or 200 Credits scheme is mentioned as "Not Mapped", then students have to refer to the syllabus of courses pertaining to their latest scheme.
5) **The courses that are marked in BOLD font are the course codes of which syllabus need to be referred for all subsequent supplementary examinations.**

If any of the courses are missing from the list, then the concerned students need to contact the office of the Controller of Examinations personally or through email.

Basic Sciences / Common to All courses:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21MA101 - Engineering Mathematics - I	20MA101 - Engineering Mathematics - I	-
21MA201 - Engineering Mathematics - II	20MA201 - Engineering Mathematics - II	-
21CV301 / 21ME301 - Engineering Mathematics - III	20CV301 / 20ME301 - Engineering Mathematics - III	-
21EE301 / 21EC301 - Vector Calculus & Transform Techniques	20EE301 / 20EC301 - Vector Calculus & Transform Techniques	-
21BT301 - Numerical Methods	20BT301 - Numerical Methods	-
21CS301 / 21IS301 / 21AM301 / 21CC301 - Statistics and Probability Theory	-	-
21CV401 / 21ME401 - Engineering Mathematics - IV	20CV401 / 20ME401 - Engineering Mathematics - IV	-
21EE401 - Probability Theory and Numerical Methods	20EE401 / 20EC401 - Probability Theory and Numerical Methods	-
21BT401 - Biostatistics	20BT401 - Biostatistics	-
21CS401 / 21IS401 / 21AM401 / 21CC401 - Linear Algebra and its Applications	-	-
Not Mapped	**20CS401 / 19MA401 / 20IS401 / 20AM401 / 20CC401 - Linear Algebra & Probability Theory**	-
Not Mapped	**20CS301** (19MA303) **/ 20IS301 / 20CC301 - Discrete Mathematical Structures** (Discrete Mathematics)	-
Not Mapped	**MATDIP301 - Advanced Mathematics - I**	MATDIP301 – Advanced Mathematics - I
Not Mapped	**MATDIP401 - Advanced Mathematics - II**	MATDIP401 – Advanced Mathematics - II
21PH102 - Engineering Physics	20PH102 - Engineering Physics	-
21CY110 - Engineering Chemistry	20CY110 - Engineering Chemistry	-
21HU105 - Technical English - I	-	-
Not Mapped	**20HU105 - English and Communication Skills**	17HU114 - English and Communication Skills
21HU202 - Technical English - II	-	-
21HU312 - Samskruthika Kannada / Balake Kannada	20HU312 - Samskruthika Kannada / Balake Kannada	-
21HU313 - Constitution of India & Professional Ethics	20HU107 - Constitution of India & Professional Ethics	-
21HU314 - Social Connect & Responsibility	-	-
21HU315 - Universal Human Values	-	-
Not Mapped	**ENGDIP501 – Functional English** *(For Lateral Entry Students)* (Computer Based Test)	
21HU511 - Research Methodology & Intellectual Property Rights	-	-
21CV512 - Environmental Studies (5th Semester - CBT)	20CV113 - Environmental Studies (First Year - CBT) CV113 (Lateral - CBT) - Environmental Studies	CV113 (Lateral - CBT) - Environmental Studies

Open Electives: Syllabus of 160 Credits scheme should be followed for all open elective courses. If any of the open elective backlog courses is not offered in the 160 Credits scheme, then the syllabus of 175 Credit scheme should be followed.

21MA8X02 - Linear Algebra	20MA8X02 - Linear Algebra	-
21HU8X03 - Intellectual Property Rights	20HU8X03 - Intellectual Property Rights	-
21CV8X07 - Environmental Impact Assessment	18CV8X07 - Environmental Impact Assessment	-
21EC8X18 - Consumer Electronics	19EC8X18 - Consumer Electronics	-
21ME8X28 - Operations Management & Entrepreneurship	20ME8X28 - Operations Management & Entrepreneurship	-
21IS8X38 - Introduction to Python Programming	20IS8X38 - Introduction to Python Programming	-
21BT8X40 - Biofuel Engineering	20BT8X40 - Biofuel Engineering	-
21MA8X43 - Number Theory	20MA8X43 - Number Theory	-
21HU8X72 - Introduction to Japanese Language	18HU8X72 - Introduction to Japanese Language	-
21HU8X74 - Introduction to German Language	20HU8X74 - Introduction to German Language	-
21IS8X76 - Web Technologies	18IS8X76 - Web Technologies	-
21EE8X79 - Electric Vehicle Technology	20EE8X79 - Electric Vehicle Technology	-
21ME8X88 - Marketing Management	20ME8X88 - Marketing Management	-

Note: First year common courses offered by technical departments are listed under the corresponding department, along with course list for higher semesters in the following pages.

Civil Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21CV103 - Elements of Civil Engineering	20CV103 - Engineering Mechanics	17CV103 - Elements of Civil Engineering and Engineering Mechanics
21CV302 - Fluid Mechanics and Hydraulics	-	-
21CV303 - Building Materials and Engineering Geology	-	-
Not Mapped	**20CV302 - Building Materials and Construction**	-
21CV304 - Strength of Materials	20CV303 - Strength of Materials	-
Not Mapped	**20CV304 - Surveying**	-
Not Mapped	**20CV305 - Fluid Mechanics**	-
Not Mapped	**20CV306 - Engineering Geology**	-
21CV402 - Geodetic Engineering	-	-
Not Mapped	**20CV403 - Advanced Surveying**	-
21CV403 - Public Health Engineering	-	-
Not Mapped	**20CV404 - Hydraulics & Hydraulic Machines**	17CV404 - Hydraulics & Hydraulic Machines
21CV404 - Structural Analysis - I	20CV402 - Structural Analysis - I	-
21CV501 - Structural Analysis - II	20CV501 - Structural Analysis - II	17CV501 - Analysis of Indeterminate Structures
21CV502 - Transportation Engineering	-	-
21CV503 - Design of RC Structural Elements	20CV502 - Design of RC Structural Elements	-
21CV504 - Geotechnical Engineering	-	-
Not Mapped	**20CV503 - Geotechnical Engineering - I**	17CV503 - Geotechnical Engineering - I
Not Mapped	**20CV504 -Transportation Engineering - I**	17CV504 -Transportation Engineering - I
Not Mapped	**20CV505 - Environmental Engineering - I**	-
Not Mapped	**20CVE501 - Alternative Building Materials & Technologies**	17CV515 - Alternative Building Materials & Technologies
21CV601 - Design of Steel Structural Elements	20CV601 - Design of Steel Structural Elements	-
21CV602 - Engineering Project Management	-	-
Not Mapped	**20CV602 - Geotechnical Engineering - II**	17CV602 - Geotechnical Engineering - II
21CV603 - Concrete Technology	20CV405 - Concrete Technology	-
21CVE115 - Construction Planning and Control	19CVE504 - Construction Planning and Control	-
Not Mapped	**20CV603 - Transportation Engineering - II**	17CV603 - Transportation Engineering - II
Not Mapped	**20CV604 - Environmental Engineering - II**	17CV604 - Environmental Engineering - II
Not Mapped	**20CVE502 - Advanced Concrete Technology**	17CV713 - Advanced Concrete Technology
Not Mapped	**20CVE703 - Rural Water Supply & Sanitation**	17CV613 - Rural Water Supply & Sanitation
21CV701 - Quantity Surveying & Contract Management	20CV702 - Quantity Surveying & Contract Management	17CV702 - Quantity Surveying & Estimation
21CV702 - Hydrology & Irrigation Engineering	20CV701 - Hydrology & Irrigation Engineering	17CV701 - Hydrology & Irrigation Engineering
21CVE105 - Design of Prestressed Concrete Structures	20CVE104 - Design of Prestressed Concrete Structures	17CV704 - Design of Prestressed Concrete Structures
21CVE120 - RS & GIS Application in Water Resource Engineering	20CVE704 - RS & GIS Application in Water Resource Engineering	-
21CVE218 - Solid Waste Management	20CVE801 - Solid Waste Management	17CV711 - Solid Waste Management
Not Mapped	**20CVE202 - Design of Bridges**	-
Not Mapped	**20CVE301 - Ground Improvement Techniques**	-
Not Mapped	**20CVE603 - Valuation of Real Properties**	-

Mechanical Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21ME106 - Elements of Mechanical Engineering	20ME106 - Elements of Mechanical Engineering and Workshop Practices	17ME104 - Elements of Mechanical Engineering
21ME302 - Manufacturing Processes	20ME304 - Manufacturing Processes	-
21ME303 - Materials Science & Engineering	20ME302 - Materials Science & Engineering	17ME302 - Material Science & Metallurgy
21ME304 - Thermal Engineering	-	-
Not Mapped	**20ME303 - Basic Thermodynamics**	17ME303 - Basic Thermodynamics
21ME402 - Manufacturing Technology	20ME404 - Manufacturing Technology	-
21ME403 - Fluid Mechanics and Machinery	-	-
21ME404 - Mechanics of Materials	20ME305 - Mechanics of Materials	17ME305 - Mechanics of Materials
21ME405 - Engineering Metrology	20ME504 - Metrology & Measurements	17ME504 - Metrology & Measurements
Not Mapped	**20ME405 - Fluid Mechanics**	-
Not Mapped	**20ME402 - Kinematics of Machines**	16ME402 - Kinematics of Machines
Not Mapped	**20ME403 - Applied Thermodynamics**	17ME403 - Applied Thermodynamics
21ME501 - Theory of Machines	-	-
21ME502 - Mechatronics	20ME702 - Mechatronics	17ME704 - Mechatronics
21ME503 - Engineering Economics	20ME406 - Engineering Economics 18MEE76 - Engineering Economics	-
21ME504 - Automotive Engineering	20ME603 - Automotive Engineering	17ME603 - Automotive Engineering
Not Mapped	**20ME501 - Fluid Machinery**	17ME501 - Fluid Machinery
Not Mapped	**20ME502 - Design of Machine Elements - I**	17ME502 - Design of Machine Elements - I
Not Mapped	**20ME503 - Dynamics of Machines**	17ME503 - Dynamics of Machines
Not Mapped	**20MEE51 - CAD/ CAM**	16ME604 - CAD/CAM
Not Mapped	**20ME505 - Industrial Management & Entrepreneurship**	-
21ME602 - Heat Transfer	20ME701 - Heat Transfer	17ME801 - Heat Transfer
21ME603 - Design of Machine Elements	-	-
Not Mapped	**20ME602 - Design of Machine Elements - II**	17ME602 - Design of Machine Elements - II
21MEE101 - Finite Element Methods	20MEE11 - Finite Element Methods	17ME624 - Finite Element Methods
21MEE106 - Renewable Sources of Energy	20MEE41- Renewable Sources of Energy	-
21MEE115 - Operations Research	-	-
Not Mapped	**20MEE24 - Introduction to Aircraft Design**	17ME618 - Introduction to Aircraft Design
Not Mapped	**18MEE34 - Energy Management**	17ME824 - Energy Management
21ME701 - Industrial Robotics	20ME601 - Industrial Robotics	17ME703 - Industrial Robotics
21ME702 - Power Plant Engineering	20MEE42 - Power Plant Engineering	17ME701 - Power Plant Engineering
21MEE102 - Control Engineering	20MEE22 - Control Engineering	17ME712 - Control Engineering
21MEE110 - Computer Integrated Manufacturing	20MEE54 - Computer Integrated Manufacturing	-
21MEE112 - Total Quality Management	20MEE73 - Total Quality Management	17ME513 - Total Quality Management
21MEE205 - Mechanical Vibrations	18MEE25 - Mechanical Vibrations	17ME702 - Mechanical Vibrations
21MEE210 - Internal Combustion Engines	-	-
21MEE222 - Innovation and Entrepreneurship	-	-
21MEE216 - Non-Destructive Testing	19MEE65 - Non-Destructive Testing	-
Not Mapped	**20MEE31 - Wind & Solar Power Engineering**	-
Not Mapped	**20MEE75 - Maintenance & Reliability Engineering**	17ME722 - Maintenance & Reliability Engineering
Not Mapped	**20MEE97 - Introduction to Machine Learning**	17ME729 - Introduction to Machine Learning
Not Mapped	**20MEE93 - Introduction to Business Analytics with Python**	-
Not Mapped	**19MEM102 - Introduction to Self-Driving Cars**	-

Electrical & Electronics Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21EE104 - Basic Electrical Engineering	20EE104 - Basic Electrical Engineering	17EE105 - Basic Electrical Engineering
21EE302 - Network Analysis	20EE302 - Network Analysis	-
21EE303 - Digital System Design	20EE305 - Logic Design	-
Not Mapped	Not Mapped	**17EE302 - Signals & Systems**
21EE304 - Analog Signal Processing	20EE304-Analog Electronic Circuits	-
21EE402 - Electrical Machines - I	20EE402 - Transformers & Induction Machines	-
21EE403 - Microcontroller	20EE403 - Microcontroller	-
21EE404 - Linear Control Systems	20EE503 - Linear Control Systems	-
21EE405 - Sensors and Measurements	20EE306 - Instrumentation & Measurements	-
Not Mapped	**20EE404 - Electromagnetic Fields**	-
Not Mapped	**20EE405 - Electrical Power Generation & Economics**	-
Not Mapped	**20EE406 - Transmission & Distribution**	-
21EE501 - Electrical Machines – II	20EE303 - DC & Synchronous Machines	-
21EE502 - Signal Analysis & Processing	20EE502 - Signal Analysis & Processing	-
21EE503 - Generation, Transmission & Distribution	-	-
21EE504 - Power Electronics	20EE504 - Power Electronics	-
Not Mapped	**20EE501 - Linear Integrated Circuits**	17EE501 - Linear Integrated Circuits
Not Mapped	Not Mapped	**17EE502 - Digital Signal Processing**
Not Mapped	**20EEE262 - Electric Vehicle Battery Charging Methods and Topologies**	-
21EE601 - Power Systems Analysis - I	20EE601 - Power System Analysis & Stability	17EE601 - Power System Analysis & Stability
21EE602 - Switchgear and Protection	20EE602 - Switchgear and Protection	-
21EE603 - Management & Entrepreneurship	20EE505 - Management & Entrepreneurship	-
21EEE164 - Automotive Electronics	20EEE164 - Automotive Electronics	
21EEE211 - Programmable Logic Controllers	20EEE211 - Programmable Logic Controllers	17EEE211 - Programmable Logic Controllers
Not Mapped	**20EEE161 - Hybrid Electric Vehicles**	-
Not Mapped	**20EEE223 - Electrical Power Utilization**	17EEE223 - Electrical Power Utilization
21EE701 - High Voltage Engineering	20EE603 - High Voltage Engineering	17EE702 - High Voltage Engineering
21EE702 - Industrial Drives & Applications	20EE703 - Industrial Drives & Applications	17EE703 - Industrial Drives & Applications
21EEE121 - Renewable Energy Sources	20EEE121 - Renewable Energy Sources	-
21EEE143 - VLSI Circuits & Design	20EE604 - VLSI Circuits & Design	-
21EEE235 - Electrical Estimation & Costing	20EEE235 - Electrical Estimation & Costing	-
Not Mapped	**18EEM101 - Sensors & Sensor Circuit Design**	-
Not Mapped	**18EEE123 - Electrical Power Quality**	17EEE123 - Electrical Power Quality
Not Mapped	**19EEE201 - Special Electrical Machines**	-
Not Mapped	**18EEE241 - Embedded Systems**	-
Not Mapped	**20EEE253 - Operations Research**	-
Not Mapped	**18EEE254 - Introduction to Machine Learning with Python**	-
Not Mapped	**20EE701 - Computer Techniques in Power System Analysis**	17EE701 - Computer Techniques in Power System Analysis
Not Mapped	**20EEE242 - Digital Systems Design using HDL**	-
Not Mapped	**20EEE251 - Fundamentals of Python Programming**	-
Not Mapped	**18EEE132 - Smart Electric Grid**	17EEE132 - Smart Electric Grid
Not Mapped	-	**17EEE202 - Solid State Lighting Control**

Electronics & Communication Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21EC112 - Basic Electronics	20EC112 - Basic Electronics	17EC112 - Basic Electronics
21EC302 - Analog Electronic Circuits	20EC402- Analog Electronic Circuits	17EC302 - Analog Electronic Circuits
21EC303 - Digital System Design with Verilog	20EC302 - Digital Systems Design	17EC406 - Digital System Design with Verilog
21EC304 - Network Theory	20EC304 - Network Theory	17EC303 - Network Analysis
21EC305 - Signals & Systems	20EC305 - Signals & Systems	17EC305 - Signals & Systems
Not Mapped	**20EC303 - Electronic Devices**	-
21EC401 - Signal Processing	20EC404 - Digital Signal Processing	-
21EC402 - Analog Communication	20EC501 - Analog Communication	17EC405 - Analog Communication
21EC403 - Control Systems	20EC403 - Control Systems	-
21EC404 - Electromagnetic Wave Theory	20EC405 - Electromagnetic Wave Theory	-
21EC501 - Information Theory & Error Control Coding	20EC603 - Information Theory & Coding	16EC502 - Information Theory & Coding
21EC502 - Microprocessor & Microcontroller	20EC503 - Microprocessor & Microcontroller	
21EC503 - Digital Communication	20EC602 - Digital Communication	17EC501 - Digital Communication
21EC504 - VLSI Design	20EC504 - VLSI Design	-
Not Mapped	**20ECE43 - Digital IC Design using VHDL**	-
Not Mapped	**20ECE46 - Introduction to Sensors and Actuators**	-
Not Mapped	**20ECE63 - Linear Algebra for Signal Processing**	-
Not Mapped	**20ECE84 - OOP with C++**	16ECE71 - OOP with C++
21EC601 - Operations Research & Project Management	20EC505 - Operations Research	-
21EC602 - Computer Networks	20EC502 - Computer Networks	17EC701 - Computer Communication Networks
21EC603 - Antenna & Microwave Systems	20EC601 - Antenna & Microwave Systems	-
21ECE101 - Adhoc & Sensor Networks	20ECE11 - Adhoc & Sensor Networks	-
21ECE112 - Automotive Electronics	20ECE32- Automotive Electronics	-
21ECE117 / 21CSE109 - IoT Device Security	-	-
Not Mapped	**20ECE35 - Low Power VLSI**	
21ECE135 - Object Oriented Programming in Java	20ECE75 - Object Oriented Programming in Java	-
Not Mapped	**20ECE45 - Internet of Things**	-
Not Mapped	**20ECE86 - Python Programming**	-
Not Mapped	**20ECE52 - Biomedical Signal Processing**	-
21EC701 - Power Electronics	20EC701 - Power Electronics	17EC703 - Power Electronics
21EC702 – e-Vehicles	-	-
21ECE114 - Embedded Linux	20ECE34 - Embedded Linux	16ECE33 - Embedded Linux
21ECE121 - Artificial Intelligence	20ECE51 - Artificial Intelligence	-
21ECE125 - Machine Learning & its Applications	20ECE55 - Machine Learning & its Applications	-
21ECE133 - Cryptography	20ECE73 - Cryptography	16ECE74 - Cryptography
21ECE136 - Real Time Operating Systems	-	-
Not Mapped	**20ECE11 - Adhoc & Sensor Networks**	-
21ECE212 - Analog & Mixed Mode VLSI Design	20ECE42 - Analog & Mixed Mode VLSI Design	-
21ECE231 - Computer Architecture	20ECE81 - Computer Architecture	-
21ECE214 - Embedded Systems	20ECE44 - Embedded Systems	-
21ECE217 - Embedded Secure Element	-	-
Not Mapped	**20ECE41 - Advanced Digital Logic Verification**	-
Not Mapped	**20ECE24 - High Performance Communication Networks**	16ECE24 - High Performance Communication Networks
Not Mapped	**20ECE33 - Biomedical Instrumentation**	-
Not Mapped	**20ECE82 - Data Base Management System**	-
Not Mapped	**19ECE22 - Fiber Optics**	-
Not Mapped	**19ECE26 - Satellite Communication Systems**	-
Not Mapped	**19ECM102 - VLSI CAD**	-

Biotechnology:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21BT114 - Biology for Engineers	20BT114 - Biology for Engineers	-
21BT302 - Biochemistry	20BT302 - Biochemistry – I	17BT303 - Biochemistry – I
21BT303 - Unit Operations in Bioprocess Industries	20BT303 - Unit Operations in Bioprocess Industries	17BT302 - Unit Operations
21BT304 - Molecular Biology and Genetic Engineering	-	-
Not Mapped	**20BT405 - Molecular Biology & Genetics**	-
Not Mapped	**20BT406 - Cell and Developmental Biology**	-
21BT402 - Heat and Mass Transfer	20BT402 - Heat and Mass Transfer	-
21BT403 - Analytical Techniques	20BT403 - Analytical Techniques	17BT505 - Analytical Techniques
21BT404 - Microbiology	20BT304 - Microbiology	-
21BT405 - Bioprocess Principles & Calculations	20BT305 - Bioprocess Principles & Calculations	-
Not Mapped	**20BT404 - Biochemistry – II**	-
21BT501 - Reaction Engineering	20BT501 - Reaction Engineering	-
21BT502 - Enzyme Technology	20BT502 - Enzyme Technology	-
21BT503 - Bioinformatics	20BT503 - Bioinformatics	-
21BT504 - Upstream Processing Technology	20BT602 - Upstream Processing Technology	-
Not Mapped	**20BT504 - Genetic Engineering**	-
Not Mapped	**20BT505 - Bioethics, Biosafety & IPR**	-
Not Mapped	**20BTC112 - Research Methodology**	-
21BT601 - Principles of Fermenter Design & Control	20BT601 - Principles of Fermenter Design & Control	-
21BT602 - Industrial Management & Entrepreneurship	20BT702 - Industrial Management & Entrepreneurship	-
21BT603 - Downstream Processing Technology	20BT603 - Downstream Processing Technology	-
21BTE101 - Advanced Plant Tissue & Organ Culture	20BTC101 - Advanced Plant Tissue & Organ Culture	-
21BTE113 - Food Biotechnology	20BTC113 - Food Biotechnology	-
Not Mapped	**20BTC211 - Plant Design & Economics**	-
Not Mapped	**20BTC209 - Oenology**	-
Not Mapped	**20BTC212 - Tissue Engineering**	-
Not Mapped	**20BTC214 - Science & Engineering of Biomaterials**	-
21BT701 - Immunology and Immunotechnology	20BT701 - Immunology	17BT701 - Immunology
21BT702 - Clinical Research & Data Management	20BTC206 - Clinical Research & Data Management	-
21BTE105 - Forensic Science & Technology	-	-
21BTE111 - Nutraceuticals	20BTC111 - Nutraceuticals	-
21BTE114 - Environmental Biotechnology	20BTC114 - Environmental Biotechnology	-
Not Mapped	**20BTC102 - Basics of Pharmaceutical Science**	-
21BTE202 - Applied Biostatistics	-	-
21BTE204 - Biomedical Instrumentation	20BTC204 - Biomedical Instrumentation	-
21BTE207 - Industrial Biotechnology	20BTC207 - Industrial Biotechnology	-
Not Mapped	**20BTC205 - Biomimetics**	-

Computer Science & Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21CS111 - 'C' Programming for Problem Solving	20CS111 - 'C' Programming for Problem Solving	17CS111 - Computer Concepts and 'C' Programming
21CS302 / 21IS302 / 21AM302 / 21CC302 - Data Structures	20CS305 - Data Structures	-
21CS303 / 21IS303 - Computer Organization & Architecture	20CS304 - Computer Organization & Architecture	-
21CS304 - Digital Systems Design	20CS302 - Digital Systems Design	-
Not Mapped	**20CS303 /19CS301 - Object Oriented Programming in C++**	-
21CS402 / 21IS402 / 21AM402 / 21CC402 - Design and Analysis of Algorithms	20CS402 - Design and Analysis of Algorithms	-
21CS403 - Microprocessor and Embedded Systems	-	-
21CS404 / 21IS404 – Software Engineering and Project Management	20CS406 / 19CS404 - Principles & Practices of Software Engineering	-

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
Not Mapped	**20CS405 - Microprocessors & Peripherals**	-
Not Mapped	**20CS404 / 19CS306 / 20IS404 - Data Communications**	-
21CS501 / 21IS501 - Theory of Computation	20CS604 - Formal Languages & Automata Theory	17CS503 - Formal Languages & Automata Theory
21CS502 / 21IS502 - Computer Network and Communication	-	-
21CS503 / 21IS503 - Database Management Systems	20CS502 - Database Management Systems	17CS502 - Relational Database Management Systems
21CS504 / 21IS504 - Operating Systems	20CS503 - Operating Systems	17CS505 - Operating Systems
Not Mapped	**20CS501 - Programming in Java**	-
Not Mapped	**20CSE41 - Web Programming**	-
Not Mapped	**20CSE71 - Artificial Intelligence**	-
21CS601 / 21IS601 - Machine Learning	-	-
Not Mapped	**20CS601 - Machine Learning**	17CS704 - Machine Learning
21CS602 - Financial Management	-	-
21CS603 - Compiler Design	20CS702 - Compiler Design	17CS603 - Compiler Design
Not Mapped	**20HU504 - Engineering Management**	17HU801 - Engineering Management
Not Mapped	**20CS602 - Computer Networks**	
Not Mapped	**20CS603 - Computer Graphics**	17CS703 - Computer Graphics & Multimedia
21CSE103 - Digital Image Processing	-	-
21CSE110 - Computer Graphics & Visualization	-	-
21CSE109 / 21ECE117 - IoT Device Security	-	-
21CS701 - Big Data Analytics	20CSE81 - Big Data Analytics	16CSE81 - Big Data Analytics
21CS702 - Cryptography & Network Security	20CSE54 - Cryptography & Network Security	-
21CSE202 - Cyber Security	20CSE64 - Cyber Security	16CSE64 - Cyber Security
21CSE204 - Software Testing	20CS701 - Software Testing	-
21CSE205 - Cloud Computing	20CSE33 - Cloud Computing	16CSE33 - Cloud Computing
21CSE206 - Embedded Secure Element	-	-
21CSE302 - Deep Learning	-	-
21CSE303 - NoSQL Database	-	-
21CSE304 - Business Intelligence	20CSE75 - Business Intelligence	17CS604 - Business Intelligence
Not Mapped	**20CSE43 - Software Architecture**	16CSE44 - Software Architecture
Not Mapped	**20CSE82 - Image Processing**	16CSE82 - Image Processing
Not Mapped	**18CSE44 - Object Oriented Modeling & Design**	17CS701 - Object Oriented Modeling & Design
Not Mapped	-	**17CS501 - Advanced Java Programming**
Not Mapped	-	**16CSE43 - Advanced Unix Programming**
Not Mapped	**19CSM103 - Front End Development with React**	-
Not Mapped	**20CSE13 - Operations Research**	-
Not Mapped	**20CSE73 - Social & Web Analytics**	-

Information Science & Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21CS302 / 21IS302 / 21AM302 / 21CC302 - Data Structures	20IS305 - Data Structures	-
21CS303 / 21IS303 - Computer Organization & Architecture	20IS304 - Computer Organization & Architecture 19IS304 - Computer Organization	-
21IS304 - Object Oriented Programming	-	-
Not Mapped	**20IS302 - Software Engineering**	-
Not Mapped	**20IS303 - Unix & Shell Programming**	-
21CS402 / 21IS402 / 21AM402 / 21CC402 - Design and Analysis of Algorithms	20IS402 - Design and Analysis of Algorithms	-
21IS403 - Digital System Design	20IS405 - Digital System Design	-
21CS404 / 21IS404 - Software Engineering and Project Management	-	-
Not Mapped	**20IS403 - Java Programming**	-
Not Mapped	**20CS404 / 19CS306 / 20IS404 - Data Communications**	-

21CS501 / 21IS501 - Theory of Computation	20IS503 - Finite Automata & Formal Languages	17IS503 - Finite Automata & Formal Languages
21CS502 / 21IS502 - Computer Network and Communication	-	-
21CS503 / 21IS503 - Database Management Systems	20IS502 - Database System Models	17IS502 - Relational Database Management Systems
21CS504 / 21IS504 - Operating Systems	20IS505 - Operating Systems	-
Not Mapped	**20IS501 - Microcontroller & Embedded Systems**	-
Not Mapped	**20IS504 - Data Mining**	-
21CS601 / 21IS601 - Machine Learning	-	-
Not Mapped	**20IS604 - Machine Learning**	-
21IS602 - Industrial Engineering & Management	20HU701 - Engineering Management	17HU701 - Engineering Management
21IS603 - Cryptography & Network Security	20IS702 - Information & Network Security	17IS702 - Information & Network Security
21ISE111 - Information Storage Management	20ISE11 - Information Storage Management	17ISE11 - Information Storage Management
21ISE124 - Software Testing	-	-
21ISE153 - Operations Research	20ISE93 - Operations Research	-
21ISE154 - Robotic Process Automation Design & Development	-	-
Not Mapped	Not Mapped	**17IS601 – Web Technologies**
21IS701 - Cloud Computing	20IS703 - Cloud Computing	17IS704 - Cloud Computing
21IS702 - Compiler Design	20IS603 - Compiler Design	17IS703 - Compiler Design
21ISE114 - Management & Entrepreneurship for IT Industry	20ISE14 - Management & Entrepreneurship for IT Industry	-
21ISE133 - Adhoc Networks	20ISE53 - Adhoc Networks	17ISE53 - Adhoc Networks
21ISE142 - Natural Language Processing	20ISE72 - Natural Language Processing	-
21ISE143 - Front-end Javascript Angular Framework	20ISE73 - Front-end Javascript Angular Framework	-
Not Mapped	**19ISE52 - Network Engineering**	-
21ISE231 - Cyber Security & Cyber Laws	-	-
21ISE232 - Blockchain Technology	20ISE62 - Blockchain Technology	-
21ISE233 - Digital Forensics	20ISE63 - Digital Forensics	-
21ISE254 - Architecting with Google Compute Engine	20ISE105 - Architecting With Google Compute Engine	-
Not Mapped	**20ISE23 - Supply Chain Management & Enterprise Resource Planning**	-

Artificial Intelligence & Machine Learning:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21CS302 / 21IS302 / 21AM302 / 21CC302 - Data Structures	20AM305 - Data Structures	-
21AM303 / 21CC303 - Digital Systems and Computer Organization	20AM303 - Digital Systems and Computer Organization	-
21AM304 - Introduction to Machine Learning	-	-
Not Mapped	**20AM304 / 20CC304 - Object Oriented Programming with Python**	-
21CS402 / 21IS402 / 21AM402 / 21CC402 - Design and Analysis of Algorithms	20AM402 - Design and Analysis of Algorithms	-
21AM403 / 21CC403 - Database Systems	20AM404 - Database Systems	-
21AM404 / 21CC404 - Operating Systems	20AM403 - Operating Systems	-
21AM405 - Advanced Machine Learning	-	-
21AM501 - Neural Network & Deep Learning	-	-
21AM502 - Computer Network and Data Communication	-	-
21AM503 - Artificial Intelligence	-	-
21AM504 - Computer Vision	-	-
21AM601 - Internet of Things	-	-
21AM603 / 21CC603 - Management & Entrepreneurship	-	-
21AM701 - Optimization Techniques	-	-
21AM702 - Reinforcement Learning	20AM812 - Reinforcement Learning	-
21AME110 - Cloud Computing	20AM611 - Cloud Computing	-
21AME130 / 21RIE120 - Prompt Engineering	-	-
21AME104 / 21RIE215 - Augmented and Virtual Reality	-	-
21AME141 - Generative Adversarial Networks	20AM713 - Generative Adversarial Networks	-
21AME109 - Business Intelligence	20AM813 - Business Intelligence	-

Computer & Communication Engineering:

160 Credits Scheme	175 Credits Scheme	200 Credits Scheme
21CS302 / 21IS302 / 21AM302 / 21CC302 - Data Structures	20CC305 - Data Structures	-
21AM303/21CC303 - Digital Systems and Computer Organization	20CC302 - Digital Systems and Computer Organization	-
21CC304 - Data Communications	20CC303 - Data Communications	-
Not Mapped	**20AM304 / 20CC304 - Object Oriented Programming with Python**	-
21CS402 / 21IS402 / 21AM402 / 21CC402 - Design and Analysis of Algorithms	20CC402 - Design and Analysis of Algorithms	-
21AM403 / 21CC403 - Database Systems	20CC404 - Database Systems	-
21AM404 / 21CC404 - Operating Systems	20CC503 - Operating Systems	-
21CC405 - Computer Networks	20CC405 - Computer Networks	-
Not Mapped	**20CC403 - Principles and Practices of Software Engineering**	-
21CC501 - Wireless Networks & Mobile Computing	20CC501 - Wireless Networks & Mobile Computing	-
21CC502 - Internet of Things	20CC603 - Internet of Things	-
21CC503 - Cryptography & Network Security	20CC502 - Cryptography & Network Security	-
21CC504 - Principles & Practices of Software Engineering	20CC403 - Principles & Practices of Software Engineering	-
21CC601 - Cyber Security & Forensics	20CC601 - Cyber Security & Forensics	
21CC602 - Next Generation Telecom Networks	20CC602 - Next Generation Telecom Networks	-
21AM603 / 21CC603 - Management & Entrepreneurship	20CC604 - Management & Entrepreneurship	-
21CCE113 - Wireless Sensor Networks	20CC622 - Wireless Sensor Networks	-
21CC701 - Multimedia Communication	20CC702 - Multimedia Communication	-
21CC702 - Software Defined Networks	20CC703 - Software Defined Networking	-
21CCE111 - Introduction to Blockchain Technology	-	-
21CCE213 - Ethical Hacking	-	-
21CCE215 - Artificial Intelligence & Machine Learning	20CC512 - Artificial Intelligence & Machine Learning	-
Not Mapped	**20CC811 - Big Data Analytics**	-
Not Mapped	**20CC611 - Cloud Computing**	-
Not Mapped	**20HU701 - Engineering Management**	-
Not Mapped	**20CC721 - Network Flow Algorithms**	-
Not Mapped	**20CC711 – Introduction to Deep Learning**	-
Not Mapped	**20CC504 – Network Engineering**	-

Robotics & Artificial Intelligence

There are no 175 and 200 Credits scheme courses to map with courses of 160 Credits scheme. All courses for supplementary examination follow the 160 credits scheme syllabus.

Practical Courses:

Practical courses (core or elective) to follow the syllabus of corresponding scheme pertaining to the scheme of study. Hence, they are not mapped to other schemes.

Sd/-
Dean (Academics)

Sd/-
PRINCIPAL