

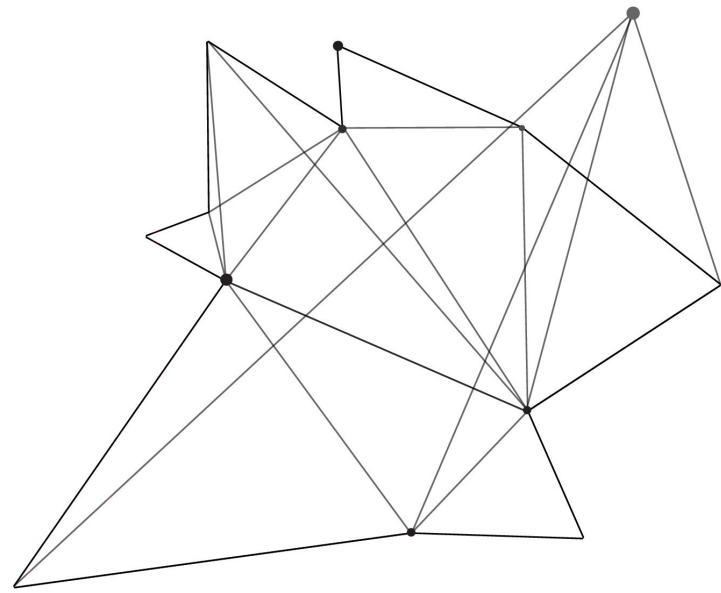


CATEGORY 1
UNIVERSITY
BY MHRD, Govt. of India

45 YEARS OF
EDUCATIONAL
LEADERSHIP

nirf
2025
NATIONAL
INSTITUTIONAL
RANKING
FRAMEWORK

RANKED 26
AMONG ALL
UNIVERSITIES



BACHELOR OF TECHNOLOGY

CIVIL ENGINEERING

**PROGRAM
HANDBOOK**

2025

For Students Admitted in
Academic Year 2025 -26



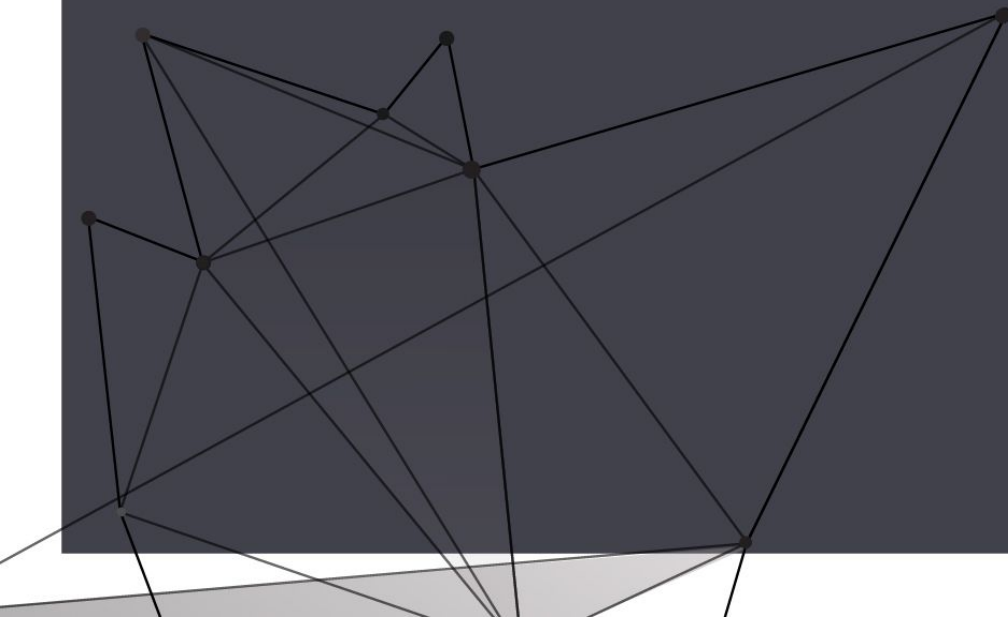


VISION

To be a globally renowned university.

MISSION

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.





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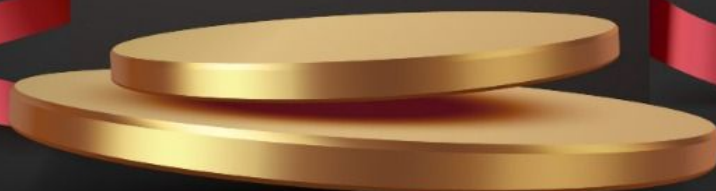
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AWARDS





Koneru Satyanarayana,
Chancellor

Sri Koneru Satyanarayana, BE, FIE, FIETE, MIEEE graduated in Electronics and Communication Engineering in the year 1977. Along with Sri Koneru Lakshmaiah, he is the co-founder of the Institute which was established in the year 1980. He is an educationist of eminence and also an industrialist of great repute. He runs a number of industries in and around Vijayawada.

Dr. K S Jagannatha Rao
Pro Chancellor



Prof. K. S. Jagannatha Rao was one of the leading scientists in neuroscience research in globe. He was the Director on Institute for Scientific Research and Technological Advances (INDICASAT AIP), Republic Panama and contributed lot in building innovation in higher education and research in Panama since 2010. He played a key role in building PRISM (Panamanian Research Institutes of Science and Medicine) in Latin America. Dr. Rao has his research area on Brain Research and established Alzheimer's Centre and published 165 papers in leading Biochemistry and Neuroscience Journals, supervised 19 Ph.D students. He is also adjunct faculty of Biomedical Informatics of UTHS, Houston, and Advisory Board Member of UT- El Paso Minority Health NIH program, USA and Adjunct Faculty, Methodist Research Institute, Houston, USA. He was elected Member of Panamanian Association for the Advancement of Science (APANAC) - Considered as National Science Academy of Panama. He received his undergraduate and Ph.D degrees from Sri Venkateswara University, Tirupati. Later, joined in Central Food Technological Research Institute, Mysore. He received Sir C. V. Raman Award by Karnataka State Council of Science and Technology, 2003.



Prof. G P S Varma
Vice Chancellor

Prof. G P S Varma, Vice-Chancellor, KLEF, is one of the most widely experienced leaders in Indian higher education, known for his commitment to expanding student opportunity, catalyzing academic innovation, and encouraging university's civic engagement and service to society. He adorned the position of Chairman, ISTE (Indian Society for Technical Education)- AP State, TSEMCET Test Committee Member-2021 nominated By Telangana State Govt, APEAMCET Admission Committee Member in 2016 by Andhra Pradesh State Council of Higher Education, Govt. of Andhra Pradesh. He has been a very farsighted Peer Team Visit Member for National Assessment and Accreditation Council (NAAC), Expert Committee Member for University Grants Commission (UGC) Autonomous Visits. He has been an Advisory Council Member for (CEGR) Centre for Education Growth, and Research India International Centre, New Delhi, and Board Member for Big-Data Analytics Forum.



Dr. K Rajasekhara Rao
Pro-Vice Chancellor

Dr. Kurra Rajasekhara Rao, Pro-Vice Chancellor is a professor of Computer Science and Engineering (C.S.E.) having more than 35 years of teaching and research as well as administrative experience. His current research interests include topics related to Embedded Systems, Software Engineering, Software Testing, Data Sciences, Image Processing and Knowledge Management. He has authored a book and has more than 240 research publications in various International/National Journals and Conferences. Dr. KRR is a recognized as 'Research Guide' in many reputed universities and 32 doctorates were awarded under his guidance till now.

Prior to this, he discharged duties in various organizations, as a Director, Usha Rama College of Engineering & Technology (Autonomous), Telaprolu, A.P, Director, Sri Prakash College of Engineering (SPCE), Tuni and as a faculty member in various positions in KLCE/K.L.University, Andhra Pradesh for over 20 years. He contributed as a Member in Board of Studies for CSE & IT, at various prestigious institutions like Acharya Nagarjuna University, Krishna University, Sree Vidyaniketan Engineering College, Tirupathi and Bapatla Engineering College, Bapatla. He extended his services to K.L. University as Member in Board of Management, Dean's Council, Academic Council, Standing Committee, Research Board & Board of Studies [CSE].

Dr. KRR's outstanding contributions have been honoured by various organizations. He received the "Patron Award" from Computer Society of India (CSI), India's prestigious professional society in the years 2011 (Ahmedabad) and 2020 (Bhubaneswar). Recognising his administrative capabilities, Association of Scientists, Developers and Faculties (ASDF) through Puducherry CM honoured him with the "Best Dean" award in the year 2012. He was felicitated with the "Aacharya Ratna" from Indian Servers, IMPACT and Lions Club in the year 2019. Received "Bhishmacharya" Award in 2022 by Bharath Educational Excellence Awards. He got honoured as "Global Faculty" by AKS Education awards in 2023 and "Lifetime Achievement Award" by AIMER Society for the year 2024.

Dr. N Venkatram
Pro-Vice Chancellor



Dr. Venkatram Nidumolu, Pro-Vice Chancellor is High performing, strategic thinking professional with more than 15 years of administration experience and 20 years of teaching experience in KLEF and 30 years overall experience in the higher education sector. He graduated in B.Tech (ECE) from Acharya Nagarjuna University, pursued M.S degree from BITS, PILANI in software Systems. He received Ph.D award from Acharya Nagarjuna University. He held the positions like HOD, Joint Register, Principal, and Dean-Academics before becoming Pro-Vice Chancellor. He was core member of all NBA, NAAC, & other accreditations since 2004 and he has good experience in handling of quality issues and assessment related practices.



Dr. A V S Prasad
Pro-Vice Chancellor

Dr. A. V. S. Prasad, M.E and Ph.D from JNTU, Hyderabad is a professor in Civil Engineering. He has a rich experience of 33 years in academics which includes 26 years in administration at various cadres ranging from Head of Department, Dean, Principal, Director and Pro-Vice Chancellor. He has served as Director of Audisankara group of institutions and Narayana Group of Institutions for 18 years and was instrumental in getting these institutions accredited by NAAC, NBA, Autonomous and gained many laurels from the State Government, JNTU etc. He has served as Pro-Vice Chancellor of KL University for 3 years.

He has extensive knowledge of administrative system, maintaining statutory norms of bodies like AICTE, UGC etc and has a good understanding of NBA, NAAC procedures and norms. He served as Member, Chairman of Board of Studies at JNTU(A), KLCE(Autonomous) and KL University.

ABOUT THE DEPARTMENT

Department of Civil Engineering

The Department of Civil Engineering was established in 1980 with an intake of 60 students and five faculty members. The department has been successful in producing excellent and well-trained graduates. Today, we have 320 Students from UG & PG and 45 teaching faculty drawn from premium institutes throughout India, out of whom 5 are Professors, 10 are Associate Professors and 30 are Assistant Professors. Eleven staff members have more than ten years' experience, ten are doctorates and thirteen are pursuing Ph.D and ten are non-teaching Staff.

The departmental activities embrace Testing, Planning, Design, Construction and Management. The department offers courses for graduates in civil engineering, postgraduates in Structural Engineering, Construction Technology and Management, and Geotechnical Engineering, also we have Ph.D. program in civil engineering discipline for those who wants to pursue research. The department offers flexible syllabus for the students for their post-graduation in specializations like Structural Engineering, Geotechnical Engineering, Construction Technology and Management.

The department of civil engineering has well equipped laboratories in all areas. Also, many of our alumni hold prestigious positions in leading academic institutions, industry and government in different countries all over the world.

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- Honors Through Experiential Learning Courses
- Skill Development Courses
- Professional Elective Courses
- Project Research and Internship
- Open Elective Courses
- Value Added Courses
- Audit Courses

VISION

To foster excellence in Civil Engineering with global perspective, integrity and social responsibility.

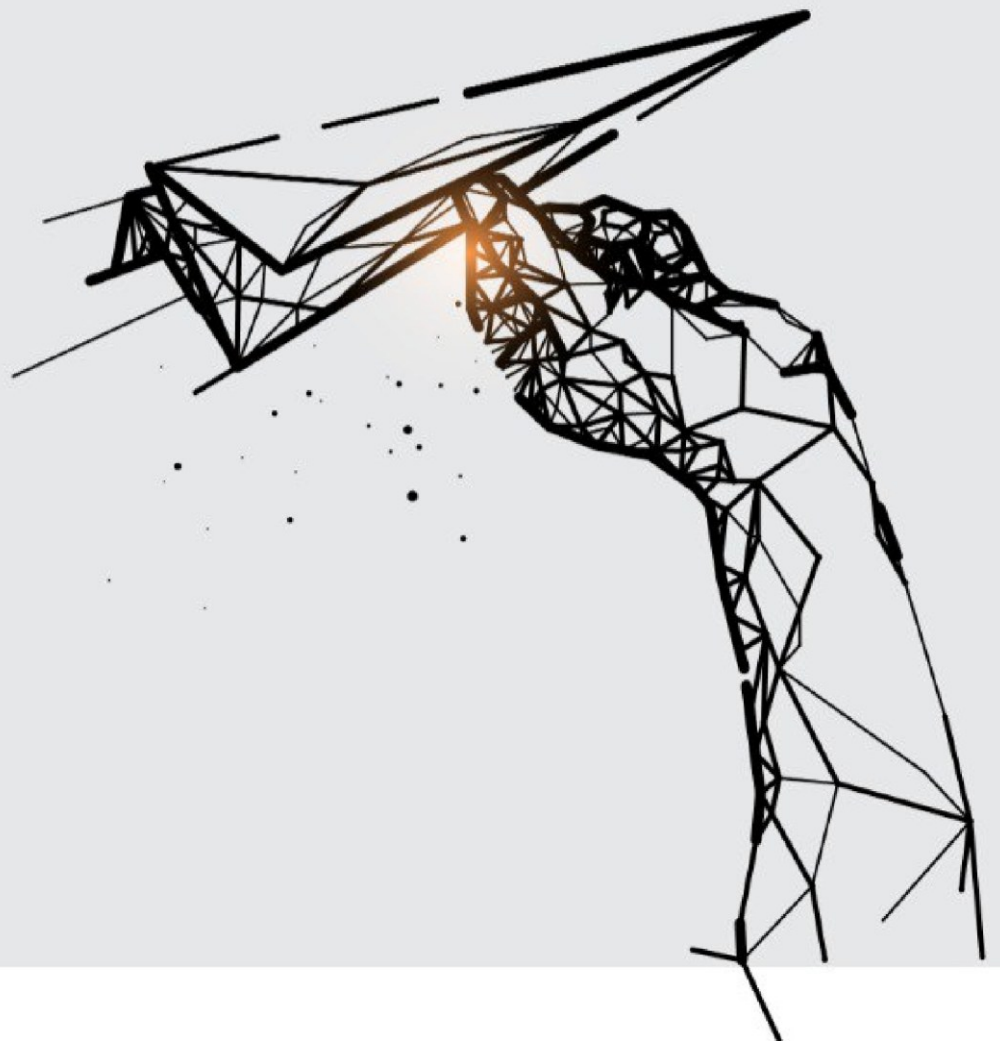
MISSION

Provide comprehensive education in civil engineering.

Foster professional excellence and lifelong learning.

Promote innovative problem-solving and cutting-edge technologies.

Cultivate socially responsible engineers for societal well-being.





(DEEMED TO BE U N I V E R S I T Y)

Y25: B.Tech. - Civil Engineering

Program Handbook

Program Educational Objectives (PEOs)**PEOs**

PEO	PEO Description
1	Practice engineering in a broad range of industrial, societal and real-world applications.
2	Pursue advanced education, research and development, and other creative and innovative in engineering, and technology, as well as other professional careers.
3	To lead in various fields of their expertise and proactive and generous in serving the country for the economic development.

Program Outcomes & Program Specific Outcomes (PO & PSO)

PO & PSO

PO/PSO	PO/PSO Description
PO1	Engineering Knowledge: An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization for the solution of complex engineering problems in engineering.
PO2	Problem Analysis: An ability to identify, formulate, research literature, analyze complex engineering problems in mechanical engineering using first principles of mathematics, natural sciences and engineering sciences
PO3	Design/ development of solutions: An ability to design solutions for complex engineering problems and system component or processes that meet the specified needs considering public health & safety and cultural, societal & environment.
PO4	Conduct investigations of complex problems: An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to obtain solutions to engineering problems.
PO5	Engineering Tool Usage: Ability to create, select and apply appropriate techniques, resources and modern engineering activities, with an understanding of the limitations.
PO6	The Engineer and The World: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment.
PO7	Ethics: An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
PO8	Individual and Collaborative Team work: An ability to function effectively as an individual, and as a member or leader in diverse teams and in multi- disciplinary settings.
PO9	Communication: Ability to communicate effectively oral, written reports and graphical forms on complex engineering activities.
PO10	Communication: Ability to communicate effectively oral, written reports and graphical forms on complex engineering activities.
PO11	Lifelong learning: An ability to recognize the need for and having the preparation and ability to engage independent and life-long learning in broadest context of technological change.
PSO1	To be efficient design consultants for the construction industry in design execution of challenging projects in civil engineering.
PSO2	Extend technical knowledge and skill for solving construction problems and sustainable development.

Program Rules & Regulations

Admission Eligibility Criteria

A Pass in 10+2 or equivalent examination with 60% in aggregate and 60% and above (or) equivalent CGPA in Group subjects - Physics, Chemistry and Mathematics.

Program Structure and Curriculum

For each academic program, the curriculum serves as a framework that specifies the credits, course category, codes, titles, and delivery methods (Lectures, Tutorials, Practice, Skills, Projects, Self-Study, Capstone Design, etc.) under the **Choice-Based Credit System (CBCS)**. The curriculum is designed, implemented, and assessed following the **Outcome-Based Education (OBE)** framework. In designing the curriculum, we ensure the integration of key contemporary and traditional values by embedding Indian Knowledge Systems (IKS), Sustainable Development Goals (SDGs), and Design Thinking principles into courses at their inception.

- Each **Academic Year** consists of two regular semesters, each approximately 20 weeks including classwork and exams:
 - **Odd Semester:** July to December
 - **Even Semester:** December to May
- A **Summer Term** may be offered from May to June but is not considered a regular semester for calculating program duration.
- Students have the flexibility to choose courses as prescribed by KLEF.
- Each course has a **Lecture-Tutorial-Practice-Skill (L-T-P-S)** component.

Course Credit Structure:

Credits are allocated to courses based on the **L-T-P-S** structure:

- Every **Lecture** or **Tutorial** hour equals **1 credit**.
- Every **Practical** hour equals **0.5 credits**.
- Every **Skill-based practice** hour equals **0.25 credits**.

Course Precedence:

The following are the guidelines for registering into courses with pre-requisites.

- A course may have one or more of its preceding course(s) as pre-requisite(s).
- To register for a course, the student must successfully be promoted in these course(s) earmarked as pre-requisite(s) for that course.

Academic Flexibilities

Major Flexibilities:

- **Honors:** Honors can be awarded if students complete additional courses from their core program and earn 20 extra credits through specified category of courses and achieve the prescribed CGPA/SGPA, and fulfill the defined outcomes and targets outlined in the degree requirements.
- **Honors through Research:** Honors through Research offers students the chance to explore their chosen field of study in greater depth, cultivate valuable research skills, and make meaningful contributions to their specific area of interest. Students can be awarded this Degree upon fulfilling the requirement of earning an additional 20 credits through specified category of courses and achieve the prescribed CGPA/SGPA, and fulfill the defined outcomes and targets outlined in the degree requirements.

- **Honors through Innovation:** Honors through Innovation emphasize the exploration of innovative ideas, problem-solving, and creative thinking within a particular field of study. It may provide opportunities for students to engage in innovative projects, research, or entrepreneurial activities. Students can be awarded their degree upon successful completion of additional courses from their core program and earning an extra 20 credits through specified category of courses and achieve the prescribed CGPA/SGPA, and fulfill the defined outcomes and targets outlined in the degree requirements.
- **Honors through Experiential Learning:** Honors through Experiential Learning focuses on hands-on, practical experiences that complement and enhance traditional classroom learning. Students will be eligible for the degree upon the successful completion of additional courses from their core program and the attainment of 20 extra credits through specified category of courses and achieve the prescribed CGPA/SGPA, and fulfill the defined outcomes and targets outlined in the degree requirements.

Note: For the above-mentioned major flexibilities, if a student fails to meet the prescribed CGPA/SGPA requirements along with the specific outcome/targets outlined for the respective degree, at any point after registration, then they will lose their eligibility for the honors degree. In such cases, the student will be awarded only the regular B.Tech. Degree. However, a separate grade sheets will be issued, listing the additional courses successfully completed by the student.

Program Add-ons:

- **Specialization:** Specialization degree can be awarded if student completes five professional electives in the same track of his/her interest in addition to fulfilling all other degree requirements.
- **Minor:** Minor degree can be awarded if student fulfills all the program requirements of their discipline and are successful in completing a specified set of courses from another discipline through which they earn an additional 20 credits are eligible to get minor degree in that discipline.
- **Double Major:** Double Major degree can be awarded if student earns 40 additional credits from the selected second major stream in addition to fulfilling the requirements of their first major.

	No Major Flexibility	Major Flexibility Honors	Major Flexibility Honors through Research	Major Flexibility Honors through Innovation	Major Flexibility Honors through Experiential Learning
No Program Add-On	B.Tech.	B.Tech. (Honors)	B.Tech. (Honors through Research)	B.Tech. (Honors through Innovation)	B.Tech. (Honors through Experiential Learning)
Program Add-On Specialization	B.Tech. with Specialization	B.Tech. (Honors) with Specialization	B.Tech. (Honors through Research) with Specialization	B.Tech. (Honors through innovation) with Specialization	B.Tech. (Honors through Experiential Learning) with Specialization
Program Add-On Minor	B.Tech. with Minor	B.Tech. (Honors) with Minor	B.Tech. (Honors through Research) with Minor	B.Tech. (Honors through Innovation) with Minor	B.Tech. (Honors through Experiential Learning) with Minor
Program Add-on Double Major	B.Tech. with Second Major	B.Tech. (Honors) with Second Major	B.Tech. (Honors through Research) with Second Major	B.Tech. (Honors through innovation) with Second Major	B.Tech. (Honors through Experiential Learning) with Second Major

Registration Process

Key Guidelines:

- **Course Availability:** Students are permitted to register only for courses offered in the specific semester of enrollment.
- **Prerequisites:** Any prerequisite courses must be successfully completed before registering for subsequent courses.
- **Timely Registration:** Students must register on the designated registration day. KLEF reserves the right to deny late registrations.
- **Add/Drop/Change Period:** Students have a one-week window from the start of classes to add a course and two-weeks to drop or change courses.
- **Credit Limits:**
 - The recommended credit load is 22-24.
 - The maximum credit load per semester is 30.
 - If a student finds the standard load overwhelming, they can opt for deceleration, taking fewer courses now and making up the credits in a future summer semester.
 - Students in honors programs or pursuing a minor may be allowed to take on a heavier load through overloading, subject to eligibility criteria.
- **Elective Course Availability:** KLEF may cancel elective courses with low enrollment within the first week. Students will be able to switch to another elective if they meet its prerequisites.
- **Re-registration:** If a student wants to improve their grade in a course, they can re-register for it with approval from the Dean of Academics.
- **Registration Cancellation:** KLEF can cancel a student's registration for disciplinary reasons or plagiarism.
- **Timetable Clashes:** Students are responsible for resolving any timetable conflicts. They should contact their Department Year Coordinator immediately if any clashes arise.
- **Irregularities:** If any irregularities are found in a student's registration later on, KLEF may cancel their registration for a course or even the entire semester.

Registration Flexibilities:

- **Choice of electives:** Students have the flexibility to choose from a diverse set of elective courses that align with their personal interests or career objectives.
- **Choice of faculty:** Students have the flexibility to choose their preferred faculty members for certain courses, depending on departmental policies and course availability.
- **Acceleration & Overloading:** Students can accelerate their progress by taking courses from the next semester in advance, or overload by taking more credits than the standard limit. Prior permission from the Dean of Academics is required for either of these.
- **Deceleration & Underloading:** If students need to lighten their course load, they can decelerate by postponing some courses to the next semester, or underload by taking fewer credits than usual. Students who do not register on time, may also be forced to decelerate to compensate the classwork that they missed due to late registration. In both the cases of deceleration, permission must be sought from Office of Dean Academics through proper channel.

- **Special Purpose Semesters:**

- **Innovation Semester:** An Innovation Semester is a dedicated academic term focused on cultivating a culture of creativity, problem-solving, and entrepreneurial thinking. It provides students with the opportunity to develop innovative solutions to real-world challenges.
- **Product Development Semester:** A Product Development Semester is an academic term dedicated to the process of creating new products or improving existing ones. It provides students with hands-on experience in the entire product lifecycle, from ideation to market launch.
- **Rapid Prototyping Semester:** A Rapid Prototyping Semester is an academic term dedicated to the practical application of rapid prototyping techniques to create physical models or prototypes of products or designs. It provides students with hands-on experience in transforming digital designs into tangible objects.
- **Research Semester:** A research semester is a dedicated period within an academic program focused on independent research or scholarly inquiry. It provides students with the opportunity to delve deep into a specific research topic or project under the guidance of a faculty mentor.

Summer Term Registration:

The Summer Term is designed to help students catch up or get ahead. Here are the guidelines:

- **Eligibility:** Students can register for summer courses if they have backlogs to clear, need to fulfill pre-requisites, or have been approved for acceleration.
- **Credit Limit:** The maximum credit load for the summer term is 12.
- **Timetable Clashes:** Students should ensure there are no conflicts in their summer course schedule.
- **Attendance & Promotion:** The same policies apply as in regular semesters, except that attendance condonation is not available in the summer.

Course Categories

- **Humanities, Arts and Social Sciences (HAS):** The Humanities, Arts, and Social Sciences (HAS) category encompasses a diverse range of academic disciplines designed to broaden students' perspectives beyond their core areas of study. As part of the undergraduate curriculum, students can choose from a variety of courses within this category, including Foreign Language Electives and Management Electives. These courses offer valuable opportunities for students to develop skills in communication, cultural understanding, and management, complementing their technical education and fostering a well-rounded academic experience.
- **Basic Science Courses (BSC):** The Basic Science category covers key courses in subjects like Mathematics, Physics, and Chemistry, providing a strong scientific foundation for undergraduate students. This category includes Mathematics Electives and Science Electives, offering students the flexibility to choose courses that align with their interests. These courses help develop essential problem-solving and analytical skills, which are critical for understanding advanced concepts in their field. Basic Science courses also play a vital role in applying scientific principles to real-world engineering and research challenge.
- **Engineering Science Courses (ESC):** The Engineering Science category comprises foundational engineering courses that introduce students to essential principles and methods used in various engineering fields. These courses provide the necessary technical background and practical knowledge required for more advanced study and specialization in engineering disciplines.
- **Professional Core Courses (PCC):** Professional Core Courses (PCC) are essential courses within each engineering discipline that provide foundational knowledge and skills critical to the field. These courses are integral to the curriculum and ensure that students acquire the core competencies necessary for their professional practice.

- **Flexi Core Courses (FCC):** Flexi Core Courses offer students a degree of flexibility within their core curriculum. These courses are designed to complement the professional core courses while allowing students to select topics that align with their career goals and personal interests. Flexi Core Courses are integral to ensuring that students receive a comprehensive education while exploring specialized areas that may not be covered in the traditional core courses.
- **Skill Development Courses (SDC):** Skill Development Courses are designed to equip students with practical, hands-on skills that enhance their employability and professional capabilities. These courses often focus on soft skills, technical proficiency, and industry-relevant competencies, such as communication, teamwork, leadership, digital literacy, and industry-specific software tools. By offering both theoretical knowledge and practical training, these courses help bridge the gap between academia and the professional world.
- **Professional Elective Courses (PEC):** Professional Elective Courses (PEC) are required for students who wish to pursue a specific specialization within their field of study. These courses allow students to focus on advanced topics and gain in-depth knowledge in their area of interest, tailoring their education to align with their career goals. By completing the designated PECs, students can achieve a degree of specialization that enhances their expertise and prepares them for specific roles or industries in their professional journey.
- **Project Research and Internship (PRI):** Project Research and Internship courses provide students with real-world experience by engaging them in research projects and internships in industry or academia. These courses are essential for developing practical problem-solving skills, fostering innovation, and giving students the opportunity to apply the theoretical knowledge gained in the classroom to real-life scenarios. Through internships and research projects, students can gain industry exposure, improve their technical skills, and prepare themselves for professional careers or advanced studies.
- **Open Elective Courses (OEC):** Open Elective Courses offer students the flexibility to explore subjects outside their core discipline, fostering interdisciplinary learning and intellectual diversity. Available across all university programs, these courses encourage students to integrate knowledge from various fields, promoting innovation and a holistic understanding of global issues. Open Electives play a key role in broadening student academic perspectives and preparing them for multifaceted professional challenges.
- **Value-Added Courses (VAC):** Value-Added Courses are designed to enhance employability by providing students with training that leads to globally recognized certifications or specialized skills. These courses focus on industry-relevant knowledge and practical applications, ensuring students are well-prepared for current job market demands. By offering advanced skills and certifications, Value-Added Courses give students a competitive edge in their careers.
- **Social Immersive Learning (SIL):** Social Immersive Learning (SIL) is an informal learning approach facilitated through the Student Activity Centre, where students earn credits by actively participating in a wide range of events. These include Extension, Social & Outreach Events, Technology Club Events, Literary, Hobby & Cultural Events, Innovation, Incubation & Entrepreneurship Events, and Health & Well-Being Events. SIL emphasizes experiential and activity-based learning, fostering personal growth and social engagement. The course is evaluated based on the points students accumulate through their involvement, offering a flexible, real-world learning experience that complements their formal education.
- **Bridge Courses:** Bridge Courses are designed to address academic gaps and ensure continuity between Basic Sciences, Engineering Sciences, and Professional Courses. These courses, identified through gap analysis and stakeholder feedback, serve as a foundation for students, helping them transition smoothly between academic levels or disciplines. Bridge Courses reinforce fundamental concepts and skills, preparing students for more advanced coursework in their academic programs.
- **Audit Courses (AUC):** Audit courses are courses that students can attend without receiving a formal grade or credit towards their degree. These courses are often chosen by students who want to learn a subject for personal enrichment or to gain knowledge in areas outside of their major.

- **Honors Flexi Core Courses (HFC):** Honors Flexi Core Courses (HFC) provide students pursuing honors programs with the flexibility to choose from a range of core courses tailored to their specific academic interests and career goals. These courses are designed to offer advanced content and greater depth in core subjects, allowing students to personalize their academic journey while fulfilling the requirements of their honors program.
- **Honors Through Research Courses (HRC):** Honors Through Research Courses (HRC) enable students to engage in in-depth research projects as part of their honors curriculum. These courses focus on developing student research skills, critical thinking, and analytical abilities, allowing them to contribute original knowledge to their field of study. Through hands-on research experiences, students gain valuable insights and prepare for advanced academic or professional pursuits.
- **Honors Through Innovation Courses (HIC):** Honors Through Innovation Courses (HIC) emphasize creativity and innovation within the honors program framework. These courses encourage students to explore cutting-edge technologies, develop novel solutions to real-world problems, and engage in entrepreneurial activities. By focusing on innovation, students can apply their learning to create impactful projects and drive advancements in their areas of interest.
- **Honors Through Experiential Learning Courses (HEC):** Honors Through Experiential Learning Courses (HEC) integrate practical, hands-on experiences with academic study. These courses offer students opportunities to apply theoretical knowledge in real-world settings through internships, fieldwork, or community projects. HEC courses aim to enhance student learning by providing experiential opportunities that complement their honors education and contribute to their personal and professional development.
- **Minor Degree Courses (MIN):** Students pursuing a Minor Degree must complete a designated set of Minor Degree Courses. These courses are carefully selected to provide a structured and cohesive understanding of the minor subject, complementing the student's major field of study. By fulfilling these requirements, students gain specialized knowledge and skills in an additional discipline, which enhances their overall academic profile and broadens their career opportunities.
- **Minor Skill Development Courses (MSDC):** Minor Skill Development Courses (MSDC) must be completed as part of the selected minor degree. These courses are designed to provide targeted skill-building opportunities relevant to the minor field, focusing on practical and industry-specific competencies. By engaging in MSDC, students develop specialized skills that complement their major and enhance their overall expertise, making them more versatile and competitive in their chosen career paths.
- **Second Major Flexi Core Courses (SMFC):** Second Major Flexi Core Courses (SMFC) are designed for students pursuing a second major, offering flexibility in selecting core courses that meet the requirements of both their primary and secondary majors. These courses allow students to integrate and balance the demands of two distinct fields of study, providing a comprehensive educational experience across discipline.

Requirements for the award of Degree

To be eligible for the award of a B.Tech. degree, a student must successfully fulfill the following criteria:

- **Credit Requirements:** Earn the minimum number of credits specified in the program structure.
- **Focused Training:** Successfully undertake specific training in focused areas that enable students to be successful in their chosen career tracks. The focused areas are: (a) Employment in MNCs, (b) Civil Services (c) Higher Studies (d) Research and (e) Entrepreneurship.
- **Certifications:** Successfully complete at least three global certifications or value-added courses in the chosen discipline, along with one in yoga, sports & games, or fine arts. Students opting for an Honors degree are additionally required to complete one more global certification or value-added course in their chosen discipline.

- **Internships:** Complete both a Social Internship and a Technical Internship.
- **Audit Courses:** Successfully complete all audit courses outlined in the program structure.
- **Minimum CGPA:** Achieve a minimum Cumulative Grade Point Average (CGPA) of 5.25 by the end of the program.
- **Extra Courses:** Students with extra courses having 'DT' or 'F' grades can still graduate if they meet all other requirements. However, these courses will be factored into the CGPA calculation.
- **Time Limit:** Complete all requirements within:
 - A minimum of 8 regular semesters (excluding summer terms)
 - A maximum of 8 years

Note: The student is awarded a B.Tech. (Honors / Specialization / Minor / Double Major) degree based on the chosen academic flexibility, provided they fulfill all the credit and outcome requirements specified for each degree (refer to degree-wise requirements under Design your own Degree) in addition to meeting the regular B.Tech. degree requirements mentioned above.

Multiple Entry and Exit System

Multiple Entry and Exit System (MEES) empowers students to make their own academic decisions, allowing them to rejoin their studies at a later point and achieve their career goals. As per NEP guidelines, undergraduate degrees can be three or four years long, with multiple entry and exit points. Students can earn certificates, diplomas, or degrees based on their progress.

Entry and Exit Options:

- 1st Year (Level 5 - Undergraduate Certificate):
 - Entry: Secondary School Leaving Certificate (Grade 12/Intermediate)
 - Exit: Certificate in Computational Thinking & Engineering Science (40 credits + 4 skill development credits)
- 2nd Year (Level 6 - Undergraduate Diploma):
 - Entry: Completion of the first year with a certificate.
 - Exit: Diploma in the respective discipline (80 credits + 4 skill development credits, with at least 40 credits at Level 6)
- 3rd Year (Level 7 - Bachelor's Degree):
 - Entry: Completion of two years with a diploma
 - Exit: Bachelor of Science in the respective discipline (120 credits + 4 skill development credits across Levels 5, 6, and 7)
- 4th Year (Level 8 - Bachelor's Engineering Degree):
 - Entry: Completion of a three-year B.Sc. degree with a minimum CGPA of 7.5.
 - Exit: B.Tech. degree (minimum 160 credits from Levels 5 to 8).

Note: These degree levels align with the NHEQF. While the student is provided with MEES, the maximum time limit for completion of degree must still be adhered for the award of degree.

Branch Transfer

A student admitted to a particular Branch of the B.Tech. Program will normally continue studying in that branch until the completion of the program. However, in special cases the KLEF may permit a student to change from one branch to another after the second semester, provided s/he has fulfilled admission requirement for the branch into which the change is requested.

The rules governing change of branch are as listed below:

- (a) Top 1% (based on CGPA until 2nd semester) students will be permitted to change to any branch of their choice within the program discipline.
- (b) Apart from students mentioned in above clause, those who have successfully completed all the first and second semester courses and with CGPA greater than or equal to 8 are also eligible to apply, but the change of Branch in such case is purely at the discretion of the KLEF.
- (c) All changes of Branch will be effective from third semester. Change of branch shall not be permitted thereafter.
- (d) Change of branch once made will be final and binding on the student. No student will be permitted, under any circumstances, to refuse the change of branch offered.
- (e) Students in clause (a) and (b) may be permitted subject to the availability of seats in the desired branch.

Academic Bank of Credits

- ABC helps the students to digitally store their academic credits from any higher education institute registered under ABC in order to award Certificate/Diploma/Degree/Honors based on the credits earned by the student.
- All the credits acquired by the students are stored digitally by registering into Academic Bank of Credits (ABC) portal. It also supports retaining the credits for a shelf period and continue their program study with multiple breakovers.
- Students may exit from their current program of study due to any unforeseen reasons or to focus on their chosen career path. In such cases, the student may break for a period of time (preferably not in the middle of an academic year) and may continue with the program of study at a later stage.
- Students must be able to complete their program by not exceeding the maximum duration of the program. If not, they may be issued with a Certificate, diploma, degree or honors based on the credits acquired over the period of time for all the programs approved by UGC.

Award of Class

A student having cleared all the courses and met all the requirements for the award of degree with:

- **Pass class:** CGPA greater than or equal to 5.25 and lesser than 5.75.
- **Second class:** CGPA greater than or equal to 5.75 and lesser than 6.75.
- **First class:** CGPA greater than or equal to 6.75 and lesser than 7.75
- **First class with Distinction:** CGPA greater than or equal to 7.75, provided the student has cleared all the courses in first attempt and must have fulfilled all the program requirements in program specified minimum years duration.

Award of Medals

KLEF awards Gold and Silver medals to the top two candidates in each program after successful completion of their study. The medals are awarded based on their CGPA during the Annual Convocation with the following constraints:

- The grade obtained through betterment/ supplementary will not be considered for this award.
- He/She must have obtained first class with distinction for the award of Gold or Silver-medal.

Course Flexibilities

In line with the institution's commitment to personalized learning, courses are offered in multiple modes, allowing students to tailor their academic journey based on personal preferences, career goals, and learning styles. The available modes include:

- **Regular Mode:** It is the traditional method of learning, involving in-person classroom instruction, a structured curriculum, and traditional assessments. This mode provides students with a structured and predictable learning environment, facilitating direct interaction with professors and classmates. It is suitable for students who prefer a traditional learning approach and value face-to-face interaction.
- **Advanced Mode:** This mode is designed for students seeking a more rigorous academic experience, this mode offers additional credits, in-depth theoretical studies, research projects, and complex problem-solving evaluations. It is particularly suitable for students participating in honors programs.

- **Experiential Mode:** This mode emphasizes practical learning through real-world projects, lab work, or industry interactions. It offers variable credits based on the extent of practical involvement and assessments centered around project outcomes and presentations. Honors students pursuing experiential learning often choose this option.
- **MOOCs Mode:** Massive Open Online Courses (MOOCs) are utilized to support independent learners, such as students engaged in internships or practice school. Students can earn credits by completing accredited online courses at their own pace. Assessments in this mode may include online quizzes, certifications, and institutional evaluations.
- **Work-in-lieu Mode:** It allows students to substitute certain coursework with relevant work experience, internships, or on-the-job training. Credits are awarded based on the work performed, and evaluations are typically centered around performance reports, supervisor evaluations, and reflective essays. This mode is ideal for students who want to gain practical experience while fulfilling academic requirements.
- **Peer Learning Mode:** Encourages collaborative learning, where students actively learn from and with each other through discussions, group projects, study circles, or mentoring activities. Credits are based on participation, contributions, and reflective documentation. This mode is suitable for students who thrive in interactive environments and value shared learning experiences.

Attendance calculation in a course

- **Attendance calculation for LTPS:** Attendance of a student on a course is calculated based on the credit-weighted average of the student's attendance in each of the LTPS components of the course.
- **Attendance start date:** Attendance is counted from the class commencement date. However, for transferred or newly admitted students, attendance in their admitted semester is counted from the date of admission.

Attendance requirements leading to promotion

- **Minimum Attendance:** 85% attendance is required for course promotion and appearing for the semester-end exam.
- **Condonation:** Up to 10% condonation by Principal, College of Engineering, is possible for medical emergencies with proper documentation submitted within a week. Students will be levied a condonation fee to appear for the semester-end exam.
- **Marginal Cases:** Attendance slightly below 75% due to severe medical or valid reasons may be considered for further relaxation by the condonation board appointed and headed by the Vice-Chancellor.

Attendance-based marks

- **Optional Marks:** Course coordinators can allocate up to 5% of the total marks for attendance, clearly stated in the course handout and approved by the Dean of Academics through proper channel.
- **Mark Distribution:** Marks are awarded based on attendance ranges: 85-88% = 1 mark, 89-91% = 2 marks, and so on. Below 85% results in zero marks, even with condonation.
- **Applicability:** Attendance marks, if given, apply to all L-T-P-S components cumulatively, not just the theory part.

Attendance waiver

- **Academic Excellence**
 - Students with a CGPA and SGPA of 9.00 or higher in the previous semester can get an attendance waiver for up to three courses in the next semester, with prior approval from the Dean of Academics through proper channel.
 - Students availing this option must demonstrate regular progress in their chosen work or activity, which will be periodically reviewed.
 - Students using the attendance waiver must participate in all assessments and evaluation components without being marked ineligible due to attendance-based regulations.

- **Sports Representation**

- Students officially representing the University at State, National, or International level sports events, shall be exempted from mandatory attendance requirements for the duration of their preparation and participation in recognized competitions.
- Student athletes must submit prior intimation, along with proof of participation and endorsement by the Director of Sports, for verification and academic coordination.

Compensatory (Extra) attendance policy

- **Eligibility:** Students representing KLEF in events or participating in co-curricular / extracurricular activities can get compensatory attendance with prior written approval.
- **Limit:** Compensation is limited to 10% of total classes per course per semester and doesn't apply to the summer term.

Course-based promotion and detention policy

- **Minimum Attendance:** Students must meet the minimum attendance requirement to be promoted in a course. If a student fails to meet this requirement, their grade in the course will be marked as "DT", indicating that the student is detained in the course.
- **Next Steps after detention:** Student must re-register in a detained course and study it completely by attending the classwork, submitting all assessments, taking all evaluation components

Eligibility for appearing Sem-End Examination

A Student registered for a course and got promoted is eligible to write the Semester End Examination for that course unless found ineligible due to one or more of the following reasons:

- Shortfall of attendance.
- Acts of indiscipline.
- Withdrawal from a course.
- Non-payment of examination fees.
- Without a hall ticket.

Assessment & Evaluation

The assessment in each theory subject consists of Sem In Exams, in class quizzes/tutorials/home-assignments/Active Learning Methods (continuous assessment) and the Semester End Examination (SEE). Students are advised to refer to the course handout to get more detailed information on assessment.

- Sem In Examinations and the Semester End Examinations will be conducted as per the Academic Calendar.
- As per the necessity, the Supplementary examinations will be conducted at the discretion of Dean Academics with the approval of the Vice Chancellor.
- Students may have to take more than one examination in a day during Sem In exams, Semester End Examinations /Supplementary examinations.

College / School Name	Semester-In Evaluation (Weightage in percent) (A)	Sem End Examination (Weightage in percent) (B)	Minimum requirement for pass percent	
			(A+B)	B
College of Engineering	60	40	40	40

Semester-In Evaluation

The following guidelines are followed for the Semester In evaluation.

- The process of evaluation is continuous throughout the semester
- The distribution of marks for Semester In evaluation is 60 percent of aggregate marks of the course.
- The distribution of weightage for various evaluation components are decided and notified by the course coordinator through the course handout after approval by the Dean Academics, prior to the beginning of the semester.
- In order to maintain transparency in evaluation, answer scripts are shown to the students for verification, within one week of conduct of exam. If there is any discrepancy in evaluation, the student can request the course coordinator to re-evaluate.
- The solution key and scheme of evaluation for all examinations are displayed by the Course Coordinator in the appropriate web portal of the course, on the day of the conduct of examination.
- In case the student is unable to appear for any evaluation component owing to hospitalization, participation in extra/ co-curricular activities representing KLEF/ state/ country; the Dean Academics can permit to conduct of re-examination for such students.
- In case a student has missed any of the two in semester evaluations, S/he is eligible for and will be provided with an opportunity of appearing for re-examination.
- The pattern and duration of such examination are decided and notified by the Course Coordinator through the Course handout, after approval from the Dean Academic.
- To maintain transparency in evaluation, answer scripts are shown to the students for verification. If there is any discrepancy in evaluation, the student can request the Controller of Examinations to re-evaluate.
- If a student earns F grade in any of the courses of a semester, an instant supplementary exam (for only Semester End Exam component) will be provided within a fortnight of the declaration of the results.

Semester-End Evaluation

The following guidelines are followed for the End Semester evaluation.

- The end-semester evaluation typically includes a variety of components such as Sem End Exams, projects, presentations, or practical assessments, skill assessments as detailed in the course handout.
- Each component is evaluated based on the criteria outlined in the course handout.
- The distribution of weightage for various evaluation components are decided and notified by the course coordinator through the course handout after approval by the Dean Academics, prior to the beginning of the semester.
- To pass in a course, student must meet or exceed the minimum passing marks specified for each end semester summative assessment component mentioned in the course handout.
- The key and scheme of evaluation for all examinations are displayed by the Course Coordinator in the appropriate web portal of the course, on the day of the conduct of examination.
- In case the student is unable to appear for any Sem end summative evaluation component owing to hospitalization, participation in extra/ co-curricular activities representing KLEF/ state/ country; student can request for re-examination by taking prior permission from Dean Academics.
- If a student earns F grade in any of the courses of a semester, an instant supplementary exam (for only Semester End Exam component) will be provided within a fortnight of the declaration of the results.

Absence in Assessment and Examination

If a student misses a formative assessment component (quizzes, assignments, etc.) due to illness or other valid reasons, no retakes will be permitted, and a score of zero will be recorded. However, in cases of an excused absence, the instructor may allow the student to retake the assessment, subject to written approval from both the Principal and the relevant Head of Department.

Make-up Exams:

A student's absence from Semester In or Semester End Exams will only be considered for a make-up exam under the following circumstances.

- Pre-approved participation in university/state/national/international co-curricular or extracurricular activities.
- Illness or medical emergencies resulting in hospitalization, with a doctor's certification explicitly stating the student's inability to attend the exam within the designated period.
- Death of an immediate family member.

Remedial Exams:

- Remedial exams are conducted for students who score less than 60% on Semester In Exam I and have attended at least 85% of the remedial classes.
- For courses without remedial classes, no remedial exam will be scheduled.
- If a student does not take or scores less than 60% on Semester In Exam I, they must attend remedial classes and maintain a minimum 85% attendance to be eligible for the remedial exam. The remedial exam score will then be considered.
- The number of remedial classes will be 33% of the regular classes held prior to Semester In Exam I. However, there are no remedial exams for Semester In Exam II or laboratory exams.

Remedial Classes Policy

The following categories of students are recommended to attend Remedial classes:

- Students who did not attend or obtain a minimum of 60 percent marks in the Sem In exam1.
- Students for whom CO1/CO2 is (are) not attained in Sem In Exam 1
- Any other student may also be permitted to attend remedial classes as per the discretion of the principal.

The following are the guidelines to conduct remedial classes:

- Remedial classes which are scheduled to be conducted usually one or two weeks post conclusion of Sem In exam1.
- The number of remedial classes to be conducted shall be 33 percent of regular classes held till the Sem In exam I.
- Remedial classes MUST NOT be scheduled during regular class work hours.

Assessment of Project/Research based Courses

- All project or research-based subjects must have a defined time limit for completion.
- The specific time limits for completion and schedule for monitoring and evaluation of performance of students will be announced each term.
- The final project report, after getting the plagiarism certificate, only will be considered and evaluated by the panel of examiners.
- Student project reports must follow the guidelines prescribed by the office of Dean Academics.

Grading Process

At the end of all evaluation components based on the performance of the student, each student is awarded based on absolute/relative grading system. Relative grading is only applicable to a section of a course in which the number of registered students is greater than or equal to 25. Choice of grading system is decided by the Course Coordinator with due approval of Dean Academics and is specified in the course handout.

(i) Absolute Grading:

The list of absolute grades and its connotation are given below:

Performance	Letter Grade	Grade Point	Percentage of marks
Outstanding	O	10	90 - 100
Excellent	A+	9	80 - 89
Very Good	A	8	70 - 79
Good	B+	7	60 - 69
Above Average	B	6	50 - 59
Average	C	5	46 - 49
Pass	P	4	40 - 45
Fail	F	0	0 - 39
Absent	AB	0	Absent

(ii) Relative Grading:

The following table lists the grades and its connotation for relative grading:

Letter Grade	Grade Point	Grade Calculation
O	10	total marks $\geq 90\%$ and total marks $\geq \mu + 1.50\sigma$
A+	9	$\mu + 0.50\sigma \leq \text{total marks} < \mu + 1.50\sigma$
A	8	$\mu \leq \text{total marks} < \mu + 0.50\sigma$
B+	7	$\mu - 0.50\sigma \leq \text{total marks} < \mu$
B	6	$\mu - 1.00\sigma \leq \text{total marks} < \mu - 0.50\sigma$
C	5	$\mu - 1.25\sigma \leq \text{total marks} < \mu - 1.00\sigma$
P	4	$\mu - 1.50\sigma \leq \text{total marks} < \mu - 1.25\sigma$ or ≥ 40
F	0	total marks $< \mu - 1.50\sigma$ or total marks ≤ 39
AB	0	Absent

μ is the mean mark of the class excluding the marks of those students who scored greater than or equal 90 percent and less than or equal 40 percent after rounding the percentages to the next highest integer. σ is the standard deviation of the marks.

Course handout

A course handout is a document that provides essential information about a specific course. It's like a roadmap that guides you through the course, helping you understand the expectations, assignments, and grading criteria.

Significance of Course Handout:

- **Clarity and Organization:** Course handouts help you stay organized and focused by outlining the course structure, topics, and deadlines.
- **Expectations:** They communicate the instructor's expectations for your participation, assignments, and overall performance.
- **Grading:** Course handouts outline the grading criteria, so you know exactly how your work will be evaluated.
- **Resources:** They often list valuable resources, such as textbooks, articles, or online tools, that can aid your learning.

Expectations from the course handout:

- **Course Description:** A brief overview of the course, its goals, and its relevance to your studies.
- **Learning Outcomes:** Clear goals for what you should be able to do by the end of the course. These outcomes will help you understand the skills and knowledge that are expected to gain.
- **Instructor Information:** Contact details, office hours, and specific communication preferences.
- **Course Schedule:** A tentative timeline of topics, assignments, and exams.
- **Required Materials:** A list of textbooks, articles, or other materials essential for the course.
- **Assessment Methods:** A breakdown of how your final grade will be determined, including the weight of assignments, exams, and participation.
- **Assignment Guidelines:** Detailed instructions for each assignment, including due dates, submission requirements, and expectations.

Effective use of the course handout:

- **Refer to it regularly:** Check back to keep track of important dates and assignments.
- **Highlight key points:** Make notes or highlight sections that are particularly important to you.
- **Ask questions:** If something isn't clear, bring it up in class or during office hours.

Betterment

- A student may reappear for the semester-end examination for betterment, only in the theory part of a course to improve their grade, provided that the student has passed the course, his/her CGPA is less than or equal to 6.75 and the grade in the respective course is equal to or lower than a 'C'. In case of reappearing for a course, the best of the two grades will be considered.
- A student may re-register for any course in any semester during the program to improve their grade if the current grade in the course is lower than 'B+', with the approval of the Dean Academics and in accordance with academic regulations.
- A student cannot reappear for the semester-end examination in courses with an L-T-P-S structure such as 0-0-X-X, 0-0-X-0, 0-0-0-X, Social Internship, Technical Internship, Seminar, Term Paper, Project, Capstone Project, Practice School, Industrial Internship.
- A student is not eligible for the award of a Degree with Honors if they opt for the betterment option.

Supplementary

- A student is eligible for a supplementary exam if they don't meet the minimum passing marks for a course or if they fail any component of the end-of-semester assessments listed in the course handout.
- If a student has failed courses from a previous odd semester that are not offered in the current semester, the supplementary exams for those courses will be scheduled for the summer supply.

- As per the end semester assessment components listed in the course handout (i.e. end semester summative) if student fail any component, they are eligible for a supplementary exam. Only the component(s) student failed will be considered for this supplementary attempt, though in some cases, you might be allowed to retake all components to improve your marks.
- In cases where there is a clash between supplementary exams and other scheduled exams, students may take the supplementary exams during the summer supply.
- If a student fails any of the end-of-semester examinations in an even semester, supplementary exams will be scheduled either within one month after the release of the results (i.e. summer supply) or during the summer term.
- Student must register for supplementary exams within a specified period after the results are declared.
- Student may be required to pay a supplementary exam fee. Details on the fee structure and payment process will be provided along with the supplementary exam notification.
- A student is not eligible for the award of a degree with first class with Distinction, if they opt for the Supplementary option.

Revaluation

Students desirous of seeing their Semester End Examination answer scripts have to apply online to the COE for the same within the timeframe as declared by the COE by paying the prescribed fee through ERP.

- There is no provision for re evaluation in case of Lab/Practical/skilling exams, project, viva voce exam or seminar / design / mini project courses.
- The final grades awarded to each course shall be announced by the COE and the same will be made available to students through the website/notice boards.

Credit Transfer

Credit transfer between KLEF and other Institution:

Credit transfer from other institutions to KLEF or vice versa is permitted only for undergraduate program.

Credit transfer from KLEF to other institutions: Student studying in KLEF can take transfer to another institution under the following conditions:

- KLEF has signed MOU with the institution
- However, a student, after seeking transfer from KLEF can return to KLEF after a semester or year. Based on courses done in the other institution, equivalent credits shall be awarded to such students.

Credit transfer from another institution to KLEF:

A student studying in another institution can take transfer to KLEF under the following conditions:

- When a student seeks transfer, equivalent credits will be assigned to the student based on the courses studied by the student.
- To determine the equivalent credits for a course from a previous institution on a 10-point scale at KLEF, the number of credits of the course is multiplied by the equivalent grade point of the previous institution and then divided by the number of credits of the corresponding course at KLEF.
- If a course from the previous institution has zero credits and no grade assigned, the student must sit for the final examination for the equivalent course at KLEF.

- A transfer student seeking improvement in any course can take the final examination at KLEF, where the grade received at KLEF becomes the final grade recorded on their grade sheets.
- The student, when transferred from other institutions, must stick to the rules and regulations of KLEF.
- To graduate from KLEF, a student must study at least half of the minimum duration prescribed for a program at KLEF.

Credit Transfer Through MOOCs:

- Undergraduate students can get credits for MOOCs courses recommended by KLEF up to a maximum of 20% of their minimum credits required for graduation. The discretion of allocation of MOOCs courses equivalent to the courses in the curriculum lies with the office of the Dean Academics.
- A student may also be permitted to obtain 20 credits through MOOCs in addition to the minimum credits required for graduation. These 20 credits can also be utilized to acquire a Minor degree or an Honors degree if the courses are pronounced equivalent to those specified for the respective degrees by the office of the Dean Academics. These additional credits through MOOCs if to be considered for CGPA/Minor/Honors degree must be approved by Dean Academics prior to enrollment in the respective MOOCs.
- Students acquiring additional credits for Honors/Minor degree must adhere to the rules governing the award of the respective degree, otherwise, a student applying for registering into additional credits through MOOCs must possess a minimum CGPA of 7.5 till that semester.

Semester Promotion policy

Promotion is only course-based. Semester-based promotion is not applicable for B.Tech. students.

Counselling procedure

KLEF is committed to fostering a supportive and nurturing environment for our students, addressing not only their academic needs but also their psychological well-being. To achieve this, KLEF is implementing a comprehensive Mentor-Mentee Scheme aimed at providing holistic support through academic, career, and psychological counselling. To achieve this, KLEF implement a comprehensive Mentor-Mentee Scheme and establish the Central Academic Counselling Board (CACB) in addressing academic, career and student-psychological issues.

The Mentor-Mentee Scheme aims to provide personalized guidance and support to students throughout their academic journey. Each student shall be assigned a mentor from the faculty, who will act as a guide, counselor, and advocate for the student's academic and personal growth. The mentor-mentee relationship is intended to facilitate communication, goal-setting, and problem-solving.

The primary objectives of the Mentor-Mentee Scheme are:

- To facilitate a strong and positive mentor-mentee relationship that supports students' academic growth, personal development, and psychological well-being.
- To offer career counselling, guiding mentees in exploring career options, developing professional skills, and making informed career-related decisions.
- To provide psychological counselling, offering a safe space for mentees to discuss psychological concerns and providing appropriate support or referrals when needed.
- To provide tailored academic counselling, helping mentees set academic goals, plan their course of study, and navigate academic challenges effectively.

Academic Counselling:

The mentors oversee the following academic counselling activities which are not limited to:

- Providing guidance during academic registration sessions
- Monitoring attendance and addressing attendance-related concerns
- Communicating attendance and marks information to parents/guardians
- Addressing concerns related to backlogs and providing advice
- Advising on domain specializations and academic flexibilities
- Assisting students in exploring study abroad opportunities
- Conducting student and parent meetings to address academic concerns

Career Counselling:

The mentors oversee the following career counselling activities which are not limited to:

- Recommending technical skilling courses and certificate programs
- Facilitating internship opportunities and competitive exam preparations
- Guiding students through term papers, projects, hackathons, and coding challenges
- Providing information on higher education options and entrance exams
- Encouraging entrepreneurship awareness and guiding start-ups initiatives
- Assisting students in preparing for placements and future career goals
- Conducting student and parent meetings to discuss career aspirations

Psychological Counselling:

The Mentors oversee the following psychological counselling activities which are not limited to:

- Providing guidance on time management and classroom activities
- Addressing anti-ragging issues and promoting a positive attitude
- Providing support for managing mental stress and promoting well-being
- Addressing hostel, room, home, and food-related concerns
- Conducting student and parent meetings to address personal well-being

Mentor-Mentee allocation

- The Department Academic Counselling Board (DACB) is responsible for assigning approximately 20 students to each faculty member, who will act as their mentor. The mentors will guide and support their assigned students throughout their academic journey.
- For engineering students, the procedure includes a specific approach: during their first year, faculty members from the Fresh Engineering Department (FED) will be designated as counsellors/mentors. From the second year onwards, counsellors/mentors will be appointed from the students' respective parent departments, and these faculty members will continue as mentors until the students complete their course.
- The counselling program aims to help students develop their character, academic abilities, professional skills, and social responsibilities. Mentors play a vital role in this process by:
 - Maintaining detailed records of mentor-mentee interactions in the ERP system. Mentors are required to update the ERP with counselling remarks for both students and their parents every fortnight.
 - Providing regular updates to parents about students' academic progress, career developments, and physiological status through various communication channels, including phone calls, SMS, WhatsApp, and Telegram.
 - Ensuring that counselling remarks are accurately recorded in the ERP system, and reflecting these updates in DACB monthly reports and CACB semester reports.

Academic Counselling Board

- Academic Counselling Board is constituted by the Dean Academics. This board shall comprise of the Chairman, Convener, Principal/Director, HOD and Professor/Associate Professor. A student will be put under Academic Counselling Board in the following circumstances:
 - Has CGPA of less than 6.00.
 - Has F grade or Detained in multiple courses.
- The first level of Counselling such students will be done by the Mentor of the student and the HoD followed by the ACB and the list of students who have to undergo the ACB counselling be forwarded by the HoD to the Office of Dean Academics.
- The students undergoing the Academic Counselling Board process may be allowed to register only for a few courses based on the recommendation of Academic Counselling Board.

Rustication policy

A student may be rusticated from the KLEF on disciplinary grounds, based on the recommendations of any empowered committee, by the Vice Chancellor.

Malpractice penalty policy

The following actions constitute malpractice during examinations and are subject to disciplinary actions as outlined below:

Clause 1: Possession of unauthorized material in the examination hall (e.g., paper, notebooks, programmable calculators, cell phones, or any material related to the exam subject). This includes any marks on the candidate's body that could be used as an aid.

Penalty: Immediate expulsion from the examination hall, without cancelling the paper.

Clause 2: a) Providing or receiving assistance, or communicating with others via oral means, body language, or electronic devices (such as cell phones), either inside or outside the examination hall. b) Smuggling in or out answer sheets, additional sheets, or arranging to send out the question paper or answer sheets during or after the exam. c) Using objectionable or offensive language in the answer paper or in communication with examiners, or attempting to influence examiners to award passing marks. d) Exchanging answer scripts or additional sheets in the examination hall

Penalty: Expulsion from the examination hall and cancellation of the comprehensive examination performance in that subject only of all the candidates involved. In case of an outsider, he will be handed over to the police and a case is registered against him

Clause 3: Copying from any unauthorized material (e.g., paper, books, programmable calculators, palm computers) during the exam.

Penalty: Expulsion from the examination hall, cancellation of the exam performance in that subject, and a fine of Rs. 1000.

Clause 4: a) Taking the answer script outside the exam hall, tearing the script or any part of it inside or outside the hall. b) Appearing for the exam in a drunken condition.

Penalty: Expulsion from the examination hall and cancellation of comprehensive examination performance in that subject and all the other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining comprehensive examinations of the subjects of that semester/year.

Clause 5: a) Disobeying examination authorities, creating disturbances, organizing or instigating a walk-out, threatening or assaulting officials, or damaging property inside or outside the exam hall. b) Possession of any lethal weapon or firearm in the examination hall.

Penalty: Expulsion from the exam hall and cancellation of exam performance in all subjects. The student will be debarred from future exams and may forfeit their seat. Outsiders will be handed over to the police.

Clause 6: Impersonation during the examination.

Penalty: Both the impersonator and the original candidate will be expelled from the exam hall. The original candidate's performance will be cancelled in all subjects, including practical and project work, and they will be barred from exams for two consecutive semesters. Continuation in the course is subject to academic regulations. The impersonator (if an outsider) will be handed over to the police.

Clause 7: Repeated offenses.

Penalty: For a second offense, the candidate will face expulsion from the exam hall and cancellation of all exam performances for that term, with a fine of Rs. 1000. Repeated academic dishonesty may result in the issuance of a transfer certificate (TC).

Clause 8: Any other form of malpractice not specified.

Penalty: Punishment will be determined by the Examination Malpractice Committee and approved by the Vice-Chancellor.

Plagiarism Penalty Policy

Plagiarism is considered a serious breach of academic integrity, compromising both the ethical standards of the university and the intellectual development of students. The university enforces a strict zero-tolerance policy regarding plagiarism, and all students are expected to uphold the highest standards of academic honesty.

Penalties for plagiarism will be applied as follows:

First Offense:

- Minor Plagiarism (e.g., improper citation, small portions of copied work): The student will receive a warning and be required to resubmit the work with proper citations. Marks may be reduced up to 50%.
- Major Plagiarism (e.g., copying significant portions, submitting another person's work): The assignment will receive a grade of zero. The student may be required to attend a mandatory workshop on academic integrity.

Second Offense:

- Any second offense, regardless of severity, will result in a zero for the assignment and an official letter of reprimand placed in the student's record. The student will be placed on academic probation.

Third Offense:

- The student will face suspension from the university for one academic term. A record of academic misconduct will be permanently placed in the student's academic file.

Repeated Violations:

- Further violations after the third offense may lead to expulsion from the university.

In cases of group work, if plagiarism is identified, all group members will be held equally accountable unless it can be demonstrated that the act of plagiarism was isolated to specific individuals.

Terminology

Absolute Grading: Absolute grading is a method of assigning grades based on predetermined criteria or standards rather than comparing student performance to other students in the class (See: Relative Grading where the performances are compared).

Academic Bank of Credits (ABC): Academic Bank of Credits, an initiative of Government of India, is a digital platform that stores the academic credits earned by a student throughout their educational journey. It's essentially a virtual repository of a student's academic achievements.

Academic Council: The Academic Council is the highest academic body of the University and is responsible for the maintenance of standards of instruction, education and examination within the University. The Academic Council is an authority as per UGC regulations and has the right to decide all academic matters including academic research.

Academic Year: It is the period necessary to complete an actual course of study within a year. It comprises of two consecutive regular semesters i.e., Odd and Even semesters.

Acceleration: Acceleration of courses refers to a student's ability to progress through their academic program at a faster pace than traditional timelines.

Attendance: Attendance refers to the record of a student's presence or absence in educational institutions. It is a critical factor influencing academic performance, overall development, and future success.

Audited Course: It is a course of study which has zero credits and has a "Satisfactory" or an "Unsatisfactory" grade.

Backlog Course: A course is considered to be a backlog if the student has obtained 'F' grade or detained in the course.

Basic Sciences: The courses of foundational nature in the areas of Mathematics, Physics, Chemistry, Biology etc., are offered in this category.

Betterment: Betterment is a way that contributes towards improving the students' grade in any course(s). It can be done by either (a) re-appearing or (b) re-registering for the course.

Board of Studies: Board of Studies (BOS) is an authority as defined in UGC regulations, constituted by Vice Chancellor for each of the department separately. They are responsible for curriculum design and update in respect of all the programs offered by a department.

Branch of Study: It is a branch of knowledge, an area of study or a specific program (like Civil Engineering, Mechanical Engineering, Electrical and Electronics Engineering etc.)

Bridge Courses: Courses which are required to bridge the continuity among the Basic sciences/Engineering Sciences/professional courses (both core and electives) and are identified through gap analysis carried out using feedback obtained from various academic stakeholders are termed as Bridge Courses. These courses also do not yield any credits but require a "Satisfactory" result to register into the attached professional courses.

Capstone Project: A capstone project is the culminating academic experience for many students, typically undertaken in the final year of a degree program. It's designed to integrate and apply the knowledge and skills acquired throughout the course of study.

Certificate course: It is a course that makes a student gain hands-on expertise and skills required for holistic development. It is a mandatory, non-credited course for the award of degree.

Change of Branch: Change of branch means transfer from one's branch of study to another.

Compulsory course: Course required to be undertaken for the award of the degree as per the program.

Course: A course is a subject offered by the University for learning in a particular semester.

Course Handout: Course Handout is a document which gives a complete plan of the course. It contains the details of the course viz. Course title, Course code, Pre-requisite, Credit structure, team of instructors, Course objectives, Course rationale, Course Outcomes and the relevant syllabus, textbook(s) and reference books, Course delivery plan and session plan, evaluation method, chamber consultation hour, course notices and other course related aspects. In essence, course handout is an agreement between students (learners) and the instructor.

Course Outcomes: The essential skills that need to be acquired by every student through a course.

Course Withdrawal: Withdrawing from a Course means that a student can drop from a course within the first two weeks of the odd or even Semester (deadlines are different for summer sessions). However, s/he can choose a substitute course in place of it by exercising the option within 5 working days from the date of withdrawal.

Credit: A credit is a unit that gives weight to the value, level or time requirements of an academic course. The number of 'Contact Hours' in a week of a particular course determines its credit value.

Credit point: It is the product of grade point and number of credits for a course.

Credit Transfer: The procedure of granting credit (s) to a student for course(s) undertaken at another institution.

Cumulative Grade Point Average (CGPA): It is a measure of cumulative performance of a student over all the completed semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

Curriculum: Curriculum is a standards-based sequence of planned experiences where students practice and achieve proficiency in content and applied learning skills. Curriculum is the central guide for all educators as to what is essential for teaching and learning, so that every student has access to rigorous academic experiences.

Deceleration: Deceleration of courses typically refers to a student's decision to reduce their course load or extend the time taken to complete a degree program.

Degree: A student who fulfills all the Program requirements is eligible to receive a degree.

Degree Requirements: Degree requirements are the specific courses, credits, and academic standards that a student must fulfill to earn a particular degree.

Degree with Specialization: A student who fulfills all the Program requirements of her/his discipline and successfully completes a specified set of Professional elective courses in a specialized area is eligible to receive a degree with specialization.

Department: An academic entity that conducts relevant curricular and co-curricular activities, involving both teaching and non-teaching staff and other resources.

Designing Your Own Degree: Designing your own degree is a revolutionary concept that empowers students to create a customized educational path aligned with their passions, career goals, and unique learning styles.

Dissertation: Dissertation is a substantial piece of original research written and defended by a candidate for a degree.

Detention in a course: Student who does not obtain minimum prescribed marks in continuous in-semester evaluation and /or minimum prescribed attendance in a course shall be detained in that course.

Double Major Degree: A double major degree allows students to specialize in two academic fields while earning a single bachelor's degree.

Dropping from the Semester: A student who doesn't want to register for the semester should do so in writing in a prescribed format before commencement of the semester.

End-semester Evaluation: End-semester evaluation is a summative assessment conducted at the conclusion of an academic term to measure students' overall performance.

Elective Course: A course that can be chosen from a set of courses. An elective can be Professional Elective, Open Elective, Management Elective and Humanities Elective.

Engineering Sciences: The courses belonging to basic evolutionary aspects of engineering from Mechanical Sciences, Electrical Sciences and Computing like Engineering Mechanics, Data structures, Network Theory, Signal Analysis.

EPICS: EPICS stands for Engineering Projects in Community Service. It's a unique program that combines engineering education with community service.

Evaluation: Evaluation is the process of judging the academic work done by the student in her/his courses. It is done through a combination of continuous in-semester assessment and semester end examinations.

Experiential Learning: Experiential learning is a process through which students develop knowledge, skills, and values from direct experiences outside a traditional academic setting. It involves learning by doing, where students engage in hands-on activities, real-world problem-solving, and reflective practices to gain deeper understanding and practical application of the concepts they are studying.

Flexi-Core course: A Flexi-Core course typically refers to an elective or optional course within a degree program that offers students flexibility in choosing subjects based on their interests and career goals.

Formative Assessment: Formative assessment is ongoing evaluation of student understanding to inform instruction and facilitate learning.

Flipped Learning: Flipped learning is an instructional strategy that reverses the traditional teaching model. In flipped learning, students are introduced to new content outside of class, usually through video lectures, readings, or other materials. The in-class time is then used for more interactive activities, such as discussions, problem-solving, group work, and applying the concepts learned at home.

Grade: It is an index of the performance of the students in a said course. Grades are denoted by alphabets.

Grade Point: It is a numerical weight allotted to each letter grade on a 10 - point scale.

Grade Point Average (GPA): Grade Point Average is a numerical representation of a student's academic performance. It is calculated by averaging the numerical equivalents of letter grades earned in courses, considering the number of credit hours for each course.

Honors Degree: A student who fulfills all the Program requirements of her/his discipline and successfully completes a specified set of additional courses within the same program is eligible to receive an Honors degree.

Humanities, Arts and Social Sciences (HAS): It is a broad term that groups together the academic disciplines of humanities, arts and social sciences.

Industrial Training: Training program undergone by the student as per the academic requirement in any company/firm.

Industrial Visit: Visit to a company/firm as per the academic requirement.

Internship: Internship is a temporary work experience offered by an organization for a limited period. It provides students, graduates, or career changers with an opportunity to gain practical skills and experience in a specific field.

In-Semester Evaluation: Summative assessments used to evaluate student learning, acquired skills, and academic attainment during a course.

Induction Courses: Student who gets admitted into B.Tech. program must complete a set of Induction courses for a minimum period of 3 weeks and obtain a "Satisfactory" result prior to registering into 1st Semester of the Program.

Innovation Semester: An Innovation Semester is a dedicated academic term focused on cultivating a culture of creativity, problem-solving, and entrepreneurial thinking.

Lecture: A lecture is a formal instructional session where an instructor presents information to a large group of students.

Make-up Test: An additional test scheduled on a date other than the originally scheduled date.

Malpractice: Malpractice typically refers to academic dishonesty or misconduct during examinations or coursework. This can include a wide range of behaviors that compromise the integrity of the evaluation process.

Management elective: A course that develops managerial skills and inculcates entrepreneurial skills.

Minor Degree: A student who fulfills all the Program requirements of her/his discipline and successfully completes a specified set of courses from another discipline is eligible to receive a minor degree in that discipline.

Multiple Entry and Multiple Exit (MEME): It is an educational framework designed to provide flexibility in learning pathways, allowing students to enter and exit educational programs at various stages based on their individual needs, prior knowledge, and career goals.

National Education Policy (NEP): NEP 2020 is a comprehensive framework for transforming India's Education System. It aims to create an equitable and vibrant knowledge society by providing high-quality education to all.

NHEQF: NHEQF stands for National Higher Education Qualifications Framework. It's a comprehensive framework designed to standardize and classify higher education qualifications in India. The primary goal of NHEQF is to ensure that qualifications from different institutions are comparable and recognized nationally and internationally.

Open Elective: This is a course of interdisciplinary nature. It is offered across the University for all Programs.

Overloading: Registering for more number of credits than normally prescribed by the Program in a semester.

Peer Learning: Peer learning is a collaborative learning process where students learn from each other. It involves sharing knowledge, skills, and experiences among peers.

Practical: A practical is a hands-on session where students apply theoretical knowledge in a real-world or laboratory setting. Practical sessions are designed to develop students' technical skills, problem-solving abilities, and understanding of experimental procedures.

Practice School: It is a part of the total program and takes one full semester in a professional location, where the students and the faculty get involved in finding solutions to real-world problems. A student can choose Project/Practice School during his/her final year to meet the final requirements for the award of degree.

Pre-requisite: A course, the knowledge required for registration into higher level course.

Product Development Semester: A Product Development Semester is an academic term dedicated to the process of creating new products or improving existing ones.

Professional Core: The courses that are essential constituents of each engineering discipline are categorized as Professional Core courses for that discipline.

Professional Elective: A course that is discipline centric. An appropriate choice of minimum number of such electives as specified in the program will lead to a degree with specialization.

Program: A set of courses offered by the Department. A student can opt and complete the stipulated minimum credits to qualify for the award of a degree in that Program.

Program Educational Objectives: The broad career, professional, personal goals that every student will achieve through a strategic and sequential action plan.

Program Outcome (PO): Program outcomes are statements that describe what students are expected to know, understand, and be able to do upon completing a specific academic program.

Project: Course that a student must undergo during his/her final year which involves the student to undertake a research or design, which is carefully planned to achieve a particular aim. It is a credit-based course.

Project-Based Learning (PBL): Project-Based Learning is an instructional approach where students actively engage in real-world and personally meaningful projects.

Rapid Prototyping Semester: A Rapid Prototyping Semester is an academic term dedicated to the practical application of rapid prototyping techniques to create physical models or prototypes of products or designs.

Registration: Process of enrolling into a set of courses in a semester/ term of the Program.

Re-Registration: Student who are detained in courses due to attendance or marks criteria as per their regulation are given a chance to re-register for the same and complete it during the summer term.

Relative Grading: Relative grading is a method of assigning grades based on a student's performance compared to the rest of the class.

Remedial Exam: A remedial Exam is an assessment designed to identify specific areas of weakness or gaps in a student's knowledge or skills. It is typically administered after a student has performed poorly on a regular assessment.

Research Project: A research project is a systematic investigation undertaken to answer a specific question or address a particular problem.

Research Semester: A research semester is a dedicated period within an academic program focused on independent research or scholarly inquiry.

Research Seminar: A research seminar is a formal academic gathering where researchers present their ongoing work to a group of peers, faculty, and other interested individuals.

Self-learning: Self-learning is the process of acquiring knowledge and skills independently without formal instruction.

Semester: It is a period of study consisting of 15+1 weeks of academic work equivalent to normally 90 working days including examination and preparation holidays. The odd Semester starts normally in July and even semester in December.

Semester End Examinations: It is an examination conducted at the end of a course of study.

Skilling: It is a process of developing and enhancing specific skills that are essential for performing particular tasks or activities effectively. It involves structured training and practice aimed at equipping individuals with the practical abilities, knowledge, and competencies required for professional success and personal development.

Social Immersive Learning (SIL): Social Immersive Learning is a pedagogical approach that combines the power of social interaction with immersive technologies to create engaging and impactful learning experiences.

Social Service: An activity designed to promote social awareness and generate well-being; to improve the life and living conditions of society.

Student Outcomes: The essential skill sets that need to be acquired by every student during her/his program of study. These skill sets are in the areas of employability, entrepreneurial, social and behavioral.

Substitution of Elective course: Replacing an elective course with another elective course as opted by the student.

Summative Assessment: Summative Assessment is a type of evaluation that occurs at the end of a learning period.

Summer term: The term during which courses are offered from May to July. Summer term is not a student's right and will be offered at the discretion of the University.

Supplementary: A student can reappear only in the semester end examination for the Theory component of a course, subject to the regulations contained herein.

Term paper: A 'term paper' is a research report written by students that evolves their course-based knowledge, accounting for a grade. Term paper is a written original research work discussing a topic in detail. It is a credit-based course.

Tutorial: A tutorial is a small group session designed to provide personalized guidance and support to students. Tutorials often involve discussions, problem-solving activities, and hands-on practice to reinforce concepts learned in lectures.

Under-loading: Registering for lesser number of credits than normally prescribed for a semester in that Program.

Value-Added Courses: Courses leading to global certification and those which are conducted exclusively for employability are referred to as value added courses.

FAQs

Q: What is the Choice-Based Credit System (CBCS) and how does it work?

A: CBCS allows student to choose courses from various categories based on your interests and career goals. Each course has a credit value assigned to it, and you need to earn a minimum number of credits in each category and in total to complete your program.

Q: Can I choose electives based on my interests?

A: Yes, student has the flexibility to choose electives that align with your personal interests and career objectives.

Q: Can I choose my preferred faculty members for certain courses?

A: During registrations prior to commencement of each semester, if a course is offered for multiple sections and if multiple faculty are teaching the same course, you will then have a choice of selecting the section being taught by that faculty under whom you wish to study.

Q: When and how do I register for courses?

A: Student must register for courses on the designated registration day. There is a one-week window for adding courses and a two-week window for dropping or changing them.

Q: Can I get an attendance waiver?

A: Students with a CGPA and SGPA of 9.00 or higher in the previous semester can get an attendance waiver for up to three courses with prior approval.

Q: What is the minimum attendance requirement for promotion?

A: 85% attendance is required for course promotion and appearing for the semester-end exam.

Q: Can I transfer to a different branch?

A: Under special circumstances, you may be permitted to transfer branches after the second semester based on your CGPA and seat availability.

Q: Can I pursue a minor degree?

A: Yes, any student can pursue a minor degree by completing a specified set of courses from another discipline.

Q: Can I study some semesters in abroad?

A: KLEF University may have exchange programs or partnerships with foreign universities, allowing you to study abroad for a semester or year.

Q: Are there any extracurricular activities or clubs available?

A: Yes, KLEF offers various extracurricular activities and clubs, such as sports, cultural events, and student organizations.

Q: What happens if I have less than 85% attendance?

A: Upto 75% attendance, student may be eligible for condonation or marginal case consideration, but need to provide proper documentation and may be subject to fees. But falling below 75% will make you detain in the course.

Q: What happens if I detain a course?

A: Student who detained in a course must re-register for the course and study it again in summer term. If the detained course is not offered by the department, then the student can study other equivalent course from the same category upon taking approval from office of Dean Academics.

Q: What is ABC?

A: ABC enables you to digitally store your earned credits and potentially use them towards future studies at other institutions.

Q: Can I accelerate or decelerate my studies?

A: Students are generally recommended to register for 20 to 24 credits in each semester. Students who cannot cope up with such load, may consult their counsellor and Head of the Department to register in lower number of credits. This process is called "Deceleration". Students who do not register on time, may also be forced to decelerate to compensate the classwork that they missed due to late registration. In both the cases of deceleration, permission must be sought from Office of Dean Academics through proper channel. On the contrary, Students who wish to accelerate can register for upto 30 credits by selecting courses that are usually offered in later semesters and complete them in advance. Students may also use the optional Summer Term for accelerating courses upto 12 credits. In Similarly, a student may also register for credits lower than. However, you'll need approval from the Dean of Academics.

Q: Will I get my degree upon acquiring all the required credits?

A: Apart from fulfilling the total credit requirement, it is required to fulfill category and sub-category wise credit requirements and outcome requirements (which are clearly mentioned in the degree-wise credit requirements section) to be eligible for award of specific degree.

Q: Can I register for a course without promoting in its pre-requisite course?

A: No, student must promote in the pre-requisite course in order to register for a course having pre-requisite.

Program - Degrees(Design your own Degree)

S#	Major Flexibility	Program Addon
1	Honors through Experiential Learning	Minor
2	Honors through Experiential Learning	Double Major
3	Honors through Experiential Learning	Specialization
4	Honors through Experiential Learning	No Add-on
5	Honors through Innovation	Minor
6	Honors through Innovation	Double Major
7	Honors through Innovation	Specialization
8	Honors through Innovation	No Add-on
9	Honors through Research	Minor
10	Honors through Research	Double Major
11	Honors through Research	Specialization
12	Honors through Research	No Add-on
13	Honors	Minor
14	Honors	Double Major
15	Honors	Specialization
16	Honors	No Add-on
17	No Flexibility	Minor
18	No Flexibility	Double Major
19	No Flexibility	Specialization
20	No Flexibility	No Add-on

Degree-wise Credit Requirements

1. Honors through Experiential Learning with Minor

a) Credit Requirement

Total Credit Required: 205

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	0.0	20.0	0	5	
12	HEC	HEC-CORE	20.0	20.0	5	5	
13	SDC	SDP-1	2.0	2.0	1	1	
14	SDC	SDP-2	2.0	2.0	1	1	
15	SDC	SDP-3	2.0	2.0	1	1	
16	SDC	SDP-4	2.0	2.0	1	1	
17	PEC	PE-1	4.0	4.0	1	1	
18	PEC	PE-2	3.0	3.0	1	1	
19	PEC	PE-3	3.5	3.5	1	1	
20	PEC	PE-4	3.0	3.0	1	1	
21	PEC	PE-5	3.0	3.0	1	1	
22	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
23	OEC	OE-1	3.0	3.0	1	1	
24	OEC	OE-2	3.0	3.0	1	1	
25	OEC	OE-3	3.0	3.0	1	1	
26	VAC	VAC-SPORTS	0.0	0.0	1	1	
27	VAC	VAC-CERT	0.0	0.0	4	4	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
28	AUC	AUC-CORE	0.0	0.0	4	4	
29	AUC	AUC-CAREER	0.0	0.0	1	1	
30	MIN	MIN-CORE	16.0	16.0	4	4	MINOR
31	MSDC	MIN-SDP	4.0	4.0	1	1	MINOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Scopus Journal Publication.
- Minimum One Design Patent.
- Two Consultancy Projects.
- Additional 20 Credits must be from chosen minor degree.
- Must take up Capstone Project-1 and Capstone Project-2.

2. Honors through Experiential Learning with Double Major

a) Credit Requirement

Total Credit Required: 225

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	0.0	20.0	0	5	
12	HEC	HEC-CORE	20.0	20.0	5	5	
13	SDC	SDP-1	2.0	2.0	1	1	
14	SDC	SDP-2	2.0	2.0	1	1	
15	SDC	SDP-3	2.0	2.0	1	1	
16	SDC	SDP-4	2.0	2.0	1	1	
17	PEC	PE-1	4.0	6.0	1	1	
18	PEC	PE-2	3.0	3.0	1	1	
19	PEC	PE-3	3.5	5.5	1	1	
20	PEC	PE-4	3.0	3.0	1	1	
21	PEC	PE-5	3.0	3.0	1	1	
22	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
23	OEC	OE-1	3.0	3.0	1	1	
24	OEC	OE-2	3.0	3.0	1	1	
25	OEC	OE-3	3.0	3.0	1	1	
26	VAC	VAC-SPORTS	0.0	0.0	1	1	
27	VAC	VAC-CERT	0.0	0.0	4	4	
28	AUC	AUC-CORE	0.0	0.0	4	4	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	AUC	AUC-CAREER	0.0	0.0	1	1	
30	SMFC	SMFC-CORE	36.0	36.0	9	9	DOUBLE MAJOR
31	SMFC	SMFC-SDP	4.0	4.0	1	1	DOUBLE MAJOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Scopus Journal Publication.
- Minimum One Design Patent.
- Two Consultancy Projects.
- Additional 40 Credits must be from selected second major degree.
- Must take up Capstone Project-1 and Capstone Project-2.

3. Honors through Experiential Learning with Specialization

a) Credit Requirement

Total Credit Required: 185

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	0.0	20.0	0	5	
12	HEC	HEC-CORE	20.0	20.0	5	5	
13	SDC	SDP-1	2.0	4.0	1	1	
14	SDC	SDP-2	2.0	4.0	1	1	
15	SDC	SDP-3	2.0	4.0	1	1	
16	SDC	SDP-4	2.0	4.0	1	1	
17	PEC	PE-1	4.0	6.0	1	1	SPECIALIZATION
18	PEC	PE-2	3.0	3.0	1	1	SPECIALIZATION
19	PEC	PE-3	3.5	5.5	1	1	SPECIALIZATION
20	PEC	PE-4	3.0	3.0	1	1	SPECIALIZATION
21	PEC	PE-5	3.0	3.0	1	1	SPECIALIZATION
22	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
23	OEC	OE-1	3.0	3.0	1	1	
24	OEC	OE-2	3.0	3.0	1	1	
25	OEC	OE-3	3.0	3.0	1	1	
26	VAC	VAC-SPORTS	0.0	0.0	1	1	
27	VAC	VAC-CERT	0.0	0.0	4	4	
28	AUC	AUC-CORE	0.0	0.0	4	4	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Scopus Journal Publication.
- Minimum One Design Patents.
- Two Consultancy Projects.
- All professional elective credits must be from same chosen specialization.
- Must take up Capstone Project-1 and Capstone Project-2.

4. Honors through Experiential Learning with No Add-on

a) Credit Requirement

Total Credit Required: 185

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	0.0	20.0	0	5	
12	HEC	HEC-CORE	20.0	20.0	5	5	
13	SDC	SDP-1	2.0	4.0	1	1	
14	SDC	SDP-2	2.0	4.0	1	1	
15	SDC	SDP-3	2.0	4.0	1	1	
16	SDC	SDP-4	2.0	4.0	1	1	
17	PEC	PE-1	4.0	4.0	1	1	
18	PEC	PE-2	3.0	3.0	1	1	
19	PEC	PE-3	3.5	3.5	1	1	
20	PEC	PE-4	3.0	3.0	1	1	
21	PEC	PE-5	3.0	3.0	1	1	
22	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
23	OEC	OE-1	3.0	3.0	1	1	
24	OEC	OE-2	3.0	3.0	1	1	
25	OEC	OE-3	3.0	3.0	1	1	
26	VAC	VAC-SPORTS	0.0	0.0	1	1	
27	VAC	VAC-CERT	0.0	0.0	4	4	
28	AUC	AUC-CORE	0.0	0.0	4	4	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Scopus Journal Publication.
- Minimum One Design Patent.
- Two Consultancy Projects.
- Must take up Capstone Project-1 and Capstone Project-2.

5. Honors through Innovation with Minor

a) Credit Requirement

Total Credit Required: 205

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	0.0	20.0	0	5	
12	HRC	HRC-CORE	0.0	0.0	0	0	
13	HIC	HIC-CORE	12.0	12.0	4	4	
14	HEC	HEC-CORE	8.0	20.0	2	5	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	4.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	3.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	
32	MIN	MIN-CORE	16.0	16.0	4	4	MINOR
33	MSDC	MIN-SDP	4.0	4.0	1	1	MINOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Web of Science Journal Publications.
- Minimum Two Design Patents & One Utility Patent.
- LLP Establishment.
- Additional 20 credits must be from same chosen minor degree.
- Must take up Innovation Project-1 and Innovation Project-2.

6. Honors through Innovation with Double Major

a) Credit Requirement

Total Credit Required: 225

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	8.0	20.0	2	5	
12	HIC	HIC-CORE	12.0	12.0	4	4	
13	HEC	HEC-CORE	0.0	20.0	0	5	
14	SDC	SDP-1	2.0	2.0	1	1	
15	SDC	SDP-2	2.0	2.0	1	1	
16	SDC	SDP-3	2.0	2.0	1	1	
17	SDC	SDP-4	2.0	2.0	1	1	
18	PEC	PE-1	4.0	6.0	1	1	
19	PEC	PE-2	3.0	3.0	1	1	
20	PEC	PE-3	3.5	5.5	1	1	
21	PEC	PE-4	3.0	3.0	1	1	
22	PEC	PE-5	3.0	3.0	1	1	
23	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
24	OEC	OE-1	3.0	3.0	1	1	
25	OEC	OE-2	3.0	3.0	1	1	
26	OEC	OE-3	3.0	3.0	1	1	
27	VAC	VAC-SPORTS	0.0	0.0	1	1	
28	VAC	VAC-CERT	0.0	0.0	4	4	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	AUC	AUC-CORE	0.0	0.0	4	4	
30	AUC	AUC-CAREER	0.0	0.0	1	1	
31	SMFC	SMFC-CORE	36.0	36.0	9	9	DOUBLE MAJOR
32	SMFC	SMFC-SDP	4.0	4.0	1	1	DOUBLE MAJOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Web of Science Journal Publications.
- Minimum Two Design Patents & One Utility Patent.
- LLP Establishment.
- Additional 40 Credits must be from selected second major degree.
- Must take up Innovation Project-1 and Innovation Project-2.

7. Honors through Innovation with Specialization

a) Credit Requirement

Total Credit Required: 185

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	0.0	20.0	0	5	
12	HRC	HRC-CORE	0.0	0.0	0	0	
13	HIC	HIC-CORE	12.0	12.0	4	4	
14	HEC	HEC-CORE	8.0	20.0	2	5	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	6.0	1	1	SPECIALIZATION
20	PEC	PE-2	3.0	3.0	1	1	SPECIALIZATION
21	PEC	PE-3	3.5	5.5	1	1	SPECIALIZATION
22	PEC	PE-4	3.0	3.0	1	1	SPECIALIZATION
23	PEC	PE-5	3.0	3.0	1	1	SPECIALIZATION
24	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Web of Science Journal Publications.
- Minimum Two Design Patents & One Utility Patent.
- LLP Establishment.
- All professional elective credits must be from same chosen specialization.
- Must take up Innovation Project-1 and Innovation Project-2.

8. Honors through Innovation with No Add-on**a) Credit Requirement****Total Credit Required: 185**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	8.0	20.0	2	5	
12	HRC	HRC-CORE	0.0	0.0	0	0	
13	HIC	HIC-CORE	12.0	12.0	4	4	
14	HEC	HEC-CORE	0.0	20.0	0	5	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	4.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	3.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum One Web of Science Journal Publications.
- Minimum Two Design Patents & One Utility Patent.
- LLP Establishment.
- Must take up Innovation Project-1 and Innovation Project-2.

9. Honors through Research with Minor

a) Credit Requirement

Total Credit Required: 205

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	8.0	20.0	2	5	
12	HRC	HRC-CORE	12.0	12.0	4	4	
13	HIC	HIC-CORE	0.0	0.0	0	0	
14	HEC	HEC-CORE	0.0	20.0	0	5	
15	SDC	SDP-1	2.0	4.0	1	1	
16	SDC	SDP-2	2.0	4.0	1	1	
17	SDC	SDP-3	2.0	4.0	1	1	
18	SDC	SDP-4	2.0	4.0	1	1	
19	PEC	PE-1	4.0	4.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	3.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	
32	MIN	MIN-CORE	16.0	16.0	4	4	MINOR
33	MSDC	MIN-SDP	4.0	4.0	1	1	MINOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum Three Web of Science Journal Publications.
- Minimum One Design Patent.
- Additional 20 credits must be from same chosen minor degree.
- Must take up Research Seminar, Term paper, Research Project-1 and Research Project-2.

10. Honors through Research with Double Major

a) Credit Requirement

Total Credit Required: 225

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	8.0	20.0	2	5	
12	HRC	HRC-CORE	12.0	12.0	4	4	
13	HIC	HIC-CORE	0.0	0.0	0	0	
14	HEC	HEC-CORE	0.0	20.0	0	5	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	6.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	5.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	
32	SMFC	SMFC-CORE	36.0	36.0	9	9	DOUBLE MAJOR
33	SMFC	SMFC-SDP	4.0	4.0	1	1	DOUBLE MAJOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum Three Web of Science Journal Publications.
- Minimum One Design Patent.
- Additional 40 Credits must be from selected second major degree.
- Must take up Research Seminar, Term Paper, Research Project-1 and Research Project-2.

11. Honors through Research with Specialization

a) Credit Requirement

Total Credit Required: 185

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	8.0	20.0	2	5	
12	HRC	HRC-CORE	12.0	12.0	4	4	
13	HEC	HEC-CORE	0.0	20.0	0	5	
14	SDC	SDP-1	2.0	2.0	1	1	
15	SDC	SDP-2	2.0	2.0	1	1	
16	SDC	SDP-3	2.0	2.0	1	1	
17	SDC	SDP-4	2.0	2.0	1	1	
18	PEC	PE-1	4.0	6.0	1	1	SPECIALIZATION
19	PEC	PE-2	3.0	3.0	1	1	SPECIALIZATION
20	PEC	PE-3	3.5	5.5	1	1	SPECIALIZATION
21	PEC	PE-4	3.0	3.0	1	1	SPECIALIZATION
22	PEC	PE-5	3.0	3.0	1	1	SPECIALIZATION
23	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
24	OEC	OE-1	3.0	3.0	1	1	
25	OEC	OE-2	3.0	3.0	1	1	
26	OEC	OE-3	3.0	3.0	1	1	
27	VAC	VAC-SPORTS	0.0	0.0	1	1	
28	VAC	VAC-CERT	0.0	0.0	3	3	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	AUC	AUC-CORE	0.0	0.0	4	4	
30	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum Three Web of Science Journal Publications.
- Minimum One Design Patent.
- All professional elective credits must be from same chosen specialization.
- Must take up Research Seminar, Term Paper, Research Project-1 and Research Project-2.

12. Honors through Research with No Add-on**a) Credit Requirement****Total Credit Required: 185**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	8.0	20.0	2	5	
12	HRC	HRC-CORE	12.0	12.0	4	4	
13	HIC	HIC-CORE	0.0	0.0	0	0	
14	HEC	HEC-CORE	0.0	20.0	0	5	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	4.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	3.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	PROJECT
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum Three Web of Science Journal Publications.
- Minimum One Design Patent.
- Must take up Research Seminar, Term Paper, Research Project-1 and Research Project-2.

13. Honors with Minor**a) Credit Requirement****Total Credit Required: 205**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	20.0	20.0	5	5	
12	HRC	HRC-CORE	0.0	0.0	0	0	
13	HIC	HIC-CORE	0.0	0.0	0	0	
14	HEC	HEC-CORE	0.0	0.0	0	0	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	4.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	3.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	
32	MIN	MIN-CORE	16.0	16.0	4	4	MINOR
33	MSDC	MIN-SDP	4.0	4.0	1	1	MINOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum one Scopus Journal Publication.
- Additional 20 credits must be from same chosen minor degree.

14. Honors with Double Major**a) Credit Requirement****Total Credit Required: 225**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	20.0	20.0	5	5	
12	HRC	HRC-CORE	0.0	0.0	0	0	
13	HIC	HIC-CORE	0.0	0.0	0	0	
14	HEC	HEC-CORE	0.0	0.0	0	0	
15	SDC	SDP-1	2.0	2.0	1	1	
16	SDC	SDP-2	2.0	2.0	1	1	
17	SDC	SDP-3	2.0	2.0	1	1	
18	SDC	SDP-4	2.0	2.0	1	1	
19	PEC	PE-1	4.0	6.0	1	1	
20	PEC	PE-2	3.0	3.0	1	1	
21	PEC	PE-3	3.5	5.5	1	1	
22	PEC	PE-4	3.0	3.0	1	1	
23	PEC	PE-5	3.0	3.0	1	1	
24	PRI	PRI-CORE	16.0	16.0	4	4	
25	OEC	OE-1	3.0	3.0	1	1	
26	OEC	OE-2	3.0	3.0	1	1	
27	OEC	OE-3	3.0	3.0	1	1	
28	VAC	VAC-SPORTS	0.0	0.0	1	1	

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
29	VAC	VAC-CERT	0.0	0.0	4	4	
30	AUC	AUC-CORE	0.0	0.0	4	4	
31	AUC	AUC-CAREER	0.0	0.0	1	1	
32	SMFC	SMFC-CORE	36.0	36.0	9	9	DOUBLE MAJOR
33	SMFC	SMFC-SDP	4.0	4.0	1	1	DOUBLE MAJOR

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum one Scopus Journal Publication.
- Additional 40 Credits must be from selected second major degree.

15. Honors with Specialization

a) Credit Requirement

Total Credit Required: 185

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	20.0	20.0	5	5	
12	SDC	SDP-1	2.0	2.0	1	1	
13	SDC	SDP-2	2.0	2.0	1	1	
14	SDC	SDP-3	2.0	2.0	1	1	
15	SDC	SDP-4	2.0	2.0	1	1	
16	PEC	PE-1	4.0	6.0	1	1	SPECIALIZATION
17	PEC	PE-2	3.0	3.0	1	1	SPECIALIZATION
18	PEC	PE-3	3.5	5.5	1	1	SPECIALIZATION
19	PEC	PE-4	3.0	3.0	1	1	SPECIALIZATION
20	PEC	PE-5	3.0	3.0	1	1	SPECIALIZATION
21	PRI	PRI-CORE	16.0	16.0	4	4	
22	OEC	OE-1	3.0	3.0	1	1	
23	OEC	OE-2	3.0	3.0	1	1	
24	OEC	OE-3	3.0	3.0	1	1	
25	VAC	VAC-SPORTS	0.0	0.0	1	1	
26	VAC	VAC-CERT	0.0	0.0	3	3	
27	AUC	AUC-CORE	0.0	0.0	4	4	
28	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum one Scopus Journal Publication.
- All professional elective credits must be from same chosen specialization.

16. Honors with No Add-on**a) Credit Requirement****Total Credit Required: 185**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	HFC	HFC-CORE	20.0	20.0	5	5	
12	SDC	SDP-1	2.0	2.0	1	1	
13	SDC	SDP-2	2.0	2.0	1	1	
14	SDC	SDP-3	2.0	2.0	1	1	
15	SDC	SDP-4	2.0	2.0	1	1	
16	PEC	PE-1	4.0	4.0	1	1	
17	PEC	PE-2	3.0	3.0	1	1	
18	PEC	PE-3	3.5	3.5	1	1	
19	PEC	PE-4	3.0	3.0	1	1	
20	PEC	PE-5	3.0	3.0	1	1	
21	PRI	PRI-CORE	16.0	16.0	4	4	
22	OEC	OE-1	3.0	3.0	1	1	
23	OEC	OE-2	3.0	3.0	1	1	
24	OEC	OE-3	3.0	3.0	1	1	
25	VAC	VAC-SPORTS	0.0	0.0	1	1	
26	VAC	VAC-CERT	0.0	0.0	3	3	
27	AUC	AUC-CORE	0.0	0.0	4	4	
28	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 8.25.
- Additional 20 credits through extra courses from the Honors category, courses in advanced or experiential mode, or a combination of both.
- No History of Backlogs.
- No History of Betterment.
- Minimum one Scopus Journal Publication.

17. No Flexibility with Minor**a) Credit Requirement****Total Credit Required: 185**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	SDC	SDP-1	2.0	2.0	1	1	
12	SDC	SDP-2	2.0	2.0	1	1	
13	SDC	SDP-3	2.0	2.0	1	1	
14	SDC	SDP-4	2.0	2.0	1	1	
15	PEC	PE-1	4.0	4.0	1	1	
16	PEC	PE-2	3.0	3.0	1	1	
17	PEC	PE-3	3.5	3.5	1	1	
18	PEC	PE-4	3.0	3.0	1	1	
19	PEC	PE-5	3.0	3.0	1	1	
20	PRI	PRI-CORE	16.0	16.0	4	4	
21	OEC	OE-1	3.0	3.0	1	1	
22	OEC	OE-2	3.0	3.0	1	1	
23	OEC	OE-3	3.0	3.0	1	1	
24	VAC	VAC-SPORTS	0.0	0.0	1	1	
25	VAC	VAC-CERT	0.0	0.0	3	3	
26	AUC	AUC-CORE	0.0	0.0	4	4	
27	MIN	MIN-CORE	16.0	16.0	4	4	MINOR
28	MSDC	MIN-SDP	4.0	4.0	1	1	MINOR

b) Outcome Requirement

- Minimum CGPA 6.75.
- Additional 20 credits must be from same chosen minor degree.

18. No Flexibility with Double Major**a) Credit Requirement****Total Credit Required: 205**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	SDC	SDP-1	2.0	2.0	1	1	
12	SDC	SDP-2	2.0	2.0	1	1	
13	SDC	SDP-3	2.0	2.0	1	1	
14	SDC	SDP-4	2.0	2.0	1	1	
15	PEC	PE-1	4.0	4.0	1	1	
16	PEC	PE-2	3.0	3.0	1	1	
17	PEC	PE-3	3.5	3.5	1	1	
18	PEC	PE-4	3.0	3.0	1	1	
19	PEC	PE-5	3.0	3.0	1	1	
20	PRI	PRI-CORE	16.0	16.0	4	4	
21	OEC	OE-1	3.0	3.0	1	1	
22	OEC	OE-2	3.0	3.0	1	1	
23	OEC	OE-3	3.0	3.0	1	1	
24	VAC	VAC-SPORTS	0.0	0.0	1	1	
25	VAC	VAC-CERT	0.0	0.0	3	3	
26	AUC	AUC-CORE	0.0	0.0	4	4	
27	SMFC	SMFC-CORE	36.0	36.0	9	9	DOUBLE MAJOR
28	SMFC	SMFC-SDP	4.0	4.0	1	1	DOUBLE MAJOR

b) Outcome Requirement

- Minimum CGPA 7.75.
- Additional 40 Credits must be from selected second major degree.

19. No Flexibility with Specialization**a) Credit Requirement****Total Credit Required: 165**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	4.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	SDC	SDP-1	2.0	2.0	1	1	
12	SDC	SDP-2	2.0	2.0	1	1	
13	SDC	SDP-3	2.0	2.0	1	1	
14	SDC	SDP-4	2.0	2.0	1	1	
15	PEC	PE-1	4.0	4.0	1	1	SPECIALIZATION
16	PEC	PE-2	3.0	3.0	1	1	SPECIALIZATION
17	PEC	PE-3	3.5	3.5	1	1	SPECIALIZATION
18	PEC	PE-4	3.0	3.0	1	1	SPECIALIZATION
19	PEC	PE-5	3.0	3.0	1	1	SPECIALIZATION
20	PRI	PRI-CORE	16.0	16.0	4	4	
21	OEC	OE-1	3.0	3.0	1	1	
22	OEC	OE-2	3.0	3.0	1	1	
23	OEC	OE-3	3.0	3.0	1	1	
24	VAC	VAC-SPORTS	0.0	0.0	1	1	
25	VAC	VAC-CERT	0.0	0.0	3	3	
26	AUC	AUC-CORE	0.0	0.0	4	4	
27	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 6.75.
- All professional elective credits must be from same chosen specialization.

20. No Flexibility with No Add-on**a) Credit Requirement****Total Credit Required: 165**

S#	Category	Sub-Category	Min-Credit	Max-Credit	Min-Courses	Max-Courses	Grouping
1	HAS	HAS-CORE	10.0	10.0	6	6	
2	HAS	HAS-FLE	3.0	3.0	1	1	
3	HAS	HAS-MGE	3.0	3.0	1	1	
4	BSC	BSC-CORE	12.0	12.0	3	3	
5	BSC	BSC-SE-1	4.0	4.0	1	1	
6	BSC	BSC-SE-2	4.0	8.0	1	1	
7	ESC	ESC-CORE	32.0	32.0	9	9	
8	PCC	PCC-CORE	41.5	41.5	10	10	
9	FCC	FC-1	3.0	3.0	1	1	
10	FCC	FC-2	3.0	3.0	1	1	
11	SDC	SDP-1	2.0	2.0	1	1	
12	SDC	SDP-2	2.0	2.0	1	1	
13	SDC	SDP-3	2.0	2.0	1	1	
14	SDC	SDP-4	2.0	2.0	1	1	
15	PEC	PE-1	4.0	4.0	1	1	
16	PEC	PE-2	3.0	3.0	1	1	
17	PEC	PE-3	3.5	3.5	1	1	
18	PEC	PE-4	3.0	3.0	1	1	
19	PEC	PE-5	3.0	3.0	1	1	
20	PRI	PRI-CORE	16.0	16.0	4	4	
21	OEC	OE-1	3.0	3.0	1	1	
22	OEC	OE-2	3.0	3.0	1	1	
23	OEC	OE-3	3.0	3.0	1	1	
24	VAC	VAC-SPORTS	0.0	0.0	1	1	
25	VAC	VAC-CERT	0.0	0.0	3	3	
26	AUC	AUC-CORE	0.0	0.0	4	4	
27	AUC	AUC-CAREER	0.0	0.0	1	1	

b) Outcome Requirement

- Minimum CGPA 5.25.

Program Structure

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	HAS	HAS-CORE	25UC1203	DESIGN THINKING FOR INNOVATION	R	DTI	0	0	4	0	2	4	
2	HAS	HAS-CORE	25UC1102	LANGUAGE SKILLS FOR ENGINEERS	R	LSE	0	0	4	0	2	4	
3	HAS	HAS-CORE	25UC1204	COMMUNICATION SKILLS FOR ENGINEERS	R	CSE	0	0	4	0	2	4	
4	HAS	HAS-CORE	25UC0026	HUMAN VALUES, GENDER EQUALITY AND PROFESSIONAL ETHICS	R	UHV	2	0	0	0	2	2	
5	HAS	HAS-CORE	25UC0021	SOCIAL IMMERSIVE LEARNING	R	SIL-1	0	0	2	0	1	2	
6	HAS	HAS-CORE	25UC0022	SOCIAL IMMERSIVE LEARNING	R	SIL-2	0	0	2	0	1	2	
7	HAS	HAS-FLE	25FL3054	FRENCH LANGUAGE	R	FLG	3	0	0	0	3	3	
8	HAS	HAS-FLE	25FL3064	KOREAN LANGUAGE	R	KLG	3	0	0	0	3	3	
9	HAS	HAS-FLE	25FL3055	GERMAN LANGUAGE	R	GLG	3	0	0	0	3	3	
10	HAS	HAS-FLE	25FL3058	JAPANESE LANGUAGE	R	JLG	3	0	0	0	3	3	
11	HAS	HAS-MGE	25MB4068	FINANCIAL MANAGEMENT FOR ENGINEERS	R	FMFE	3	0	0	0	3	3	
12	HAS	HAS-MGE	25MB4053	MANAGING PERSONAL FINANCE	R	MPF	3	0	0	0	3	3	
13	HAS	HAS-MGE	25MB4055	ORGANIZATION MANAGEMENT	R	OMG	3	0	0	0	3	3	
14	HAS	HAS-MGE	25MB4231	DIGITAL MARKETING	R	DMK	3	0	0	0	3	3	
15	HAS	HAS-MGE	25MB4054	BASICS OF MARKETING FOR ENGINEERS	R	BME	3	0	0	0	3	3	
16	HAS	HAS-MGE	25MB4056	PARADIGMS IN MANAGEMENT THOUGHT	R	PMT	3	0	0	0	3	3	
17	HAS	HAS-MGE	25MB4058	SIX SIGMA YELLOW BELT	R	SSYB	3	0	0	0	3	3	
18	HAS	HAS-MGE	25MB4060	FINTECH:FINANCE INDUSTRY TRANSFORMATION AND REGULATION	R	FINT	3	0	0	0	3	3	
19	HAS	HAS-MGE	25MB4070	SUSTAINABILITY LEADERSHIP AND STRATEGIC IMPACT	R	SLSI	3	0	0	0	3	3	
20	HAS	HAS-MGE	25MB4071	RESOURCE SAFETY AND QUALITY MANAGEMENT	R	RSQM	3	0	0	0	3	3	
21	HAS	HAS-MGE	25MB4072	INVESTEMENT, PORTFOLIO THEORY AND BEHAVIOURAL FINANCE	R	IPTBF	3	0	2	0	4	5	
22	HAS	HAS-MGE	25MB4073	INNOVATION MANAGEMENT	R	IM	3	0	0	0	3	3	
23	BSC	BSC-CORE	25MT1001	LINEAR ALGEBRA AND CALCULUS FOR ENGINEERS	R	LCE	2	2	0	0	4	4	
24	BSC	BSC-ME-2	25MT2019	PROBABILITY AND STATISTICS	R	PNS	2	2	0	0	4	4	
25	BSC	BSC-ME-2	25MT2003	MATHEMATICAL MODELLING & NUMERICAL METHODS	R	MNMM	2	2	0	0	4	4	

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26	BSC	BSC-SE-1	25CE2212	ENVIRONMENTAL ENGINEERING	R	EE	3	0	2	0	4	5	
27	BSC	BSC-SE-2	25CE1201	ENGINEERING GEOLOGY	R	EG	3	0	2	0	4	5	
28	ESC	ESC-CORE	25CE3214	CONSTRUCTION ENGINEERING & MANAGEMENT	R	CEM	3	1	0	0	4	4	
29	ESC	ESC-CORE	25CE2102	FLUID MECHANICS AND HYDRAULICS	R	FMH	3	0	2	0	4	5	
30	ESC	ESC-CORE	25ME1002	ENGINEERING GRAPHICS	R	EG	0	0	4	0	2	4	
31	ESC	ESC-CORE	25ME1001	ENGINEERING MECHANICS	R	EM	3	0	0	0	3	3	
32	ESC	ESC-CORE	25SC1203	DATA STRUCTURES	R	DST	3	0	2	4	5	9	
33	ESC	ESC-CORE	25SC2007	PYTHON PROGRAMMING	R	PP	2	0	2	0	3	4	
34	ESC	ESC-CORE	25SC1101	PROBLEM SOLVING THROUGH C	R	PSTC	3	0	2	4	5	9	
35	ESC	ESC-CORE	25EC1101	BASIC ELECTRICAL AND ELECTRONIC CIRCUITS	R	BEEC	3	0	2	0	4	5	
36	ESC	ESC-CORE	25ME1103	DESIGN TOOLS WORKSHOP	R	DTW	0	0	4	0	2	4	
37	PCC	PCC-CORE	25CE2208	GEOTECHNICAL ENGINEERING	R	GTE	3	0	2	2	4.5	7	
38	PCC	PCC-CORE	25CE2209	TRANSPORTATION ENGINEERING	R	TPE	3	0	2	2	4.5	7	
39	PCC	PCC-CORE	25CE2103	SURVEYING	R	SUR	3	0	2	2	4.5	7	
40	PCC	PCC-CORE	25CE2105	SOLID MECHANICS	R	SM	3	0	2	0	4	5	
41	PCC	PCC-CORE	25CE2104	BUILDING MATERIALS, PLANNING & DRAWING	R	BMPD	3	0	2	0	4	5	
42	PCC	PCC-CORE	25CE2206	STRUCTURAL ANALYSIS	R	SA	3	1	0	0	4	4	
43	PCC	PCC-CORE	25CE2207	CONCRETE TECHNOLOGY	R	CT	3	0	2	0	4	5	
44	PCC	PCC-CORE	25CE3110	DESIGN OF REINFORCED CONCRETE STRUCUTRES	R	DRCS	3	0	2	0	4	5	
45	PCC	PCC-CORE	25CE3111	WATER RESOURCE ENGINEERING	R	WRE	3	1	0	0	4	4	
46	PCC	PCC-CORE	25CE3213	DESIGN OF STEEL STRUCTURES	R	DSS	3	1	0	0	4	4	
47	FCC	FC-1	25CE2233F	ROBOTICS AND AUTOMATION IN CIVIL ENGINEERING	R	RACE	2	1	0	0	3	3	
48	FCC	FC-2	25CE2234F	QUANTITY SURVEYING & ESTIMATION	R	QSE	2	0	2	0	3	4	
49	HFC	HFC-CORE	25CE04HF	ENVIRONMENTAL ENGINEERING DESIGN	R	EED	3	0	2	0	4	5	
50	HFC	HFC-CORE	25CE01HF	STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING	R	SDEE	3	0	2	0	4	5	
51	HFC	HFC-CORE	25CE02HF	ADVANCED GEOTECHNICAL ENGINEERING	R	AGE	3	0	2	0	4	5	

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52	HFC	HFC-CORE	25CE03HF	TRANSPORTATION SYSTEMS ENGINEERING	R	TSE	3	0	2	0	4	5	
53	HFC	HFC-CORE	25CE05HF	HYDRAULIC STRUCTURES	R	HS	3	0	2	0	4	5	
54	HRC	HRC-CORE	25IE01RF	INDEPENDENT STUDY & RESEARCH	R	ISR	2	0	2	0	3	4	
55	HRC	HRC-CORE	25IE02RF	RESEARCH METHODOLOGY, ETHICS & SCIENTIFIC WRITING	R	RMESW	2	0	2	0	3	4	
56	HRC	HRC-CORE	25IE03RF	RESEARCH SEMINAR	R	RS	2	0	2	0	3	4	
57	HRC	HRC-CORE	25IE04RF	TERM PAPER	R	TP	2	0	2	0	3	4	
58	HIC	HIC-CORE	25DT01IF	ENTREPRENEURIAL TECHNOLOGY DEVELOPMENT AND PROTOTYPING	E	ETDP	2	0	2	0	3	4	
59	HIC	HIC-CORE	25DT02IF	PROBLEM DEFINITION AND VALIDATION	E	PDV	2	0	2	0	3	4	
60	HIC	HIC-CORE	25DT03IF	PRODUCT DESIGN AND PROTOTYPE VALIDATION	E	PDPV	2	0	2	0	3	4	
61	HIC	HIC-CORE	25DT04IF	SCALABLE SOLUTION DEVELOPMENT	E	SSD	2	0	2	0	3	4	
62	HEC	HEC-CORE	25CE01EF	FIELD SURVEYING AND MAPPING	R	FSM	3	0	2	0	4	5	
63	HEC	HEC-CORE	25CE02EF	CONSTRUCTION SITE MANAGEMENT	R	CSM	3	0	2	0	4	5	
64	HEC	HEC-CORE	25CE03EF	STRUCTURAL DESIGN STUDIO	R	SDS	3	0	2	0	4	5	
65	HEC	HEC-CORE	25CE04EF	ENVIRONMENTAL IMPACT ASSESSMENT WORKSHOP	R	EIAW	3	0	2	0	4	5	
66	HEC	HEC-CORE	25CE05EF	CONSTRUCTION MATERIALS LABORATORY	R	CML	3	0	2	0	4	5	
67	SDC	SDP-1	25SDCE01	VISUALIZATION AND MODELLING FOR STRUCTURAL DESIGN	R	VMSD	1	0	0	4	2	5	
68	SDC	SDP-1	25SDCE04	PLANNING AND SCHEDULING OF RESIDENTIAL BUILDING USING PRIMAVERA	R	PSRBP	1	0	0	4	2	5	
69	SDC	SDP-2	25SDCE02	BUILDING INFORMATION MODELING	R	BIM	1	0	0	4	2	5	
70	SDC	SDP-3	25SDCE03	ANALYSIS AND DESIGN OF MULTI-STORIED STRUCTURES USING ETABS	R	ADMSSE	1	0	0	4	2	5	
71	SDC	SDP-4	25SDCE05	ANALYSIS & DESIGN OF STRUCTURAL COMPONENTS USING SAFE	R	ADSCS	1	0	0	4	2	5	
72	PEC	PE-1	25MBT3101A	STEM CELL TECHNOLOGY	A	SCT	4	1	2	0	6	7	
73	PEC	PE-1	25MBT3101E	STEM CELL TECHNOLOGY	E	SCT	4	1	2	0	6	7	
74	PEC	PE-1	25MBT3101	STEM CELL TECHNOLOGY	R	SCT	3	0	2	0	4	5	
75	PEC	PE-1	25SMF3101A	AI AND IOT IN MANUFACTURING	A	AIM	4	1	2	0	6	7	
76	PEC	PE-1	25SMF3101E	AI AND IOT IN MANUFACTURING	E	AIM	4	1	2	0	6	7	

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77	PEC	PE-1	25SMF3101	AI AND IOT IN MANUFACTURING	R	AIM	3	0	2	0	4	5	
78	PEC	PE-1	25IBT3101A	PHARMACEUTICAL BIOTECHNOLOGY	A	PBT	4	1	2	0	6	7	
79	PEC	PE-1	25IBT3101E	PHARMACEUTICAL BIOTECHNOLOGY	E	PBT	4	1	2	0	6	7	
80	PEC	PE-1	25IBT3101	PHARMACEUTICAL BIOTECHNOLOGY	R	PBT	3	0	2	0	4	5	
81	PEC	PE-1	25NTO3102A	NANOSCALE ENGINEERING FOR CLEAN ENERGY	A	NEC	4	1	2	0	6	7	
82	PEC	PE-1	25NTO3102E	NANOSCALE ENGINEERING FOR CLEAN ENERGY	E	NEC	4	1	2	0	6	7	
83	PEC	PE-1	25NTO3102	NANOSCALE ENGINEERING FOR CLEAN ENERGY	R	NEC	3	0	2	0	4	5	
84	PEC	PE-1	25NTO3101A	THIN FILM TECHNOLOGIES FOR NANOELECTRONICS	A	TTN	4	1	2	0	6	7	
85	PEC	PE-1	25NTO3101E	THIN FILM TECHNOLOGIES FOR NANOELECTRONICS	E	TTN	4	1	2	0	6	7	
86	PEC	PE-1	25NTO3101	THIN FILM TECHNOLOGIES FOR NANOELECTRONICS	R	TTN	3	0	2	0	4	5	
87	PEC	PE-1	25IOT3101A	INDUSTRIAL INTERNET OF THINGS	A	IIOT	4	1	2	0	6	7	
88	PEC	PE-1	25IOT3101E	INDUSTRIAL INTERNET OF THINGS	E	IIOT	4	1	2	0	6	7	
89	PEC	PE-1	25IOT3101	INDUSTRIAL INTERNET OF THINGS	R	IIOT	3	0	2	0	4	5	
90	PEC	PE-1	25SDM3101A	SENTIMENT ANALYSIS	A	SA	4	1	2	0	6	7	
91	PEC	PE-1	25SDM3101E	SENTIMENT ANALYSIS	E	SA	4	1	2	0	6	7	
92	PEC	PE-1	25SDM3101	SENTIMENT ANALYSIS	R	SA	3	0	2	0	4	5	
93	PEC	PE-1	25AVI3102A	AI DRIVEN VIDEO PROCESSING	A	AIDVP	4	1	2	0	6	7	
94	PEC	PE-1	25AVI3102E	AI DRIVEN VIDEO PROCESSING	E	AIDVP	4	1	2	0	6	7	
95	PEC	PE-1	25AVI3102	AI DRIVEN VIDEO PROCESSING	R	AIDVP	3	0	2	0	4	5	
96	PEC	PE-1	25BMI3101A	BIOMEDICAL SIGNAL AND IMAGE PROCESSING	A	BSIP	4	1	2	0	6	7	
97	PEC	PE-1	25BMI3101E	BIOMEDICAL SIGNAL AND IMAGE PROCESSING	E	BSIP	4	1	2	0	6	7	
98	PEC	PE-1	25BMI3101	BIOMEDICAL SIGNAL AND IMAGE PROCESSING	R	BSIP	3	0	2	0	4	5	
99	PEC	PE-1	25GAM3101A	NATURAL LANGUAGE PROCESSING AND APPLICATIONS	A	NLPA	4	1	2	0	6	7	
100	PEC	PE-1	25GAM3101E	NATURAL LANGUAGE PROCESSING AND APPLICATIONS	E	NLPA	4	1	2	0	6	7	
101	PEC	PE-1	25GAM3101	NATURAL LANGUAGE PROCESSING AND APPLICATIONS	R	NLPA	3	0	2	0	4	5	

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102	PEC	PE-1	25RFM3101A	MICROWAVE ENGINEERING	A	ME	4	1	2	0	6	7	
103	PEC	PE-1	25RFM3101E	MICROWAVE ENGINEERING	E	ME	4	1	2	0	6	7	
104	PEC	PE-1	25RFM3101	MICROWAVE ENGINEERING	R	ME	3	0	2	0	4	5	
105	PEC	PE-1	25QCS3101A	QUANTUM HARDWARE AND CONTROL SYSTEMS	A	QHCS	4	1	2	0	6	7	
106	PEC	PE-1	25QCS3101E	QUANTUM HARDWARE AND CONTROL SYSTEMS	E	QHCS	4	1	2	0	6	7	
107	PEC	PE-1	25QCS3101	QUANTUM HARDWARE AND CONTROL SYSTEMS	R	QHCS	3	0	2	0	4	5	
108	PEC	PE-1	25QTS3101A	QUANTUM COMPUTATION : CIRCUITS, ALGORITHMS & FAULT TOLERANCE	A	QCCAFT	4	1	2	0	6	7	
109	PEC	PE-1	25QTS3101E	QUANTUM COMPUTATION : CIRCUITS, ALGORITHMS & FAULT TOLERANCE	E	QCCAFT	4	1	2	0	6	7	
110	PEC	PE-1	25QTS3101	QUANTUM COMPUTATION : CIRCUITS, ALGORITHMS & FAULT TOLERANCE	R	QCCAFT	3	0	2	0	4	5	
111	PEC	PE-1	25CEC3101	CLOUD INFRASTRUCTURE AND SERVICES	R	CIS	3	0	2	0	4	5	
112	PEC	PE-1	25GDU3101A	PROGRAMMING FOR GAME DEVELOPMENT	A	PGD	4	1	2	0	6	7	
113	PEC	PE-1	25GDU3101E	PROGRAMMING FOR GAME DEVELOPMENT	E	PGD	4	1	2	0	6	7	
114	PEC	PE-1	25GDU3101	PROGRAMMING FOR GAME DEVELOPMENT	R	PGD	3	0	2	0	4	5	
115	PEC	PE-1	25SCI3101A	SPATIAL DATA VISUALIZATION	A	SDV	4	1	2	0	6	7	
116	PEC	PE-1	25SCI3101E	SPATIAL DATA VISUALIZATION	E	SDV	4	1	2	0	6	7	
117	PEC	PE-1	25SCI3101	SPATIAL DATA VISUALIZATION	R	SDV	3	0	2	0	4	5	
118	PEC	PE-1	25GMI3101A	PRINCIPLES OF DEEP NEURAL COMPUTATION	A	PDNC	4	1	2	0	6	7	
119	PEC	PE-1	25GMI3101E	PRINCIPLES OF DEEP NEURAL COMPUTATION	E	PDNC	4	1	2	0	6	7	
120	PEC	PE-1	25GMI3101	PRINCIPLES OF DEEP NEURAL COMPUTATION	R	PDNC	3	0	2	0	4	5	
121	PEC	PE-1	25AEC3101A	EDGE AI HARDWARE ARCHITECTURES & ACCELERATION	A	EHA	4	1	2	0	6	7	
122	PEC	PE-1	25AEC3101E	EDGE AI HARDWARE ARCHITECTURES & ACCELERATION	E	EHA	4	1	2	0	6	7	
123	PEC	PE-1	25AEC3101	EDGE AI HARDWARE ARCHITECTURES & ACCELERATION	R	EHA	3	0	2	0	4	5	
124	PEC	PE-1	25DSE3101A	DATA ANALYTICS & VISUALIZATION	A	DAV	4	1	2	0	6	7	

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125	PEC	PE-1	25DSE3101E	DATA ANALYTICS & VISUALIZATION	E	DAV	4	1	2	0	6	7	
126	PEC	PE-1	25DSE3101	DATA ANALYTICS & VISUALIZATION	R	DAV	3	0	2	0	4	5	
127	PEC	PE-1	25DLS3101A	STREAMING DATA ARCHITECTURES & FRAMEWORKS	A	SDAF	4	1	2	0	6	7	
128	PEC	PE-1	25DLS3101E	STREAMING DATA ARCHITECTURES & FRAMEWORKS	E	SDAF	4	1	2	0	6	7	
129	PEC	PE-1	25DLS3101	STREAMING DATA ARCHITECTURES & FRAMEWORKS	R	SDAF	3	0	2	0	4	5	
130	PEC	PE-1	25AAS3101A	AUTONOMOUS DRIVER ASSISTIVE SYSTEMS	A	ADAS	4	1	2	0	6	7	
131	PEC	PE-1	25AAS3101E	AUTONOMOUS DRIVER ASSISTIVE SYSTEMS	E	ADAS	4	1	2	0	6	7	
132	PEC	PE-1	25AAS3101	AUTONOMOUS DRIVER ASSISTIVE SYSTEMS	R	ADAS	3	0	2	0	4	5	
133	PEC	PE-1	25ACI3101A	GENERATIVE ADVERSARIAL NETWORKS	A	GANWS	4	1	2	0	6	7	
134	PEC	PE-1	25ACI3101E	GENERATIVE ADVERSARIAL NETWORKS	E	GANWS	4	1	2	0	6	7	
135	PEC	PE-1	25ACI3101	GENERATIVE ADVERSARIAL NETWORKS	R	GANWS	3	0	2	0	4	5	
136	PEC	PE-1	25AVI3101A	DEEP LEARNING	A	DL	4	1	2	0	6	7	
137	PEC	PE-1	25AVI3101E	DEEP LEARNING	E	DL	4	1	2	0	6	7	
138	PEC	PE-1	25AVI3101	DEEP LEARNING	R	DL	3	0	2	0	4	5	
139	PEC	PE-1	25ADE3101A	EDGE COMPUTING FUNDAMENTALS	A	ECF	4	1	2	0	6	7	
140	PEC	PE-1	25ADE3101E	EDGE COMPUTING FUNDAMENTALS	E	ECF	4	1	2	0	6	7	
141	PEC	PE-1	25ADE3101	EDGE COMPUTING FUNDAMENTALS	R	ECF	3	0	2	0	4	5	
142	PEC	PE-1	25ALT3101A	APPLIED MACHINE LEARNING FOR TEXT ANALYSIS	A	AMLFTA	4	1	2	0	6	7	
143	PEC	PE-1	25ALT3101E	APPLIED MACHINE LEARNING FOR TEXT ANALYSIS	E	AMLFTA	4	1	2	0	6	7	
144	PEC	PE-1	25ALT3101	APPLIED MACHINE LEARNING FOR TEXT ANALYSIS	R	AMLFTA	3	0	2	0	4	5	
145	PEC	PE-1	25HDA3101A	INTELLIGENT SYSTEMS FOR DISEASE PREDICTION & DRUG DISCOVERY	A	ISDPDD	4	1	2	0	6	7	
146	PEC	PE-1	25HDA3101E	INTELLIGENT SYSTEMS FOR DISEASE PREDICTION & DRUG DISCOVERY	E	ISDPDD	4	1	2	0	6	7	
147	PEC	PE-1	25HDA3101	INTELLIGENT SYSTEMS FOR DISEASE PREDICTION & DRUG DISCOVERY	R	ISDPDD	3	0	2	0	4	5	
148	PEC	PE-1	25CNE3101A	FOUNDATIONS OF CLOUD NATIVE COMPUTING	A	FCNC	4	1	2	0	6	7	

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149	PEC	PE-1	25CNE3101E	FOUNDATIONS OF CLOUD NATIVE COMPUTING	E	FCNC	4	1	2	0	6	7	
150	PEC	PE-1	25CNE3101	FOUNDATIONS OF CLOUD NATIVE COMPUTING	R	FCNC	3	0	2	0	4	5	
151	PEC	PE-1	25CSC3101A	FUNDAMENTALS OF CLOUD-BASED SCIENTIFIC COMPUTING	A	FCS	4	1	2	0	6	7	
152	PEC	PE-1	25CSC3101E	FUNDAMENTALS OF CLOUD-BASED SCIENTIFIC COMPUTING	E	FCS	4	1	2	0	6	7	
153	PEC	PE-1	25CSC3101	FUNDAMENTALS OF CLOUD-BASED SCIENTIFIC COMPUTING	R	FCS	3	0	2	0	4	5	
154	PEC	PE-1	25CPD3101A	FUNDAMENTALS OF MOBILE APPLICATION DEVELOPMENT	A	FMAD	4	1	2	0	6	7	
155	PEC	PE-1	25CPD3101E	FUNDAMENTALS OF MOBILE APPLICATION DEVELOPMENT	E	FMAD	4	1	2	0	6	7	
156	PEC	PE-1	25CPD3101	FUNDAMENTALS OF MOBILE APPLICATION DEVELOPMENT	R	FMAD	3	0	2	0	4	5	
157	PEC	PE-1	25BEW3101A	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY, CRYPTOCURRENCIES AND TOKENS	A	IBCTCCT	4	1	2	0	6	7	
158	PEC	PE-1	25BEW3101E	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY, CRYPTOCURRENCIES AND TOKENS	E	IBCTCCT	4	1	2	0	6	7	
159	PEC	PE-1	25BEW3101	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY, CRYPTOCURRENCIES AND TOKENS	R	IBCTCCT	3	0	2	0	4	5	
160	PEC	PE-1	25CID3101A	CLOUD INFRASTRUCTURE ENGINEERING	A	CIE	4	1	2	0	6	7	
161	PEC	PE-1	25CID3101E	CLOUD INFRASTRUCTURE ENGINEERING	E	CIE	4	1	2	0	6	7	
162	PEC	PE-1	25CID3101	CLOUD INFRASTRUCTURE ENGINEERING	R	CIE	3	0	2	0	4	5	
163	PEC	PE-1	25CNS3101A	INTRODUCTION TO CLOUD NATIVE COMPUTING	A	ITCNC	4	1	2	0	6	7	
164	PEC	PE-1	25CNS3101E	INTRODUCTION TO CLOUD NATIVE COMPUTING	E	ITCNC	4	1	2	0	6	7	
165	PEC	PE-1	25CNS3101	INTRODUCTION TO CLOUD NATIVE COMPUTING	R	ITCNC	3	0	2	0	4	5	
166	PEC	PE-1	25CSB3101A	CRYPT ANALYSIS & CYBER DEFENSE	A	CACD	4	1	2	0	6	7	
167	PEC	PE-1	25CSB3101E	CRYPT ANALYSIS & CYBER DEFENSE	E	CACD	4	1	2	0	6	7	
168	PEC	PE-1	25CSB3101	CRYPT ANALYSIS & CYBER DEFENSE	R	CACD	3	0	2	0	4	5	
169	PEC	PE-1	25DEA3101A	FUNDAMENTALS OF DATA ENGINEERING	A	FDE	4	1	2	0	6	7	
170	PEC	PE-1	25DEA3101E	FUNDAMENTALS OF DATA ENGINEERING	E	FDE	4	1	2	0	6	7	

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171	PEC	PE-1	25DEA3101	FUNDAMENTALS OF DATA ENGINEERING	R	FDE	3	0	2	0	4	5	
172	PEC	PE-1	25DSB3101A	DATA ANALYTICS AND VISUALIZATION	A	DAV	4	1	2	0	6	7	
173	PEC	PE-1	25DSB3101E	DATA ANALYTICS AND VISUALIZATION	E	DAV	4	1	2	0	6	7	
174	PEC	PE-1	25DSB3101	DATA ANALYTICS AND VISUALIZATION	R	DAV	3	0	2	0	4	5	
175	PEC	PE-1	25DLA3101A	BLOCKCHAIN SYSTEMS AND DISTRIBUTED LEDGER FOUNDATIONS	A	SNTSA	4	1	2	0	6	7	
176	PEC	PE-1	25DLA3101E	BLOCKCHAIN SYSTEMS AND DISTRIBUTED LEDGER FOUNDATIONS	E	SNTSA	4	1	2	0	6	7	
177	PEC	PE-1	25DLA3101	BLOCKCHAIN SYSTEMS AND DISTRIBUTED LEDGER FOUNDATIONS	R	SNTSA	3	0	2	0	4	5	
178	PEC	PE-1	25HSS3101A	INTRODUCTION TO HARDWARE-SOFTWARE CO-DESIGN	A	ITHSCD	4	1	2	0	6	7	
179	PEC	PE-1	25HSS3101E	INTRODUCTION TO HARDWARE-SOFTWARE CO-DESIGN	E	ITHSCD	4	1	2	0	6	7	
180	PEC	PE-1	25HSS3101	INTRODUCTION TO HARDWARE-SOFTWARE CO-DESIGN	R	ITHSCD	3	0	2	0	4	5	
181	PEC	PE-1	25SMD3101A	SOFTWARE VERIFICATION & VALIDATION	A	SVV	4	1	2	0	6	7	
182	PEC	PE-1	25SMD3101E	SOFTWARE VERIFICATION & VALIDATION	E	SVV	4	1	2	0	6	7	
183	PEC	PE-1	25SMD3101	SOFTWARE VERIFICATION & VALIDATION	R	SVV	3	0	2	0	4	5	
184	PEC	PE-1	25AAS3102A	AI AND CONTROLS FOR AUTONOMUS FUTURE TRANSPORT	A	AICFT	4	1	2	0	6	7	
185	PEC	PE-1	25AAS3102E	AI AND CONTROLS FOR AUTONOMUS FUTURE TRANSPORT	E	AICFT	4	1	2	0	6	7	
186	PEC	PE-1	25AAS3102	AI AND CONTROLS FOR AUTONOMUS FUTURE TRANSPORT	R	AICFT	3	0	2	0	4	5	
187	PEC	PE-1	25AAS3112A	ECU DESIGN FOR AUTONOMOUS SYSTEMS	A	EDAS	4	1	2	0	6	7	
188	PEC	PE-1	25AAS3112E	ECU DESIGN FOR AUTONOMOUS SYSTEMS	E	EDAS	4	1	2	0	6	7	
189	PEC	PE-1	25AAS3112	ECU DESIGN FOR AUTONOMOUS SYSTEMS	R	EDAS	3	0	2	0	4	5	
190	PEC	PE-1	25IGD3101A	GAME DEVELOPMENT WITH UNREAL ENGINE (C++)	A	GDUE	4	1	2	0	6	7	
191	PEC	PE-1	25IGD3101E	GAME DEVELOPMENT WITH UNREAL ENGINE (C++)	E	GDUE	4	1	2	0	6	7	

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192	PEC	PE-1	25IGD3101	GAME DEVELOPMENT WITH UNREAL ENGINE (C++)	R	GDUE	3	0	2	0	4	5	
193	PEC	PE-1	25IGD3102A	GAME DEVELOPMENT WITH UNITY ENGINE (C#)	A	GDUN	4	1	2	0	6	7	
194	PEC	PE-1	25IGD3102E	GAME DEVELOPMENT WITH UNITY ENGINE (C#)	E	GDUN	4	1	2	0	6	7	
195	PEC	PE-1	25IGD3102	GAME DEVELOPMENT WITH UNITY ENGINE (C#)	R	GDUN	3	0	2	0	4	5	
196	PEC	PE-1	25CND3101A	CLOUD-NATIVE APPLICATION DEVELOPMENT & CONTAINER ORCHESTRATION	A	CNAD	4	1	2	0	6	7	
197	PEC	PE-1	25CND3101E	CLOUD-NATIVE APPLICATION DEVELOPMENT & CONTAINER ORCHESTRATION	E	CNAD	4	1	2	0	6	7	
198	PEC	PE-1	25CND3101	CLOUD-NATIVE APPLICATION DEVELOPMENT & CONTAINER ORCHESTRATION	R	CNAD	3	0	2	0	4	5	
199	PEC	PE-1	25GSD3101A	GREEN SOFTWARE ENGINEERING	A	GSE	4	1	2	0	6	7	
200	PEC	PE-1	25GSD3101E	GREEN SOFTWARE ENGINEERING	E	GSE	4	1	2	0	6	7	
201	PEC	PE-1	25GSD3101	GREEN SOFTWARE ENGINEERING	R	GSE	3	0	2	0	4	5	
202	PEC	PE-1	25HCA3101A	MULTI-MODAL INFORMATION PROCESSING	A	MMIP	4	1	2	0	6	7	
203	PEC	PE-1	25HCA3101E	MULTI-MODAL INFORMATION PROCESSING	E	MMIP	4	1	2	0	6	7	
204	PEC	PE-1	25HCA3101	MULTI-MODAL INFORMATION PROCESSING	R	MMIP	3	0	2	0	4	5	
205	PEC	PE-1	25CTI3102A	MALWARE ANALYSIS & REVERSE ENGINEERING	A	MARE	4	1	2	0	6	7	
206	PEC	PE-1	25CTI3102E	MALWARE ANALYSIS & REVERSE ENGINEERING	E	MARE	4	1	2	0	6	7	
207	PEC	PE-1	25CTI3102	MALWARE ANALYSIS & REVERSE ENGINEERING	R	MARE	3	0	2	0	4	5	
208	PEC	PE-1	25CTI3101A	DIGITAL FORENSICS & INCIDENT RESPONSE	A	DFIR	4	1	2	0	6	7	
209	PEC	PE-1	25CTI3101E	DIGITAL FORENSICS & INCIDENT RESPONSE	E	DFIR	4	1	2	0	6	7	
210	PEC	PE-1	25CTI3101	DIGITAL FORENSICS & INCIDENT RESPONSE	R	DFIR	3	0	2	0	4	5	
211	PEC	PE-1	25ABT3101A	BIOSENSORS AND BIOELECTRONICS	A	BSBE	4	1	2	0	6	7	
212	PEC	PE-1	25ABT3101E	BIOSENSORS AND BIOELECTRONICS	E	BSBE	4	1	2	0	6	7	
213	PEC	PE-1	25ABT3101	BIOSENSORS AND BIOELECTRONICS	R	BSBE	3	0	2	0	4	5	
214	PEC	PE-1	25CAC3101A	GPU PROGRAMMING & HARDWARE ACCELERATION FOR AI & HPC	A	GPAH	4	1	2	0	6	7	

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215	PEC	PE-1	25CAC3101E	GPU PROGRAMMING & HARDWARE ACCELERATION FOR AI & HPC	E	GPAH	4	1	2	0	6	7	
216	PEC	PE-1	25CAC3101	GPU PROGRAMMING & HARDWARE ACCELERATION FOR AI & HPC	R	GPAH	3	0	2	0	4	5	
217	PEC	PE-1	25AEA3101A	AUTOMOTIVE SENSOR AND APPLICATIONS	A	ASA	4	1	2	0	6	7	
218	PEC	PE-1	25AEA3101E	AUTOMOTIVE SENSOR AND APPLICATIONS	E	ASA	4	1	2	0	6	7	
219	PEC	PE-1	25AEA3101	AUTOMOTIVE SENSOR AND APPLICATIONS	R	ASA	3	0	2	0	4	5	
220	PEC	PE-1	25WLT3101A	4G WIRELESS TECHNOLOGIES AND CELLULAR COMMUNICATION	A	4GW	4	1	2	0	6	7	
221	PEC	PE-1	25WLT3101E	4G WIRELESS TECHNOLOGIES AND CELLULAR COMMUNICATION	E	4GW	4	1	2	0	6	7	
222	PEC	PE-1	25WLT3101	4G WIRELESS TECHNOLOGIES AND CELLULAR COMMUNICATION	R	4GW	3	0	2	0	4	5	
223	PEC	PE-1	25AEE3101A	AUTOMOBILE ENGINEERING	A	AEG	4	1	2	0	6	7	
224	PEC	PE-1	25AEE3101E	AUTOMOBILE ENGINEERING	E	AEG	4	1	2	0	6	7	
225	PEC	PE-1	25AEE3101	AUTOMOBILE ENGINEERING	R	AEG	3	0	2	0	4	5	
226	PEC	PE-1	25WRE3101A	ADVANCED FOUNDATION ENGINEERING	A	AFE	4	1	2	0	6	7	
227	PEC	PE-1	25WRE3101E	ADVANCED FOUNDATION ENGINEERING	E	AFE	4	1	2	0	6	7	
228	PEC	PE-1	25WRE3101	ADVANCED FOUNDATION ENGINEERING	R	AFE	3	0	2	0	4	5	
229	PEC	PE-1	25BIS3101A	MOLECULAR MODELLING AND DRUG DESIGN	A	MMDD	4	1	2	0	6	7	
230	PEC	PE-1	25BIS3101E	MOLECULAR MODELLING AND DRUG DESIGN	E	MMDD	4	1	2	0	6	7	
231	PEC	PE-1	25BIS3101	MOLECULAR MODELLING AND DRUG DESIGN	R	MMDD	3	0	2	0	4	5	
232	PEC	PE-1	25VLS3101A	ANALOG VLSI DESIGN	A	AVD	4	1	2	0	6	7	
233	PEC	PE-1	25VLS3101E	ANALOG VLSI DESIGN	E	AVD	4	1	2	0	6	7	
234	PEC	PE-1	25VLS3101	ANALOG VLSI DESIGN	R	AVD	3	0	2	0	4	5	
235	PEC	PE-1	25STE3101A	ADVANCED CONCRETE TECHNOLOGY	A	ACT	4	1	2	0	6	7	
236	PEC	PE-1	25STE3101E	ADVANCED CONCRETE TECHNOLOGY	E	ACT	4	1	2	0	6	7	
237	PEC	PE-1	25STE3101	ADVANCED CONCRETE TECHNOLOGY	R	ACT	3	0	2	0	4	5	
238	PEC	PE-1	25CPS3101A	IOT SENSING AND ACTUATING DEVICES	A	ISAD	4	1	2	0	6	7	

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239	PEC	PE-1	25CPS3101E	IOT SENSING AND ACTUATING DEVICES	E	ISAD	4	1	2	0	6	7	
240	PEC	PE-1	25CPS3101	IOT SENSING AND ACTUATING DEVICES	R	ISAD	3	0	2	0	4	5	
241	PEC	PE-1	25SGT3101A	DISTRIBUTED ENERGY RESOURCES AND SMART GRIDS	A	DERSG	3	1	2	0	5	6	
242	PEC	PE-1	25SGT3101E	DISTRIBUTED ENERGY RESOURCES AND SMART GRIDS	E	DERSG	4	1	2	0	6	7	
243	PEC	PE-1	25SGT3101	DISTRIBUTED ENERGY RESOURCES AND SMART GRIDS	R	DERSG	3	0	2	0	4	5	
244	PEC	PE-1	25DCM3101A	TCP/IP AND OTHER PROTOCOL SUITE	A	TCP	4	1	2	0	6	7	
245	PEC	PE-1	25DCM3101E	TCP/IP AND OTHER PROTOCOL SUITE	E	TCP	4	1	2	0	6	7	
246	PEC	PE-1	25DCM3101	TCP/IP AND OTHER PROTOCOL SUITE	R	TCP	3	0	2	0	4	5	
247	PEC	PE-1	25EDS3101A	ADVANCED EMBEDDED SYSTEMS	A	AES	4	1	2	0	6	7	
248	PEC	PE-1	25EDS3101E	ADVANCED EMBEDDED SYSTEMS	E	AES	4	1	2	0	6	7	
249	PEC	PE-1	25EDS3101	ADVANCED EMBEDDED SYSTEMS	R	AES	3	0	2	0	4	5	
250	PEC	PE-1	25EME3101A	POWER TRAIN DESIGN FOR ELECTRIC VEHICLE	A	PTDEV	4	1	2	0	6	7	
251	PEC	PE-1	25EME3101E	POWER TRAIN DESIGN FOR ELECTRIC VEHICLE	E	PTDEV	4	1	2	0	6	7	
252	PEC	PE-1	25EME3101	POWER TRAIN DESIGN FOR ELECTRIC VEHICLE	R	PTDEV	3	0	2	0	4	5	
253	PEC	PE-1	25RAN3102A	ADVANCED ROBOTICS	A	AR	4	1	2	0	6	7	
254	PEC	PE-1	25RAN3102E	ADVANCED ROBOTICS	E	AR	4	1	2	0	6	7	
255	PEC	PE-1	25RAN3102	ADVANCED ROBOTICS	R	AR	3	0	2	0	4	5	
256	PEC	PE-1	25RAN3101A	ROBOT MOTION PLANNING, DYNAMICS AND CONTROL	A	RMPDC	4	1	2	0	6	7	
257	PEC	PE-1	25RAN3101E	ROBOT MOTION PLANNING, DYNAMICS AND CONTROL	E	RMPDC	4	1	2	0	6	7	
258	PEC	PE-1	25RAN3101	ROBOT MOTION PLANNING, DYNAMICS AND CONTROL	R	RMPDC	3	0	2	0	4	5	
259	PEC	PE-1	25EGD3101A	ADVANCED STRENGTH OF MATERIALS	A	ASM	4	1	2	0	6	7	
260	PEC	PE-1	25EGD3101E	ADVANCED STRENGTH OF MATERIALS	E	ASM	4	1	2	0	6	7	
261	PEC	PE-1	25EGD3101	ADVANCED STRENGTH OF MATERIALS	R	ASM	3	0	2	0	4	5	
262	PEC	PE-1	25GET3101A	SOLAR PV AND MICRO ENERGY TECHNOLOGIES	A	SPMET	4	1	2	0	6	7	

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263	PEC	PE-1	25GET3101E	SOLAR PV AND MICRO ENERGY TECHNOLOGIES	E	SPMET	4	1	2	0	6	7	
264	PEC	PE-1	25GET3101	SOLAR PV AND MICRO ENERGY TECHNOLOGIES	R	SPMET	3	0	2	0	4	5	
265	PEC	PE-1	25ILA3101A	INTRODUCTION TO INDUSTRIAL INTERNET OF THINGS	A	IIIoT	4	1	2	0	6	7	
266	PEC	PE-1	25ILA3101E	INTRODUCTION TO INDUSTRIAL INTERNET OF THINGS	E	IIIoT	4	1	2	0	6	7	
267	PEC	PE-1	25ILA3101	INTRODUCTION TO INDUSTRIAL INTERNET OF THINGS	R	IIIoT	3	0	2	0	4	5	
268	PEC	PE-2	25ILA3202	INDUSTRIAL AUTOMATION AND ROBOTICS	R	IAR	3	0	0	0	3	3	
269	PEC	PE-2	25ILA3203	EDGE COMPUTING FOR INDUSTRY 4.0	R	ECI	3	0	0	0	3	3	
270	PEC	PE-2	25HDA3202	BIO MEDICAL INFORMATICS	R	BMI	3	0	0	0	3	3	
271	PEC	PE-2	25HDA3203	GENETIC PROGRAMMING	R	GP	3	0	0	0	3	3	
272	PEC	PE-2	25GET3202	WIND AND ENERGY STORAGE TECHNOLOGIES	R	WEST	3	0	0	0	3	3	
273	PEC	PE-2	25GET3203	ENERGY ECONOMICS AND POLICY	R	EEP	3	0	0	0	3	3	
274	PEC	PE-2	25EGD3202	CREEP, FATIGUE AND FRACTURE MECHANICS	R	CFFM	3	0	0	0	3	3	
275	PEC	PE-2	25EGD3203	THEORY OF ELASTICITY AND PLASTICITY	R	KDARS	3	0	0	0	3	3	
276	PEC	PE-2	25STE3202	ADVANCED STRUCTURAL ANALYSIS	R	ASA	3	0	0	0	3	3	
277	PEC	PE-2	25RAN3203	ROBOT MANIPULATION AND WHEELED MOBILE ROBOTS	R	RMWR	3	0	0	0	3	3	
278	PEC	PE-2	25RAN3202	AUTONOMOUS VEHICLES AND AUTOMOTIVE ELECTRONICS	R	AVAE	3	0	0	0	3	3	
279	PEC	PE-2	25EME3202	COMMUNICATION PROTOCOLS AND TESTING OF ELECTRIC VEHICLE	R	CPTEV	3	0	0	0	3	3	
280	PEC	PE-2	25EME3203	AUTONOMOUS VEHICLES AND AUTOMOTIVE ELECTRONICS	R	AVAE	3	0	0	0	3	3	
281	PEC	PE-2	25EDS3202	EMBEDDED SYSTEMS FOR IOT	R	ESIOT	3	0	0	0	3	3	
282	PEC	PE-2	25DCM3202	CLOUD COMPUTING AND NETWORKS SECURITY	R	CCNS	3	0	0	0	3	3	
283	PEC	PE-2	25SGT3203	MICROGRID DYNAMICS AND CONTROL	R	MDC	3	0	0	0	3	3	
284	PEC	PE-2	25SGT3202	DISTRIBUTION SYSTEM PRACTICES	R	DSP	3	0	0	0	3	3	
285	PEC	PE-2	25CPS3202	INTERNET OF THINGS ARCHITECTURES AND PROTOCOLS	R	IOTAP	3	0	0	0	3	3	
286	PEC	PE-2	25BIS3202	BIOMEDICAL INFORMATICS	R	BMI	3	0	0	0	3	3	

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287	PEC	PE-2	25WRE3202	INTELLIGENT TRANSPORTATION SYSTEMS	R	ITS	3	0	0	0	3	3	
288	PEC	PE-2	25BIS3203	PYTHON AND R PROGRAMMING	R	P&RP	3	0	0	0	3	3	
289	PEC	PE-2	25VLS3202	TESTING AND VERIFICATION OF VLSI CIRCUITS	R	TVVC	3	0	0	0	3	3	
290	PEC	PE-2	25AAS3202	INTRODUCTION TO INTELLIGENT DRONES	R	IID	3	0	0	0	3	3	
291	PEC	PE-2	25AEE3202	AUTOTRONICS AND SAFETY	R	AESS	3	0	0	0	3	3	
292	PEC	PE-2	25AEA3203	AUTOMOTIVE POLLUTION AND ITS CONTROL	R	APC	3	0	0	0	3	3	
293	PEC	PE-2	25AEA3202	AUTOTRONICS	R	AT	3	0	0	0	3	3	
294	PEC	PE-2	25WLT3202	MODERN SATELLITE COMMUNICATION SYSTEMS	R	MSCS	3	0	0	0	3	3	
295	PEC	PE-2	25ABT3202	IOT APPLICATIONS IN PRECISION AGRICULTURE	R	IOTAPA	3	0	0	0	3	3	
296	PEC	PE-2	25ABT3203	MACHINE LEARNING FOR PRECISION AGRICULTURE	R	MLPA	3	0	0	0	3	3	
297	PEC	PE-2	25AEC3202	SECURE & SCALABLE EDGE AI NETWORKING	R	SEAN	3	0	0	0	3	3	
298	PEC	PE-2	25CTI3203	ETHICAL HACKING & OFFENSIVE SECURITY	R	EHOS	3	0	0	0	3	3	
299	PEC	PE-2	25CTI3204	VULNERABILITY ASSESSMENT & PENETRATION TESTING	R	VAPT	3	0	0	0	3	3	
300	PEC	PE-2	25HCA3202	NATURAL LANGUAGE PROCESSING	R	NLP	3	0	0	0	3	3	
301	PEC	PE-2	25HCA3203	COMPUTER VISION & OBJECT DETECTION	R	CVOD	3	0	0	0	3	3	
302	PEC	PE-2	25HCA3204	COMPUTATIONAL PARALINGUISTICS	R	CPL	3	0	0	0	3	3	
303	PEC	PE-2	25CAC3202	PARALLEL & FUNCTIONAL PROGRAMMING FOR SCIENTIFIC APPLICATIONS	R	PFPS	3	0	0	0	3	3	
304	PEC	PE-2	25GSD3202	GREEN ALGORITHMS AND SUSTAINABLE APP DESIGN	R	GAD	3	0	0	0	3	3	
305	PEC	PE-2	25CND3202	CLOUD-NATIVE ARCHITECTURE & INFRASTRUCTURE AS CODE	R	CNAI	3	0	0	0	3	3	
306	PEC	PE-2	25IGD3203	MULTIPLAYER GAME DEVELOPMENT AND NETWORKING	R	MGDN	3	0	0	0	3	3	
307	PEC	PE-2	25IGD3204	GAME DEVOPS AND CLOUD DEPLOYMENT	R	GDCD	3	0	0	0	3	3	
308	PEC	PE-2	25AAS3203	AI AND IOT FOR AUTONOMOUS VEHICLE	R	AIAV	3	0	0	0	3	3	
309	PEC	PE-2	25AAS3205	AUTONOMOUS VEHICLE ECU DESIGN WITH AUTOSAR	R	AVECUDA	3	0	0	0	3	3	

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310	PEC	PE-2	25AAS3213	PERCEPTION ENGINEERING FOR AUTONOMY	R	PEA	3	0	0	0	3	3	
311	PEC	PE-2	25HDA3204	PYTHON FOR GENOMIC DATA SCIENCE	R	PFGDS	3	0	0	0	3	3	
312	PEC	PE-2	25SDM3203	META SOCIAL MEDIA ANALYTICS	R	MSMA	3	0	0	0	3	3	
313	PEC	PE-2	25HSS3202	FUNDAMENTALS OF COMPUTER SECURITY	R	FOCS	3	0	0	0	3	3	
314	PEC	PE-2	25DLA3202	MACHINE LEARNING FOR FINANCIAL RISK & BEHAVIORAL INTELLIGENCE	R	MLFRBI	3	0	0	0	3	3	
315	PEC	PE-2	25DLA3203	BLOCKCHAIN TECHNOLOGY FOR DIGITAL TRANSFORMATION	R	BTDT	3	0	0	0	3	3	
316	PEC	PE-2	25SMD3202	DESIGN PATTERNS & CLEAN CODING TECHNIQUES	R	DPCT	3	0	0	2	3.5	5	
317	PEC	PE-2	25DSB3202	DATA WAREHOUSING AND MINING	R	DWHM	3	0	0	0	3	3	
318	PEC	PE-2	25ADE3202	AI AT THE EDGE	R	AIAE	3	0	0	0	3	3	
319	PEC	PE-2	25DEA3202	DATA EXPLORATION AND PREPARATION	R	DEP	3	0	0	0	3	3	
320	PEC	PE-2	25CSB3202	NETWORK AND INFRASTRUCTURE SECURITY	R	NS	3	0	0	0	3	3	
321	PEC	PE-2	25CSB3203	INTRODUCTION TO BLOCKCHAIN AND CRYPTO CURRENCIES	R	IBCC	3	0	0	0	3	3	
322	PEC	PE-2	25CNS3202	FUNDAMENTALS OF CLOUD SECURITY	R	FOCS	2	0	2	0	3	4	
323	PEC	PE-2	25CID3202	ENTERPRISE CLOUD COMPUTING: TECHNOLOGY, ARCHITECTURE, APPLICATIONS	R	ECT	3	0	0	0	3	3	
324	PEC	PE-2	25CID3203	ARCHITECTING HIGHLY AVAILABLE AND SCALABLE CLOUD ENVIRONMENTS	R	AHASCE	3	0	0	0	3	3	
325	PEC	PE-2	25BEW3202	SMART CONTRACTS	R	SC	3	0	0	0	3	3	
326	PEC	PE-2	25CEC3202	ADVANCED OPERATING SYSTEMS	R	AOS	3	0	0	0	3	3	
327	PEC	PE-2	25CEC3203	FUNCTIONAL AND CONCURRENT PROGRAMMING	R	FCP	3	0	0	0	3	3	
328	PEC	PE-2	25CEC3204	CLOUD DEVOPS	R	CD	3	0	0	0	3	3	
329	PEC	PE-2	25CPD3202	REACT NATIVE FOR ANDROID AND IOS DEVELOPMENT	R	RNA	3	0	0	0	3	3	
330	PEC	PE-2	25CPD3203	FRAMEWORK BASED CROSS PLATFORM APP DEVELOPMENT	R	FBCPD	3	0	0	0	3	3	
331	PEC	PE-2	25CSC3202	DEVELOPMENT OF SCIENTIFIC APPLICATIONS USING CLOUD-BASED TECHNOLOGY	R	DSA	3	0	0	0	3	3	
332	PEC	PE-2	25CSC3203	DISTRIBUTED SCIENTIFIC COMPUTING IN THE CLOUD	R	DSCC	3	0	0	0	3	3	

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333	PEC	PE-2	25CNE3202	CLOUD NATIVE APPLICATION DEVELOPMENT	R	CNAD	3	0	0	0	3	3	
334	PEC	PE-2	25CNE3203	CLOUD NATIVE DESIGN PROCESS	R	CNDP	3	0	0	0	3	3	
335	PEC	PE-2	25ACI3202	EXPLAINABLE AI AND COMMUNICATIONS	R	EAIC	3	0	0	0	3	3	
336	PEC	PE-2	25DLS3202	DESIGNING REAL-TIME DATA PIPELINES	R	RTDP	3	0	0	0	3	3	
337	PEC	PE-2	25DSE3202	DATA EXPLORATION & PREPARATION	R	DEP	3	0	0	0	3	3	
338	PEC	PE-2	25DSE3203	DATA WAREHOUSING& BUSINESS INTELLIGENCE	R	DWBI	3	0	0	0	3	3	
339	PEC	PE-2	25AVI3202	COMPUTER VISION	R	CV	3	0	0	0	3	3	
340	PEC	PE-2	25GMI3202	ENGINEERING LARGE LANGUAGE MODEL SYSTEMS	R	ELLMS	3	0	0	0	3	3	
341	PEC	PE-2	25ALT3202	DEEP LEARNING FOR NATURAL LANGUAGE PROCESSING	R	DLFNL	3	0	0	0	3	3	
342	PEC	PE-2	25SCI3202	SPATIAL COMPUTING FOR MULTIPLAYER GAMES	R	SCMG	3	0	0	0	3	3	
343	PEC	PE-2	25GDU3202	UX DESIGN	R	UXD	3	0	0	0	3	3	
344	PEC	PE-2	25QTS3202	QUANTUM CRYPTOGRAPHY & QUANTUM COMMUNICATION	R	QCQC	3	0	0	0	3	3	
345	PEC	PE-2	25QCS3202	QUANTUM OPTICS	R	QO	3	0	0	0	3	3	
346	PEC	PE-2	25RFM3202	ADVANCED ANTENNA DESIGN FOR WIRELESS AND 5G APPLICATIONS	R	AADW	3	0	0	0	3	3	
347	PEC	PE-2	25GAM3202	DEEP LEARNING FOR COMPUTER VISION APPLICATIONS	R	DLCVA	3	0	0	0	3	3	
348	PEC	PE-2	25BMI3202	ADVANCED BIOMEDICAL SIGNAL PROCESSING	R	ABSP	3	0	0	0	3	3	
349	PEC	PE-2	25SDM3202	OPINION MINING AND RECOMMENDER SYSTEMS	R	OMRS	3	0	0	0	3	3	
350	PEC	PE-2	25BEW3211	BLOCKCHAIN NETWORK ARCHITECTURE & CONSENSUS MECHANISMS	R	BNAC	3	0	0	0	3	3	
351	PEC	PE-2	25BEW3110	SMART CONTRACT DEVELOPMENT & TESTING	R	SCDT	3	0	0	0	3	3	
352	PEC	PE-2	25IOT3202	EDGE COMPUTING	R	EC	3	0	0	0	3	3	
353	PEC	PE-2	25IOT3203	PRECISION AGRICULTURE	R	PA	3	0	0	0	3	3	
354	PEC	PE-2	25IOT3204	SMART FARMING	R	SF	3	0	0	0	3	3	
355	PEC	PE-2	25MBT3203	NANOBIOTECHNOLOGY	R	TE	3	0	0	0	3	3	
356	PEC	PE-2	25MBT3202	VIROLOGY	R	VR	3	0	0	0	3	3	
357	PEC	PE-2	25IBT3202	PHARMACOVIGILANCE AND SAFETY	R	PCS	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
358	PEC	PE-2	25NTO3204	NANOPHOTONICS AND BIOPHOTONICS	R	NAB	3	0	0	0	3	3	
359	PEC	PE-2	25IBT3203	BIOPROCESS ECONOMICS AND PLANT DESIGN	R	BEPD	3	0	0	0	3	3	
360	PEC	PE-2	25NTO3203	NANOTECHNOLOGY AND NANOSENSORS	R	NAN	3	0	0	0	3	3	
361	PEC	PE-2	25SMF3202	FLEXIBLE MANUFACTURING SYSTEMS	R	FMS	3	0	0	0	3	3	
362	PEC	PE-2	25SMF3203	PRECISION AND MICRO MANUFACTURING	R	PMM	3	0	0	0	3	3	
363	PEC	PE-2	25AEE3203	REFRIGERATION & AIR CONDITIONING	R	RAC	3	0	0	0	3	3	
364	PEC	PE-3	25SMF3304A	ADDITIVE AND HYBRID MANUFACTURING	A	AHM	4	1	0	2	5.5	7	
365	PEC	PE-3	25SMF3304E	ADDITIVE AND HYBRID MANUFACTURING	E	AHM	4	1	0	2	5.5	7	
366	PEC	PE-3	25SMF3304	ADDITIVE AND HYBRID MANUFACTURING	R	AHM	3	0	0	2	3.5	5	
367	PEC	PE-3	25IBT3304A	ENZYME ENGINEERING	A	EE	4	1	0	2	5.5	7	
368	PEC	PE-3	25IBT3304E	ENZYME ENGINEERING	E	EE	4	1	0	2	5.5	7	
369	PEC	PE-3	25IBT3304	ENZYME ENGINEERING	R	EE	3	0	0	2	3.5	5	
370	PEC	PE-3	25NTO3305A	NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS	A	NBA	4	1	0	2	5.5	7	
371	PEC	PE-3	25NTO3305E	NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS	E	NBA	4	1	0	2	5.5	7	
372	PEC	PE-3	25NTO3305	NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS	R	NBA	3	0	0	2	3.5	5	
373	PEC	PE-3	25NTO3306A	NANOROBOTICS FOR ADVANCED APPLICATIONS	A	NAA	4	1	0	2	5.5	7	
374	PEC	PE-3	25NTO3306E	NANOROBOTICS FOR ADVANCED APPLICATIONS	E	NAA	4	1	0	2	5.5	7	
375	PEC	PE-3	25NTO3306	NANOROBOTICS FOR ADVANCED APPLICATIONS	R	NAA	3	0	0	2	3.5	5	
376	PEC	PE-3	25MBT3304A	HEALTHCARE BIOTECHNOLOGY	A	HBT	4	1	0	2	5.5	7	
377	PEC	PE-3	25MBT3304E	HEALTHCARE BIOTECHNOLOGY	E	HBT	4	1	0	2	5.5	7	
378	PEC	PE-3	25MBT3304	HEALTHCARE BIOTECHNOLOGY	R	HBT	3	0	0	2	3.5	5	
379	PEC	PE-3	25BEW3312A	WEB3 APPLICATION DEVELOPMENT & INTEGRATION	A	WADI	4	1	0	2	5.5	7	
380	PEC	PE-3	25BEW3312E	WEB3 APPLICATION DEVELOPMENT & INTEGRATION	E	WADI	4	1	0	2	5.5	7	
381	PEC	PE-3	25BEW3312	WEB3 APPLICATION DEVELOPMENT & INTEGRATION	R	WADI	3	0	0	2	3.5	5	

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382	PEC	PE-3	25BMI3303A	MATERIALS FOR BIO-MEDICAL APPLICATIONS	A	MBMA	4	1	0	2	5.5	7	
383	PEC	PE-3	25BMI3303E	MATERIALS FOR BIO-MEDICAL APPLICATIONS	E	MBMA	4	1	0	2	5.5	7	
384	PEC	PE-3	25BMI3303	MATERIALS FOR BIO-MEDICAL APPLICATIONS	R	MBMA	3	0	0	2	3.5	5	
385	PEC	PE-3	25GAM3303A	GENERATIVE AI ARCHITECTURES	A	GAA	4	1	0	2	5.5	7	
386	PEC	PE-3	25GAM3303E	GENERATIVE AI ARCHITECTURES	E	GAA	4	1	0	2	5.5	7	
387	PEC	PE-3	25GAM3303	GENERATIVE AI ARCHITECTURES	R	GAA	3	0	0	2	3.5	5	
388	PEC	PE-3	25RFM3303A	MODERN RADAR SYSTEMS & NAVIGATIONAL AIDS	A	MRSN	4	1	0	2	5.5	7	
389	PEC	PE-3	25RFM3303E	MODERN RADAR SYSTEMS & NAVIGATIONAL AIDS	E	MRSN	4	1	0	2	5.5	7	
390	PEC	PE-3	25RFM3303	MODERN RADAR SYSTEMS & NAVIGATIONAL AIDS	R	MRSN	3	0	0	2	3.5	5	
391	PEC	PE-3	25QCS3303A	QUANTUM SENSING	A	QS	4	1	0	2	5.5	7	
392	PEC	PE-3	25QCS3303E	QUANTUM SENSING	E	QS	4	1	0	2	5.5	7	
393	PEC	PE-3	25QCS3303	QUANTUM SENSING	R	QS	3	0	0	2	3.5	5	
394	PEC	PE-3	25QTS3303A	QUANTUM SENSING & METROLOGY	A	QSM	4	1	0	2	5.5	7	
395	PEC	PE-3	25QTS3303E	QUANTUM SENSING & METROLOGY	E	QSM	4	1	0	2	5.5	7	
396	PEC	PE-3	25QTS3303	QUANTUM SENSING & METROLOGY	R	QSM	3	0	0	2	3.5	5	
397	PEC	PE-3	25GDU3303A	AR AND VR APPLICATION DEVELOPMENT	A	AR&VR	4	1	0	2	5.5	7	
398	PEC	PE-3	25GDU3303E	AR AND VR APPLICATION DEVELOPMENT	E	AR&VR	4	1	0	2	5.5	7	
399	PEC	PE-3	25GDU3303	AR AND VR APPLICATION DEVELOPMENT	R	AR&VR	3	0	0	2	3.5	5	
400	PEC	PE-3	25SCI3303A	SPATIAL COMPUTING PLATFORMS AND DEVELOPMENT	A	SCPD	4	1	0	2	5.5	7	
401	PEC	PE-3	25SCI3303E	SPATIAL COMPUTING PLATFORMS AND DEVELOPMENT	E	SCPD	4	1	0	2	5.5	7	
402	PEC	PE-3	25SCI3303	SPATIAL COMPUTING PLATFORMS AND DEVELOPMENT	R	SCPD	3	0	0	2	3.5	5	
403	PEC	PE-3	25CEC3305A	CLOUD AND SERVERLESS COMPUTING	A	CSC	4	1	0	2	5.5	7	
404	PEC	PE-3	25CEC3305E	CLOUD AND SERVERLESS COMPUTING	E	CSC	4	1	0	2	5.5	7	
405	PEC	PE-3	25CEC3305	CLOUD AND SERVERLESS COMPUTING	R	CSC	3	0	0	2	3.5	5	
406	PEC	PE-3	25ALT3303A	CONVERSATIONAL AI AND CHATBOT DEVELOPMENT	A	CAICBD	4	1	0	2	5.5	7	

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407	PEC	PE-3	25ALT3303E	CONVERSATIONAL AI AND CHATBOT DEVELOPMENT	E	CAICBD	4	1	0	2	5.5	7	
408	PEC	PE-3	25ALT3303	CONVERSATIONAL AI AND CHATBOT DEVELOPMENT	R	CAICBD	3	0	0	2	3.5	5	
409	PEC	PE-3	25GMI3303A	REINFORCEMENT LEARNING	A	RL	4	1	0	2	5.5	7	
410	PEC	PE-3	25GMI3303E	REINFORCEMENT LEARNING	E	RL	4	1	0	2	5.5	7	
411	PEC	PE-3	25GMI3303	REINFORCEMENT LEARNING	R	RL	3	0	0	2	3.5	5	
412	PEC	PE-3	25ADE3303A	EDGE AI ARCHITECTURES AND APPLICATIONS	A	EAIAA	4	1	0	2	5.5	7	
413	PEC	PE-3	25ADE3303E	EDGE AI ARCHITECTURES AND APPLICATIONS	E	EAIAA	4	1	0	2	5.5	7	
414	PEC	PE-3	25ADE3303	EDGE AI ARCHITECTURES AND APPLICATIONS	R	EAIAA	3	0	0	2	3.5	5	
415	PEC	PE-3	25AVI3303A	OBJECT DETECTION	A	OD	4	1	0	2	5.5	7	
416	PEC	PE-3	25AVI3303E	OBJECT DETECTION	E	OD	4	1	0	2	5.5	7	
417	PEC	PE-3	25AVI3303	OBJECT DETECTION	R	OD	3	0	0	2	3.5	5	
418	PEC	PE-3	25AEC3303A	SERVICE MESH & OBSERVABILITY FOR EDGE AI	A	SMOA	4	1	0	2	5.5	7	
419	PEC	PE-3	25AEC3303E	SERVICE MESH & OBSERVABILITY FOR EDGE AI	E	SMOA	4	1	0	2	5.5	7	
420	PEC	PE-3	25AEC3303	SERVICE MESH & OBSERVABILITY FOR EDGE AI	R	SMOA	3	0	0	2	3.5	5	
421	PEC	PE-3	25DSE3304A	BIG DATA ENGINEERING	A	BDE	4	1	0	2	5.5	7	
422	PEC	PE-3	25DSE3304E	BIG DATA ENGINEERING	E	BDE	4	1	0	2	5.5	7	
423	PEC	PE-3	25DSE3304	BIG DATA ENGINEERING	R	BDE	3	0	0	2	3.5	5	
424	PEC	PE-3	25DSE3305A	BUSINESS ANALYTICS	A	BA	4	1	0	2	5.5	7	
425	PEC	PE-3	25DSE3305E	BUSINESS ANALYTICS	E	BA	4	1	0	2	5.5	7	
426	PEC	PE-3	25DSE3305	BUSINESS ANALYTICS	R	BA	3	0	0	2	3.5	5	
427	PEC	PE-3	25DLS3303A	DATA LAKES & STREAM-ORIENTED STORAGE SYSTEMS	A	DLSS	4	1	0	2	5.5	7	
428	PEC	PE-3	25DLS3303E	DATA LAKES & STREAM-ORIENTED STORAGE SYSTEMS	E	DLSS	4	1	0	2	5.5	7	
429	PEC	PE-3	25DLS3303	DATA LAKES & STREAM-ORIENTED STORAGE SYSTEMS	R	DLSS	3	0	0	2	3.5	5	
430	PEC	PE-3	25ACI3303A	FUZZY LOGIC WITH SET THEORY	A	FLST	4	1	0	2	5.5	7	
431	PEC	PE-3	25ACI3303E	FUZZY LOGIC WITH SET THEORY	E	FLST	4	1	0	2	5.5	7	
432	PEC	PE-3	25ACI3303	FUZZY LOGIC WITH SET THEORY	R	FLST	3	0	0	2	3.5	5	

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433	PEC	PE-3	25CNE3304A	SOFTWARE ENGINEERING FOR CLOUD COMPUTING	A	SEC	4	1	0	2	5.5	7	
434	PEC	PE-3	25CNE3304E	SOFTWARE ENGINEERING FOR CLOUD COMPUTING	E	SEC	4	1	0	2	5.5	7	
435	PEC	PE-3	25CNE3304	SOFTWARE ENGINEERING FOR CLOUD COMPUTING	R	SEC	3	0	0	2	3.5	5	
436	PEC	PE-3	25CSC3304A	CLOUD BASED HIGH PERFORMANCE COMPUTING	A	CHC	4	1	0	2	5.5	7	
437	PEC	PE-3	25CSC3304E	CLOUD BASED HIGH PERFORMANCE COMPUTING	E	CHC	4	1	0	2	5.5	7	
438	PEC	PE-3	25CSC3304	CLOUD BASED HIGH PERFORMANCE COMPUTING	R	CHC	3	0	0	2	3.5	5	
439	PEC	PE-3	25CPD3304A	SECURE MOBILE APPLICATION DEVELOPMENT	A	SMAD	4	1	0	2	5.5	7	
440	PEC	PE-3	25CPD3304E	SECURE MOBILE APPLICATION DEVELOPMENT	E	SMAD	4	1	0	2	5.5	7	
441	PEC	PE-3	25CPD3304	SECURE MOBILE APPLICATION DEVELOPMENT	R	SMAD	3	0	0	2	3.5	5	
442	PEC	PE-3	25BEW3303A	DECENTRALIZED APPLICATIONS AND DECENTRALIZED WEB	A	DADW	4	1	0	2	5.5	7	
443	PEC	PE-3	25BEW3303E	DECENTRALIZED APPLICATIONS AND DECENTRALIZED WEB	E	DADW	4	1	0	2	5.5	7	
444	PEC	PE-3	25BEW3303	DECENTRALIZED APPLICATIONS AND DECENTRALIZED WEB	R	DADW	3	0	0	2	3.5	5	
445	PEC	PE-3	25CID3304A	CLOUD INFRASTRUCTURE ARCHITECTURE AND ENGINEERING	A	CIA	4	1	0	2	5.5	7	
446	PEC	PE-3	25CID3304E	CLOUD INFRASTRUCTURE ARCHITECTURE AND ENGINEERING	E	CIA	4	1	0	2	5.5	7	
447	PEC	PE-3	25CID3304	CLOUD INFRASTRUCTURE ARCHITECTURE AND ENGINEERING	R	CIA	3	0	0	2	3.5	5	
448	PEC	PE-3	25CNS3303A	CONTAINER SECURITY	A	CTSY	4	1	0	2	5.5	7	
449	PEC	PE-3	25CNS3303E	CONTAINER SECURITY	E	CTSY	4	1	0	2	5.5	7	
450	PEC	PE-3	25CNS3303	CONTAINER SECURITY	R	CTSY	3	0	0	2	3.5	5	
451	PEC	PE-3	25CSB3304A	DIGITAL FORENSICS	A	DF	4	1	0	2	5.5	7	
452	PEC	PE-3	25CSB3304E	DIGITAL FORENSICS	E	DF	4	1	0	2	5.5	7	
453	PEC	PE-3	25CSB3304	DIGITAL FORENSICS	R	DF	3	0	0	2	3.5	5	
454	PEC	PE-3	25DEA3303A	BIG DATA TECHNOLOGIES	A	BDT	4	1	0	2	5.5	7	
455	PEC	PE-3	25DEA3303E	BIG DATA TECHNOLOGIES	E	BDT	4	1	0	2	5.5	7	
456	PEC	PE-3	25DEA3303	BIG DATA TECHNOLOGIES	R	BDT	3	0	0	2	3.5	5	
457	PEC	PE-3	25DSB3303A	BIG DATA ANALYTICS	A	BDA	4	1	0	2	5.5	7	

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458	PEC	PE-3	25DSB3303E	BIG DATA ANALYTICS	E	BDA	4	1	0	2	5.5	7	
459	PEC	PE-3	25DSB3303	BIG DATA ANALYTICS	R	BDA	3	0	0	2	3.5	5	
460	PEC	PE-3	25SMD3303A	CONTINUOUS DELIVERY & DEVOPS	A	CDD	4	1	0	2	5.5	7	
461	PEC	PE-3	25SMD3303E	CONTINUOUS DELIVERY & DEVOPS	E	CDD	4	1	0	2	5.5	7	
462	PEC	PE-3	25SMD3303	CONTINUOUS DELIVERY & DEVOPS	R	CDD	3	0	0	2	3.5	5	
463	PEC	PE-3	25DLA3304A	MULTI AGENT SYSTEMS	A	MAS	4	1	0	2	5.5	7	
464	PEC	PE-3	25DLA3304E	MULTI AGENT SYSTEMS	E	MAS	4	1	0	2	5.5	7	
465	PEC	PE-3	25DLA3304	MULTI AGENT SYSTEMS	R	MAS	3	0	0	2	3.5	5	
466	PEC	PE-3	25HSS3303A	HARDWARE SECURITY MECHANISMS	A	HSM	4	1	0	2	5.5	7	
467	PEC	PE-3	25HSS3303E	HARDWARE SECURITY MECHANISMS	E	HSM	4	1	0	2	5.5	7	
468	PEC	PE-3	25HSS3303	HARDWARE SECURITY MECHANISMS	R	HSM	3	0	0	2	3.5	5	
469	PEC	PE-3	25SDM3304A	SOCIAL MEDIA MARKETING ANALYTICS	A	SMMA	4	1	0	2	5.5	7	
470	PEC	PE-3	25SDM3304E	SOCIAL MEDIA MARKETING ANALYTICS	E	SMMA	4	1	0	2	5.5	7	
471	PEC	PE-3	25SDM3304	SOCIAL MEDIA MARKETING ANALYTICS	R	SMMA	3	0	0	2	3.5	5	
472	PEC	PE-3	25DLA3303A	SMART CONTRACTS & WEB3 APPLICATION ENGINEERING	A	SCW3	4	1	0	2	5.5	7	
473	PEC	PE-3	25DLA3303E	SMART CONTRACTS & WEB3 APPLICATION ENGINEERING	E	SCW3	4	1	0	2	5.5	7	
474	PEC	PE-3	25DLA3303	SMART CONTRACTS & WEB3 APPLICATION ENGINEERING	R	SCW3	3	0	0	2	3.5	5	
475	PEC	PE-3	25IOT3305A	DEEP LEARNING	A	DL	4	1	0	2	5.5	7	
476	PEC	PE-3	25IOT3305E	DEEP LEARNING	E	DL	4	1	0	2	5.5	7	
477	PEC	PE-3	25IOT3305	DEEP LEARNING	R	DL	3	0	0	2	3.5	5	
478	PEC	PE-3	25HDA3305A	COMPUTATIONAL NEUROSCIENCE	A	CNSE	4	1	0	2	5.5	7	
479	PEC	PE-3	25HDA3305E	COMPUTATIONAL NEUROSCIENCE	E	CNSE	4	1	0	2	5.5	7	
480	PEC	PE-3	25HDA3305	COMPUTATIONAL NEUROSCIENCE	R	CNSE	3	0	0	2	3.5	5	
481	PEC	PE-3	25AAS3304A	APPLIED DEEP LEARNING FOR AUTONOMOUS SYSTEMS	A	ADLAS	4	1	0	2	5.5	7	
482	PEC	PE-3	25AAS3304E	APPLIED DEEP LEARNING FOR AUTONOMOUS SYSTEMS	E	ADLAS	4	1	0	2	5.5	7	
483	PEC	PE-3	25AAS3304	APPLIED DEEP LEARNING FOR AUTONOMOUS SYSTEMS	R	ADLAS	3	0	0	2	3.5	5	
484	PEC	PE-3	25AAS3309A	AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS	A	AAAV	4	1	0	2	5.5	7	

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485	PEC	PE-3	25AAS3309E	AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS	E	AAAV	4	1	0	2	5.5	7	
486	PEC	PE-3	25AAS3309	AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS	R	AAAV	3	0	0	2	3.5	5	
487	PEC	PE-3	25AAS3314A	AI FOR AUTONOMOUS NAVIGATION, CONTROL & EDGE INTELLIGENCE	A	ANCE	4	1	0	2	5.5	7	
488	PEC	PE-3	25AAS3314E	AI FOR AUTONOMOUS NAVIGATION, CONTROL & EDGE INTELLIGENCE	E	ANCE	4	1	0	2	5.5	7	
489	PEC	PE-3	25AAS3314	AI FOR AUTONOMOUS NAVIGATION, CONTROL & EDGE INTELLIGENCE	R	ANCE	3	0	0	2	3.5	5	
490	PEC	PE-3	25IGD3305A	3D GAME PROGRAMMING AND PHYSICS SIMULATION	A	3DPS	4	1	0	2	5.5	7	
491	PEC	PE-3	25IGD3305E	3D GAME PROGRAMMING AND PHYSICS SIMULATION	E	3DPS	4	1	0	2	5.5	7	
492	PEC	PE-3	25IGD3305	3D GAME PROGRAMMING AND PHYSICS SIMULATION	R	3DPS	3	0	0	2	3.5	5	
493	PEC	PE-3	25IGD3306A	PROCEDURAL WORLD BUILDING	A	PWB	4	1	0	2	5.5	7	
494	PEC	PE-3	25IGD3306E	PROCEDURAL WORLD BUILDING	E	PWB	4	1	0	2	5.5	7	
495	PEC	PE-3	25IGD3306	PROCEDURAL WORLD BUILDING	R	PWB	3	0	0	2	3.5	5	
496	PEC	PE-3	25CND3303A	ADVANCED DEVOPS, OBSERVABILITY & RELIABILITY ENGINEERING	A	DORS	4	1	0	2	5.5	7	
497	PEC	PE-3	25CND3303E	ADVANCED DEVOPS, OBSERVABILITY & RELIABILITY ENGINEERING	E	DORS	4	1	0	2	5.5	7	
498	PEC	PE-3	25CND3303	ADVANCED DEVOPS, OBSERVABILITY & RELIABILITY ENGINEERING	R	DORS	3	0	0	2	3.5	5	
499	PEC	PE-3	25GSD3303A	SUSTAINABLE CLOUD AND EDGE COMPUTING	A	SCE	4	1	0	2	5.5	7	
500	PEC	PE-3	25GSD3303E	SUSTAINABLE CLOUD AND EDGE COMPUTING	E	SCE	4	1	0	2	5.5	7	
501	PEC	PE-3	25GSD3303	SUSTAINABLE CLOUD AND EDGE COMPUTING	R	SCE	3	0	0	2	3.5	5	
502	PEC	PE-3	25HCA3306A	IMAGE PROCESSING & SCENE UNDERSTANDING	A	IPSU	4	1	0	2	5.5	7	
503	PEC	PE-3	25HCA3306E	IMAGE PROCESSING & SCENE UNDERSTANDING	E	IPSU	4	1	0	2	5.5	7	
504	PEC	PE-3	25HCA3306	IMAGE PROCESSING & SCENE UNDERSTANDING	R	IPSU	3	0	0	2	3.5	5	
505	PEC	PE-3	25CAC3303A	ADVANCED COMPUTER ARCHITECTURES FOR HARDWARE ACCELERATION	A	ACHA	4	1	0	2	5.5	7	

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506	PEC	PE-3	25CAC3303E	ADVANCED COMPUTER ARCHITECTURES FOR HARDWARE ACCELERATION	E	ACHA	4	1	0	2	5.5	7	
507	PEC	PE-3	25CAC3303	ADVANCED COMPUTER ARCHITECTURES FOR HARDWARE ACCELERATION	R	ACHA	3	0	0	2	3.5	5	
508	PEC	PE-3	25HCA3307A	SPEECH PROCESSING	A	SP	4	1	0	2	5.5	7	
509	PEC	PE-3	25HCA3307E	SPEECH PROCESSING	E	SP	4	1	0	2	5.5	7	
510	PEC	PE-3	25HCA3307	SPEECH PROCESSING	R	SP	3	0	0	2	3.5	5	
511	PEC	PE-3	25HCA3305A	LARGE LANGUAGE MODELS & CONVERSATIONAL AI	A	LLMC	4	1	0	2	5.5	7	
512	PEC	PE-3	25HCA3305E	LARGE LANGUAGE MODELS & CONVERSATIONAL AI	E	LLMC	4	1	0	2	5.5	7	
513	PEC	PE-3	25HCA3305	LARGE LANGUAGE MODELS & CONVERSATIONAL AI	R	LLMC	3	0	0	2	3.5	5	
514	PEC	PE-3	25CTI3305A	BLUE TEAM OPERATIONS & SIEM	A	BTOS	4	1	0	2	5.5	7	
515	PEC	PE-3	25CTI3305E	BLUE TEAM OPERATIONS & SIEM	E	BTOS	4	1	0	2	5.5	7	
516	PEC	PE-3	25CTI3305	BLUE TEAM OPERATIONS & SIEM	R	BTOS	3	0	0	2	3.5	5	
517	PEC	PE-3	25CTI3306A	SOC MANAGEMENT	A	SOC	4	1	0	2	5.5	7	
518	PEC	PE-3	25CTI3306E	SOC MANAGEMENT	E	SOC	4	1	0	2	5.5	7	
519	PEC	PE-3	25CTI3306	SOC MANAGEMENT	R	SOC	3	0	0	2	3.5	5	
520	PEC	PE-3	25CAC3304A	QUANTUM PROGRAMMING FUNDAMENTALS	A	QPF	4	1	0	2	5.5	7	
521	PEC	PE-3	25CAC3304E	QUANTUM PROGRAMMING FUNDAMENTALS	E	QPF	4	1	0	2	5.5	7	
522	PEC	PE-3	25CAC3304	QUANTUM PROGRAMMING FUNDAMENTALS	R	QPF	3	0	0	2	3.5	5	
523	PEC	PE-3	25ABT3304A	IMAGE PROCESSING FOR AGRICULTURAL APPLICATIONS	A	IPAA	4	1	0	2	5.5	7	
524	PEC	PE-3	25ABT3304E	IMAGE PROCESSING FOR AGRICULTURAL APPLICATIONS	E	IPAA	4	1	0	2	5.5	7	
525	PEC	PE-3	25ABT3304	IMAGE PROCESSING FOR AGRICULTURAL APPLICATIONS	R	IPAA	3	0	0	2	3.5	5	
526	PEC	PE-3	25WLT3303A	5G NR-WIRELESS TECHNOLOGIES	A	5GWT	4	1	0	2	5.5	7	
527	PEC	PE-3	25WLT3303E	5G NR-WIRELESS TECHNOLOGIES	E	5GWT	4	1	0	2	5.5	7	
528	PEC	PE-3	25WLT3303	5G NR-WIRELESS TECHNOLOGIES	R	5GWT	3	0	0	2	3.5	5	
529	PEC	PE-3	25AEA3304A	ALTERNATE DRIVES, TRACTION AND CONTROLS	A	ADTC	4	1	0	2	5.5	7	
530	PEC	PE-3	25AEA3304E	ALTERNATE DRIVES, TRACTION AND CONTROLS	E	ADTC	4	1	0	2	5.5	7	

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531	PEC	PE-3	25AEA3304	ALTERNATE DRIVES, TRACTION AND CONTROLS	R	ADTC	3	0	0	2	3.5	5	
532	PEC	PE-3	25AEE3304A	THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS	A	TMEES	4	1	0	2	5.5	7	
533	PEC	PE-3	25AEE3304E	THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS	E	TMEES	4	1	0	2	5.5	7	
534	PEC	PE-3	25AEE3304	THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS	R	TMEES	3	0	0	2	3.5	5	
535	PEC	PE-3	25WRE3303A	GROUND IMPROVEMENT TECHNIQUES	A	GIT	4	1	0	2	5.5	7	
536	PEC	PE-3	25WRE3303E	GROUND IMPROVEMENT TECHNIQUES	E	GIT	4	1	0	2	5.5	7	
537	PEC	PE-3	25WRE3303	GROUND IMPROVEMENT TECHNIQUES	R	GIT	3	0	0	2	3.5	5	
538	PEC	PE-3	25BIS3304A	STRUCTURAL BIOLOGY	A	SB	4	1	0	2	5.5	7	
539	PEC	PE-3	25BIS3304E	STRUCTURAL BIOLOGY	E	SB	4	1	0	2	5.5	7	
540	PEC	PE-3	25BIS3304	STRUCTURAL BIOLOGY	R	SB	3	0	0	2	3.5	5	
541	PEC	PE-3	25VLS3303A	VLSI PHYSICAL DESIGN AUTOMATION	A	VPDA	4	1	0	2	5.5	7	
542	PEC	PE-3	25VLS3303E	VLSI PHYSICAL DESIGN AUTOMATION	E	VPDA	4	1	0	2	5.5	7	
543	PEC	PE-3	25VLS3303	VLSI PHYSICAL DESIGN AUTOMATION	R	VPDA	3	0	0	2	3.5	5	
544	PEC	PE-3	25CPS3303A	CYBER PHYSICAL SYSTEMS	A	CPS	4	1	0	2	5.5	7	
545	PEC	PE-3	25CPS3303E	CYBER PHYSICAL SYSTEMS	E	CPS	4	1	0	2	5.5	7	
546	PEC	PE-3	25CPS3303	CYBER PHYSICAL SYSTEMS	R	CPS	3	0	0	2	3.5	5	
547	PEC	PE-3	25SGT3304A	ENERGY MANAGEMENT SYSTEMS AND SCADA	A	EMS&SCADA	4	1	0	2	5.5	7	
548	PEC	PE-3	25SGT3304E	ENERGY MANAGEMENT SYSTEMS AND SCADA	E	EMS&SCADA	4	1	0	2	5.5	7	
549	PEC	PE-3	25SGT3304	ENERGY MANAGEMENT SYSTEMS AND SCADA	R	EMS&SCADA	3	0	0	2	3.5	5	
550	PEC	PE-3	25STE3303A	PRESTRESSED CONCRETE	A	PSC	4	1	0	2	5.5	7	
551	PEC	PE-3	25STE3303E	PRESTRESSED CONCRETE	E	PSC	4	1	0	2	5.5	7	
552	PEC	PE-3	25STE3303	PRESTRESSED CONCRETE	R	PSC	3	0	0	2	3.5	5	
553	PEC	PE-3	25RAN3304A	AUTONOMOUS MOBILE ROBOT SYSTEMS	A	AMRS	4	1	0	2	5.5	7	
554	PEC	PE-3	25RAN3304E	AUTONOMOUS MOBILE ROBOT SYSTEMS	E	AMRS	4	1	0	2	5.5	7	

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555	PEC	PE-3	25RAN3304	AUTONOMOUS MOBILE ROBOT SYSTEMS	R	AMRS	3	0	0	2	3.5	5	
556	PEC	PE-3	25DCM3303A	VOIP AND BROADBAND NETWORKS	A	VOIP	4	1	0	2	5.5	7	
557	PEC	PE-3	25DCM3303E	VOIP AND BROADBAND NETWORKS	E	VOIP	4	1	0	2	5.5	7	
558	PEC	PE-3	25DCM3303	VOIP AND BROADBAND NETWORKS	R	VOIP	3	0	0	2	3.5	5	
559	PEC	PE-3	25EDS3303A	EMBEDDED AND REAL-TIME SYSTEMS	A	ERTS	4	1	0	2	5.5	7	
560	PEC	PE-3	25EDS3303E	EMBEDDED AND REAL-TIME SYSTEMS	E	ERTS	4	1	0	2	5.5	7	
561	PEC	PE-3	25EDS3303	EMBEDDED AND REAL-TIME SYSTEMS	R	ERTS	3	0	0	2	3.5	5	
562	PEC	PE-3	25EME3304A	CHARGING STATIONS FOR ELECTRIC VEHICLES	A	CSEV	4	1	0	2	5.5	7	
563	PEC	PE-3	25EME3304E	CHARGING STATIONS FOR ELECTRIC VEHICLES	E	CSEV	4	1	0	2	5.5	7	
564	PEC	PE-3	25EME3304	CHARGING STATIONS FOR ELECTRIC VEHICLES	R	CSEV	3	0	0	2	3.5	5	
565	PEC	PE-3	25EGD3304A	MODELING, ANALYSIS AND DESIGN OF ROBOTIC SYSTEMS	A	MADRS	4	1	0	2	5.5	7	
566	PEC	PE-3	25EGD3304E	MODELING, ANALYSIS AND DESIGN OF ROBOTIC SYSTEMS	E	MADRS	4	1	0	2	5.5	7	
567	PEC	PE-3	25EGD3304	MODELING, ANALYSIS AND DESIGN OF ROBOTIC SYSTEMS	R	MADRS	3	0	0	2	3.5	5	
568	PEC	PE-3	25GET3304A	GRID INTEGRATION OF RENEWABLE ENERGY SOURCES	A	GIRES	4	1	0	2	5.5	7	
569	PEC	PE-3	25GET3304E	GRID INTEGRATION OF RENEWABLE ENERGY SOURCES	E	GIRES	4	1	0	2	5.5	7	
570	PEC	PE-3	25GET3304	GRID INTEGRATION OF RENEWABLE ENERGY SOURCES	R	GIRES	3	0	0	2	3.5	5	
571	PEC	PE-3	25ILA3304A	INDUSTRIAL DRIVES AND CONTROL	A	ID&C	4	1	0	2	5.5	7	
572	PEC	PE-3	25ILA3304E	INDUSTRIAL DRIVES AND CONTROL	E	ID&C	4	1	0	2	5.5	7	
573	PEC	PE-3	25ILA3304	INDUSTRIAL DRIVES AND CONTROL	R	ID&C	3	0	0	2	3.5	5	
574	PEC	PE-4	25NTO3408	INDUSTRIAL NANOTECHNOLOGY	R	INT	3	0	0	0	3	3	
575	PEC	PE-4	25ILA3405	INDUSTRIAL COMMUNICATION PROTOCOLS AND CYBER SECURITY	R	ICPCS	3	0	0	0	3	3	
576	PEC	PE-4	25ILA3406	DIGITAL MANUFACTURING AND DESIGN	R	DMD	3	0	0	0	3	3	
577	PEC	PE-4	25GET3405	ENERGY MANAGEMENT AND GREEN BUILDING	R	EMGB	3	0	0	0	3	3	
578	PEC	PE-4	25GET3406	HYDROGEN FUEL CELL TECHNOLOGY	R	HFCT	3	0	0	0	3	3	

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579	PEC	PE-4	25EGD3405	SUSTAINABLE DESIGN AND SOCIAL INNOVATION IN ENGINEERING DESIGN	R	SDSIED	3	0	0	0	3	3	
580	PEC	PE-4	25EGD3406	ADVANCED VIBRATIONS	R	AV	3	0	0	0	3	3	
581	PEC	PE-4	25EME3405	INTRODUCTION TO BATTERY-MANAGEMENT SYSTEMS	R	IBMS	3	0	0	0	3	3	
582	PEC	PE-4	25EME3406	BATTERY STATE ESTIMATION ALGORITHMS FOR ELECTRIC VEHICLE	R	BSAEV	3	0	0	0	3	3	
583	PEC	PE-4	25EDS3404	CLOUD ARCHITECTURE IN IOT	R	CAIOT	3	0	0	0	3	3	
584	PEC	PE-4	25DCM3404	5G MOBILE AND IEEE STANDARDS	R	5GMI	3	0	0	0	3	3	
585	PEC	PE-4	25RAN3406	HUMAN MACHINE INTERFACE AND BRAIN MACHINE INTERFACE	R	HMIBMI	3	0	0	0	3	3	
586	PEC	PE-4	25RAN3405	ARTIFICIAL INTELLIGENCE FOR ROBOTICS	R	AIR	3	0	0	0	3	3	
587	PEC	PE-4	25SGT3406	SMART METERS AND SMART CITIES	R	SMSC	3	0	0	0	3	3	
588	PEC	PE-4	25VLS3404	MIXED SIGNAL IC DESIGN	R	MSID	3	0	0	0	3	3	
589	PEC	PE-4	25STE3404	SUSTAINABLE CONSTRUCTION TECHNOLOGY	R	SCT	3	0	0	0	3	3	
590	PEC	PE-4	25CPS3404	FOUNDATIONS OF HYBRID AND EMBEDDED SYSTEMS	R	DVP	3	0	0	0	3	3	
591	PEC	PE-4	25BIS3405	APPLIED BIOINFORMATICS	R	ABI	3	0	0	0	3	3	
592	PEC	PE-4	25BIS3406	NGS SEQUENCING AND DATA ANALYSIS	R	NGSDA	3	0	0	0	3	3	
593	PEC	PE-4	25AEE3406	VEHICLE DYNAMICS	R	VDS	3	0	0	0	3	3	
594	PEC	PE-4	25AEA3406	AUTOMOTIVE ELECTRICAL AND ELECTRONIC SYSTEMS	R	AEES	3	0	0	0	3	3	
595	PEC	PE-4	25AEE3405	SPECIAL PURPOSE VEHICLES	R	SPV	3	0	0	0	3	3	
596	PEC	PE-4	25WRE3404	RIVER ENGINEERING	R	REG	3	0	0	0	3	3	
597	PEC	PE-4	25AEA3405	VEHICLE CONTROL SYSTEMS	R	VCS	3	0	0	0	3	3	
598	PEC	PE-4	25AAS3410	CYBERSECURITY IN AUTONOMOUS VEHICLE	R	CAV	3	0	0	0	3	3	
599	PEC	PE-4	25ABT3405	BIOINSTRUMENTATION	R	BIIS	3	0	0	0	3	3	
600	PEC	PE-4	25ABT3406	DATA ACQUISITION AND COMMUNICATION SYSTEMS FOR AGRICULTURE	R	DACSA	3	0	0	0	3	3	
601	PEC	PE-4	25IOT3406	DATA VISUALIZATION TECHNIQUES	R	DVT	3	0	0	0	3	3	
602	PEC	PE-4	25CAC3405	CLOUD ARCHITECTURES FOR HPC & AI WORKLOADS	R	CHAW	3	0	0	0	3	3	

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603	PEC	PE-4	25CAC3406	QUANTUM ALGORITHMS FOR AI & OPTIMIZATION	R	QAAO	3	0	0	0	3	3	
604	PEC	PE-4	25HDA3407	INTRODUCTION TO GENOMIC TECHNOLOGIES	R	IGT	3	0	0	0	3	3	
605	PEC	PE-4	25GMI3404	GENERATIVE AI, AGENTIC AI & RETRIEVAL AUGMENTED GENERATION	R	GAAR	3	0	0	0	3	3	
606	PEC	PE-4	25CTI3407	CLOUD SECURITY	R	CS	3	0	0	0	3	3	
607	PEC	PE-4	25CTI3408	DEVSECOPS & INFRASTRUCTURE SECURITY	R	DSI	3	0	0	0	3	3	
608	PEC	PE-4	25HCA3408	VISION TRANSFORMERS & GENERATIVE MODELS FOR VISION	R	VTGM	3	0	0	0	3	3	
609	PEC	PE-4	25GSD3404	HARDWARE FOR SUSTAINABLE DIGITAL INFRASTRUCTURE	R	HSDI	3	0	0	0	3	3	
610	PEC	PE-4	25CND3404	CLOUD-NATIVE MLOPS & A1-DRIVEN APPLICATION DEPLOYMENT	R	CNMA	3	0	0	0	3	3	
611	PEC	PE-4	25IGD3407	IMMERSIVE GAME DEVELOPMENT	R	IGD	3	0	0	0	3	3	
612	PEC	PE-4	25IGD3408	SPATIAL COMPUTING FOR INTERACTIVE SYSTEMS	R	SCIS	3	0	0	0	3	3	
613	PEC	PE-4	25AAS3405	EXPERT SYSTEMS	R	ES	3	0	0	0	3	3	
614	PEC	PE-4	25AAS3406	SELF-DRIVING CARS	R	SDC	3	0	0	0	3	3	
615	PEC	PE-4	25AAS3415	REAL-TIME NETWORKS, COMMUNICATION & SECURITY FOR AUTONOMOUS SYSTEMS	R	RTNCSAS	3	0	0	0	3	3	
616	PEC	PE-4	25HDA3406	NGS SEQUENCING AND DATA ANALYSIS	R	NGSDA	3	0	0	0	3	3	
617	PEC	PE-4	25DLA3404	TOKENOMICS, DIGITAL ASSETS & CRYPTO INFRASTRUCTURE	R	TDCI	3	0	0	0	3	3	
618	PEC	PE-4	25HSS3404	SOFTWARE SECURITY PRINCIPLES	R	SSP	3	0	0	0	3	3	
619	PEC	PE-4	25SDM3406	ETHICAL SOCIAL MEDIA	R	ESM	3	0	0	0	3	3	
620	PEC	PE-4	25HSS3405	SECURE CO-DESIGN METHODOLOGIES	R	SCDM	3	0	0	0	3	3	
621	PEC	PE-4	25HSS3406	HARDWARE TROJAN DETECTION AND PREVENTION	R	HTDAP	3	0	0	0	3	3	
622	PEC	PE-4	25DLA3405	BLOCKCHAIN ANALYTICS	R	BCA	3	0	0	0	3	3	
623	PEC	PE-4	25DLA3406	CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY	R	CBT	3	0	0	0	3	3	
624	PEC	PE-4	25SMD3404	SOFTWARE PROJECT MANAGEMENT	R	SPM	3	0	0	0	3	3	
625	PEC	PE-4	25SMD3405	SOFTWARE ARCHITECTURE & DESIGN	R	SAD	3	0	0	0	3	3	
626	PEC	PE-4	25DSB3404	BIG DATA OPTIMIZATION	R	BDO	3	0	0	0	3	3	

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627	PEC	PE-4	25DSB3407	DATA ANALYTICS ON CLOUD	R	DAC	3	0	0	0	3	3	
628	PEC	PE-4	25DSB3408	DIGITAL MEDIA ANALYTICS	R	DMA	3	0	0	0	3	3	
629	PEC	PE-4	25ADE3404	EDGE AI AND 5G	R	EAI5G	3	0	0	0	3	3	
630	PEC	PE-4	25ADE3405	EDGE AI SECURITY AND PROTECTION	R	EAI5P	3	0	0	0	3	3	
631	PEC	PE-4	25DEA3404	DATA WAREHOUSING AND BUSINESS INTELLIGENCE	R	DWBI	3	0	0	0	3	3	
632	PEC	PE-4	25CSB3405	DATABASE SYSTEM AND SECURITY	R	DSS	3	0	0	0	3	3	
633	PEC	PE-4	25CSB3406	PROGRAMMING FOR SMART CONTRACTS	R	PSC	3	0	0	0	3	3	
634	PEC	PE-4	25CSB3407	CLOUD SECURITY	R	CS	3	0	0	0	3	3	
635	PEC	PE-4	25CNS3404	MICROSERVICES SECURITY	R	MSS	3	0	0	0	3	3	
636	PEC	PE-4	25CNS3405	INFRASTRUCTURE AS CODE SECURITY	R	ISACS	3	0	0	0	3	3	
637	PEC	PE-4	25CNS3406	IDENTITY AND ACCESS MANAGEMENT IN CLOUD NATIVE ENVIRONMENTS	R	IAMCNE	3	0	0	0	3	3	
638	PEC	PE-4	25CNS3407	NETWORK SECURITY IN CLOUD NATIVE ARCHITECTURES	R	NSCNA	3	0	0	0	3	3	
639	PEC	PE-4	25CID3405	RELIABLE CLOUD INFRASTRUCTURE: DESIGN AND PROCESS	R	RID	3	0	0	0	3	3	
640	PEC	PE-4	25CID3406	HYBRID CLOUD INTEGRATION AND MANAGEMENT	R	HCIM	3	0	0	0	3	3	
641	PEC	PE-4	25BEW3404	BLOCKCHAIN PLATFORMS AND PROTOCOLS	R	BCPFP	3	0	0	0	3	3	
642	PEC	PE-4	25BEW3405	BLOCKCHAIN SECURITY	R	BCF	3	0	0	0	3	3	
643	PEC	PE-4	25BEW3406	ORACLES AND DATA FEEDS	R	ODF	3	0	0	0	3	3	
644	PEC	PE-4	25CEC3406	ADVANCED COMPUTER ARCHITECTURE	R	ACA	3	0	0	0	3	3	
645	PEC	PE-4	25CEC3407	PARALLEL ALGORITHMS	R	PA	3	0	0	0	3	3	
646	PEC	PE-4	25CEC3408	CLOUD SECURITY	R	CS	3	0	0	0	3	3	
647	PEC	PE-4	25CEC3409	ARCHITECTING CLOUD SOLUTIONS*	R	ACS	3	0	0	0	3	3	
648	PEC	PE-4	25CPD3406	META REACT NATIVE SPECIALIZATION	R	MRNS	3	0	0	0	3	3	
649	PEC	PE-4	25CPD3405	UX DESIGN	R	UXD	3	0	0	0	3	3	
650	PEC	PE-4	25CSC3405	CLOUD-BASED GRID COMPUTING	R	CGC	3	0	0	0	3	3	
651	PEC	PE-4	25CSC3406	CLOUD COMPUTING FOR SCIENTIFIC DISCOVERY	R	CCFSD	3	0	0	0	3	3	

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652	PEC	PE-4	25CNE3405	SERVERLESS COMPUTING AND EVENT-DRIVEN ARCHITECTURES	R	SCEDA	3	0	0	0	3	3	
653	PEC	PE-4	25CNE3406	CLOUD NATIVE SOFTWARE ARCHITECTURES	R	CNSA	3	0	0	0	3	3	
654	PEC	PE-4	25ACI3404	HEURISTIC ALGORITHMS	R	HA	3	0	0	0	3	3	
655	PEC	PE-4	25ACI3405	SWARM INTELLIGENCE APPROACHES	R	SIA	3	0	0	0	3	3	
656	PEC	PE-4	25DLS3404	REAL-TIME ANALYTICS & COMPLEX EVENT PROCESSING	R	RTAC	3	0	0	0	3	3	
657	PEC	PE-4	25DSE3406	AI-DRIVEN DATA ENGINEERING	R	AIDE	3	0	0	0	3	3	
658	PEC	PE-4	25DSE3407	DATA GOVERNANCE ON CLOUD	R	DGC	3	0	0	0	3	3	
659	PEC	PE-4	25AEC3404	SERVERLESS & COST-OPTIMIZED AI AT THE EDGE	R	SCAE	3	0	0	0	3	3	
660	PEC	PE-4	25AVI3404	VISUAL RECOGNITION AND SCENE UNDERSTANDING	R	VRASU	3	0	0	0	3	3	
661	PEC	PE-4	25AVI3405	VISUAL RECOGNITION AND SCENE UNDERSTANDING	R	VRSU	3	0	0	0	3	3	
662	PEC	PE-4	25ALT3404	TEXT UNDERSTANDING	R	TUS	3	0	0	0	3	3	
663	PEC	PE-4	25ALT3405	NATURAL LANGUAGE PROCESSING	R	NLP	3	0	0	0	3	3	
664	PEC	PE-4	25ALT3506	LANGUAGE UNDERSTANDING WITH PRE-TRAINED MODELS	R	LUWPTM	3	0	0	0	3	3	
665	PEC	PE-4	25SCI3404	SPATIAL AND SOCIAL IMPLICATIONS OF IMMERSIVE TECHNOLOGIES	R	SSIIT	3	0	0	0	3	3	
666	PEC	PE-4	25SCI3405	SPATIAL AUDIO DESIGN FOR GAMES	R	SADG	3	0	0	0	3	3	
667	PEC	PE-4	25GDU3404	COMPUTER GRAPHICS	R	CG	3	0	0	0	3	3	
668	PEC	PE-4	25GDU3405	3D MODELLING & ANIMATION	R	3DMA	3	0	0	0	3	3	
669	PEC	PE-4	25QTS3404	QUANTUM MATERIALS & TOPOLOGICAL MATTER	R	QMTM	3	0	0	0	3	3	
670	PEC	PE-4	25QCS3404	QUANTUM RADAR	R	QR	3	0	0	0	3	3	
671	PEC	PE-4	25RFM3404	RF AND MILLIMETER-WAVE CIRCUIT DESIGN	R	RMWCD	3	0	0	0	3	3	
672	PEC	PE-4	25GAM3404	DESIGN OF LARGE LANGUAGE MODELS	R	DLLM	3	0	0	0	3	3	
673	PEC	PE-4	25BMI3404	NANOTECHNOLOGY AND NANOSENSORS	R	NTN	3	0	0	0	3	3	
674	PEC	PE-4	25BEW3413	DECENTRALIZED FINANCE (DEFI) SYSTEMS ENGINEERING	R	DFSE	3	0	0	0	3	3	
675	PEC	PE-4	25BEW3414	POST-QUANTUM CRYPTOGRAPHY FOR BLOCKCHAIN	R	PQCB	3	0	0	0	3	3	
676	PEC	PE-4	25SDM3405	DIGITAL MEDIA ANALYTICS	R	DMA	3	0	0	0	3	3	

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677	PEC	PE-4	25IOT3407	APPLIED MACHINE LEARNING FOR AGRICULTURE	R	AMLA	3	0	0	0	3	3	
678	PEC	PE-4	25IBT3406	FOOD TECHNOLOGY	R	FT	3	0	0	0	3	3	
679	PEC	PE-4	25SGT3405	SMART GRID COMMUNICATION AND CYBERSECURITY	R	SGCCS	3	0	0	0	3	3	
680	PEC	PE-4	25NTO3407	COMPUTATIONAL DATA SCIENCE FOR NANOTECHNOLOGY	R	CDN	3	0	0	0	3	3	
681	PEC	PE-4	25IBT3405	BIOPROCESS VALIDATION AND CGMP	R	BVCGMP	3	0	2	0	4	5	
682	PEC	PE-4	25SMF3405	DIGITAL MANUFACTURING	R	DM	3	0	0	0	3	3	
683	PEC	PE-4	25SMF3406	PRECISION INNOVATION & ENTREPRENEURSHIP	R	PIE	3	0	0	0	3	3	
684	PEC	PE-4	25MBT3406	NEUROBIOLOGY	R	NB	3	0	0	0	3	3	
685	PEC	PE-4	25MBT3405	CANCER BIOLOGY	R	CB	3	0	0	0	3	3	
686	PEC	PE-5	25SMF3507	SUSTAINABLE MANUFACTURING	R	SM	3	0	0	0	3	3	
687	PEC	PE-5	25SMF3508	MACHINE TO MACHINE COMMUNICATION	R	MMC	3	0	0	0	3	3	
688	PEC	PE-5	25IBT3507	MICROBIAL TECHNOLOGY	R	MBT	3	0	0	0	3	3	
689	PEC	PE-5	25IBT3508	METABOLIC ENGINEERING	R	MBE	3	0	0	0	3	3	
690	PEC	PE-5	25MBT3508	TISSUE ENGINEERING	R	NBT	3	0	0	0	3	3	
691	PEC	PE-5	25MBT3507	BIOELECTRONICS AND BIOSENSORS	R	BB	3	0	0	0	3	3	
692	PEC	PE-5	25SDM3507	INTELLIGENT SOCIAL MEDIA MONITORING SYSTEMS	R	ISMMS	3	0	0	0	3	3	
693	PEC	PE-5	25BEW3515	DECENTRALIZED STORAGE, IDENTITY & MIDDLEWARE SYSTEMS	R	DSIM	3	0	0	0	3	3	
694	PEC	PE-5	25BEW3516	QUANTUM ALGORITHMS FOR BLOCKCHAIN DATA ANALYSIS	R	QABA	3	0	0	0	3	3	
695	PEC	PE-5	25GAM3505	AI PRODUCT DEVELOPMENT AND MANAGEMENT	R	APDM	3	0	0	0	3	3	
696	PEC	PE-5	25RFM3505	SATELLITE DESIGN	R	SD	3	0	0	0	3	3	
697	PEC	PE-5	25QCS3506	QUANTUM INFORMATION THEORY	R	QIT	3	0	0	0	3	3	
698	PEC	PE-5	25QCS3505	QUANTUM SATELLITE COMMUNICATIONS	R	QSC	3	0	0	0	3	3	
699	PEC	PE-5	25QTS3505	QUANTUM AI & MACHINE LEARNING	R	QAIML	3	0	0	0	3	3	
700	PEC	PE-5	25GDU3506	PRINCIPLES OF GAME DESIGN	R	PRGD	3	0	0	0	3	3	
701	PEC	PE-5	25GDU3507	BUSINESS OF GAMES & ENTREPRENEURSHIP	R	BGE	3	0	0	0	3	3	
702	PEC	PE-5	25SCI3506	SPATIAL USER INTERFACE DESIGN	R	SUID	3	0	0	0	3	3	

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703	PEC	PE-5	25SCI3507	INTRODUCTION TO SPATIAL COMPUTING	R	ITSC	3	0	0	0	3	3	
704	PEC	PE-5	25ALT3507	LARGE LANGUAGE MODEL FOR SPEECH PROCESSING	R	LLMFSP	3	0	0	0	3	3	
705	PEC	PE-5	25AVI3506	HUMAN COMPUTER INTERACTION	R	HCI	3	0	0	0	3	3	
706	PEC	PE-5	25AVI3507	HUMAN COMPUTER INTERACTION	R	HCI	3	0	0	0	3	3	
707	PEC	PE-5	25AVI3508	OBJECT LOCALIZATION	R	OL	3	0	0	0	3	3	
708	PEC	PE-5	25AEC3505	EDGE AI ORCHESTRATION & LIFECYCLE MANAGEMENT	R	EAOM	3	0	0	0	3	3	
709	PEC	PE-5	25DSE3508	DATA ANALYTICS ON CLOUD	R	DAC	3	0	0	0	3	3	
710	PEC	PE-5	25DSE3509	GRAPH & WEB ANALYTICS	R	GWA	3	0	0	0	3	3	
711	PEC	PE-5	25DLS3505	STREAMING ANALYTICS FOR IOT AND EDGE ENVIRONMENTS	R	SAIE	3	0	0	0	3	3	
712	PEC	PE-5	25ACI3506	DATA MANIPULATION	R	DM	3	0	0	0	3	3	
713	PEC	PE-5	25ACI3507	REINFORCEMENT LEARNING	R	RIL	3	0	0	0	3	3	
714	PEC	PE-5	25ACI3508	EVOLUTIONARY COMPUTATION	R	ECP	3	0	0	0	3	3	
715	PEC	PE-5	25CNE3507	CLOUD NATIVE NETWORKING AND STORAGE SYSTEMS	R	CNNSS	3	0	0	0	3	3	
716	PEC	PE-5	25CNE3508	CLOUD INFRASTRUCTURE AND VIRTUALIZATION	R	CIIV	3	0	0	0	3	3	
717	PEC	PE-5	25CSC3507	CLOUD-BASED SCALABLE COMPUTING AND BIG DATA ANALYTICS	R	CSCBD	3	0	0	0	3	3	
718	PEC	PE-5	25CSC3508	PARALLEL COMPUTING FOR SCIENTISTS USING CLOUD PLATFORMS	R	PCSCP	3	0	0	0	3	3	
719	PEC	PE-5	25CPD3507	ADVANCED MOBILE APPLICATION DEVELOPMENT	R	AMAD	3	0	0	0	3	3	
720	PEC	PE-5	25CPD3508	CROSS PLATFORM USER INTERFACE DESIGN	R	CPED	3	0	0	0	3	3	
721	PEC	PE-5	25CPS3507	EDGE COMPUTING	R	EC	3	0	0	0	3	3	
722	PEC	PE-5	25CEC3510	EDGE COMPUTING	R	EC	3	0	0	0	3	3	
723	PEC	PE-5	25CEC3511	HIGH PERFORMANCE COMPUTING	R	HPC	3	0	0	0	3	3	
724	PEC	PE-5	25CEC3512	DESIGN OF DISTRIBUTED APPLICATIONS ON CLOUD (DDA)	R	DDAC	3	0	0	0	3	3	
725	PEC	PE-5	25CEC3513	CLOUD NETWORKING	R	CN	3	0	0	0	3	3	
726	PEC	PE-5	25BEW3507	BLOCKCHAIN SCALABILITY AND LAYER 2 SOLUTIONS	R	BCSALS	3	0	0	0	3	3	
727	PEC	PE-5	25BEW3508	REGULATORY LANDSCAPE AND COMPLIANCE	R	RLAC	3	0	0	0	3	3	

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728	PEC	PE-5	25BEW3509	FUTURE TRENDS IN BLOCKCHAIN AND WEB3	R	FTBCAW	3	0	0	0	3	3	
729	PEC	PE-5	25CID3507	CLOUD ENGINEERING	R	CE	3	0	0	0	3	3	
730	PEC	PE-5	25CID3508	CLOUD DATA MANAGEMENT AND STORAGE SOLUTIONS	R	CDMSS	3	0	0	0	3	3	
731	PEC	PE-5	25CNS3508	MONITORING AND LOGGING FOR CLOUD NATIVE SECURITY	R	MLCNS	3	0	0	0	3	3	
732	PEC	PE-5	25CNS3509	COMPLIANCE AND GOVERNANCE IN CLOUD NATIVE ENVIRONMENTS	R	CGCNE	3	0	0	0	3	3	
733	PEC	PE-5	25CNS3510	SERVERLESS SECURITY	R	SLSY	3	0	0	0	3	3	
734	PEC	PE-5	25CNS3512	FUTURE TRENDS IN CLOUD NATIVE SECURITY	R	FTCNS	3	0	0	0	3	3	
735	PEC	PE-5	25CSB3508	SECURE SOFTWARE ENGINEERING	R	SSE	3	0	0	0	3	3	
736	PEC	PE-5	25CSB3509	WEB SECURITY	R	WS	3	0	0	0	3	3	
737	PEC	PE-5	25CSB3510	SECURITY GOVERNANCE & MANAGEMENT	R	SGM	3	0	0	0	3	3	
738	PEC	PE-5	25DEA3505	MACHINE LEARNING ENGINEERING FOR BIG DATA	R	MLEBD	3	0	0	0	3	3	
739	PEC	PE-5	25ADE3506	EDGE AI DEVELOPMENT FRAMEWORKS AND TOOLS	R	EAIDFT	3	0	0	0	3	3	
740	PEC	PE-5	25ADE3507	EDGE AI ANALYTICS AND DATA MANAGEMENT	R	EAIADM	3	0	0	0	3	3	
741	PEC	PE-5	25ADE3508	EDGE AI AND SUSTAINABILITY	R	EAIAS	3	0	0	0	3	3	
742	PEC	PE-5	25SMD3507	CROSS-PLATFORM USER INTERFACE DESIGN	R	CPUIF	3	0	0	0	3	3	
743	PEC	PE-5	25DSB3509	ADVANCED DATABASES	R	AD	3	0	0	0	3	3	
744	PEC	PE-5	25DSB3510	BUSINESS ANALYTICS	R	BA	3	0	0	0	3	3	
745	PEC	PE-5	25SMD3506	SOFTWARE RELIABILITY	R	SR	3	0	0	0	3	3	
746	PEC	PE-5	25DSB3511	GRAPH & WEB ANALYTICS	R	GWA	3	0	0	0	3	3	
747	PEC	PE-5	25DSB3512	DATA GOVERNANCE ON CLOUD	R	DGC	3	0	0	0	3	3	
748	PEC	PE-5	25DLA3508	PERMISSIONED DISTRIBUTED LEDGER	R	PDL	3	0	0	0	3	3	
749	PEC	PE-5	25DLA3507	DISTRIBUTED LEDGER ARCHITECTURE FOR AUTOMATION	R	DLAA	3	0	0	0	3	3	
750	PEC	PE-5	25HSS3507	SIDE-CHANNEL ATTACKS AND COUNTER MEASURES	R	SCACM	3	0	0	0	3	3	
751	PEC	PE-5	25HSS3508	FORMAL METHODS FOR HARDWARE-SOFTWARE SECURITY	R	FMHSS	3	0	0	0	3	3	
752	PEC	PE-5	25HSS3509	TRUSTED PLATFORM MODULES AND SECURE ELEMENTS	R	TPMASE	3	0	0	0	3	3	

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753	PEC	PE-5	25SDM3508	SEARCH ENGINE OPTIMIZATION	R	SEO	3	0	0	0	3	3	
754	PEC	PE-5	25DLA3505	PRIVACY, COMPLIANCE & DECENTRALIZED SECURITY ENGINEERING	R	PCDS	3	0	0	0	3	3	
755	PEC	PE-5	25HSS3511	HARDWARE-SOFTWARE CO-DESIGN	R	HSCCS	3	0	0	0	3	3	
756	PEC	PE-5	25HSS3512	FUTURE TRENDS IN HARDWARE-SOFTWARE CO-DESIGN FOR SECURITY	R	FTHSCS	3	0	0	0	3	3	
757	PEC	PE-5	25IOT3508	BIG DATA ANALYTICS	R	BDA	3	0	0	0	3	3	
758	PEC	PE-5	25HDA3511	EPI GENETIC CONTROL FOR GENE EXPRESSION	R	ECBI	3	0	0	0	3	3	
759	PEC	PE-5	25HDA3510	GENOMIC DATASCIENCE AND CLUSTERING	R	GDSC	3	0	0	0	3	3	
760	PEC	PE-5	25AAS3507	LOCALIZATION & PROGRAMMING REAL-TIME AUTONOMOUS SYSTEMS	R	LPRAS	3	0	0	0	3	3	
761	PEC	PE-5	25AAS3508	REINFORCEMENT LEARNING FOR AUTONOMOUS SYSTEM	R	RLA	3	0	0	0	3	3	
762	PEC	PE-5	25AAS3511	AI DRIVEN ECU DESIGN FOR AUTONOMOUS VEHICLES	R	AEDATT	3	0	0	0	3	3	
763	PEC	PE-5	25AAS3516	CYBER-PHYSICAL SECURITY IN AUTONOMOUS PLATFORMS	R	CPSAP	3	0	0	0	3	3	
764	PEC	PE-5	25IGD3509	GAME AI AND AUTONOMOUS AGENTS	R	GAIA	3	0	0	0	3	3	
765	PEC	PE-5	25IGD3510	GENERATIVE AI IN GAME DESIGN	R	GAID	3	0	0	0	3	3	
766	PEC	PE-5	25CND3505	HIGH-PERFORMANCE & SECURE CLOUD-NATIVE SYSTEMS	R	HPCS	3	0	0	0	3	3	
767	PEC	PE-5	25GSD3505	SMART INFRASTRUCTURE FOR GREEN DATA CENTERS	R	SIGD	3	0	0	0	3	3	
768	PEC	PE-5	25CTI3509	QUANTUM CRYPTOGRAPHY & POST-QUANTUM SECURITY	R	QCPS	3	0	0	0	3	3	
769	PEC	PE-5	25CTI3510	APPLIED CRYPTOGRAPHY FOR CYBERSECURITY	R	ACC	3	0	0	0	3	3	
770	PEC	PE-5	25GMI3505	MULTI-MODAL INTELLIGENCE	R	MMI	3	0	0	0	3	3	
771	PEC	PE-5	25HDA3509	MOLECULAR MODELLING AND DRUG DESIGN	R	MMOD	3	0	0	0	3	3	
772	PEC	PE-5	25HCA3509	AI ETHICS, FAIRNESS & RESPONSIBLE DEPLOYMENT	R	AIFD	3	0	0	0	3	3	
773	PEC	PE-5	25HCA3510	HUMAN-AI INTERACTION & USER-CENTERED DESIGN	R	HAI	3	0	0	0	3	3	
774	PEC	PE-5	25CAC3507	MLOPS & SCIENTIFIC WORKFLOW AUTOMATION IN CLOUD	R	MSWC	3	0	0	0	3	3	
775	PEC	PE-5	25CAC3508	HYBRID QUANTUM-CLASSICAL CLOUD SYSTEMS	R	HQCC	3	0	0	0	3	3	

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776	PEC	PE-5	25ABT3507	MICROFLUIDICS FOR AGRICULTURAL APPLICATIONS	R	MAP	3	0	0	0	3	3	
777	PEC	PE-5	25ABT3508	BIOINFORMATICS FOR AGRICULTURE	R	BIA	3	0	0	0	3	3	
778	PEC	PE-5	25WLT3505	MACHINE LEARNING FOR WIRELESS COMMUNICATION	R	MLWC	3	0	0	0	3	3	
779	PEC	PE-5	25WLT3404	OPTICAL WIRELESS COMMUNICATIONS	R	OWC	3	0	0	0	3	3	
780	PEC	PE-5	25AEE3507	AUTONOMOUS VEHICLES	R	AVS	3	0	0	0	3	3	
781	PEC	PE-5	25AEA3507	SOFT COMPUTING TECHNIQUES FOR AUTOMOTIVE APPLICATIONS	R	SCTAA	3	0	0	0	3	3	
782	PEC	PE-5	25AEA3508	AUTOMOTIVE NETWORKING AND PROTOCOLS	R	ANP	3	0	0	0	3	3	
783	PEC	PE-5	25WRE3505	ENVIRONMENTAL IMPACT ASSESSMENT AND LIFE CYCLE ANALYSIS	R	EIALCA	3	0	0	0	3	3	
784	PEC	PE-5	25VLS3505	SYSTEM-ON-CHIP	R	SOC	3	0	0	0	3	3	
785	PEC	PE-5	25AEE3508	ALTERNATE ENERGY SOURCES FOR AUTOMOBILES	R	AESA	3	0	0	0	3	3	
786	PEC	PE-5	25BIS3507	SYSTEMS BIOLOGY	R	SSB	3	0	0	0	3	3	
787	PEC	PE-5	25BIS3508	DATA BASE MANAGEMENT SYSTEM FOR BIOLOGIST	R	DBMS	3	0	0	0	3	3	
788	PEC	PE-5	25BMI3505	BIOSENSING AND BIOELECTRONICS	R	BSBE	3	0	0	0	3	3	
789	PEC	PE-5	25STE3505	CONSTRUCTION PLANNING AND SCHEDULING	R	CPS	3	0	0	0	3	3	
790	PEC	PE-5	25CPS3505	CLOUD COMPUTING FOR IOT ENGINEERS	R	CCIOTE	3	0	0	0	3	3	
791	PEC	PE-5	25CPS3506	WIRELESS SENSOR NETWORKS	R	WSN	3	0	0	0	3	3	
792	PEC	PE-5	25SGT3508	SMART GRID PROTECTION	R	SGP	3	0	0	0	3	3	
793	PEC	PE-5	25SGT3507	INTERNET OF THINGS AND SMART GRID ANALYTICS	R	IOT&SGA	3	0	0	0	3	3	
794	PEC	PE-5	25RAN3507	COMPUTER VISION AND APPLICATIONS	R	CVA	3	0	0	0	3	3	
795	PEC	PE-5	25DCM3505	IP MULTIMEDIA SUB-SYSTEM AND EMERGING TECHNOLOGIES	R	IMSET	3	0	0	0	3	3	
796	PEC	PE-5	25EDS3505	EDGE COMPUTING AND DATA ANALYTICS IN IOT	R	ECDAI	3	0	0	0	3	3	
797	PEC	PE-5	25EME3507	AI AND IOT FOR ELECTRIC VEHICLE	R	AIEV	3	0	0	0	3	3	
798	PEC	PE-5	25EME3508	EV SYSTEM AND WIRING DESIGN	R	ESWS	3	0	0	0	3	3	
799	PEC	PE-5	25EGD3507	MECHANICS OF COMPOSITE MATERIALS	R	MOCM	3	0	0	0	3	3	

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800	PEC	PE-5	25EGD3508	HYBRID AND ELECTRIC VEHICLE DESIGN	R	HEVD	3	0	0	0	3	3	
801	PEC	PE-5	25GET3507	AI AND IOT FOR GREEN ENERGY INTEGRATION	R	AIGEI	3	0	0	0	3	3	
802	PEC	PE-5	25GET3508	POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS	R	PERES	3	0	0	0	3	3	
803	PEC	PE-5	25NTO3509	BIOSENSING AND BIOELECTRONICS	R	BAB	3	0	0	0	3	3	
804	PEC	PE-5	25ILA3507	SMART SENSORS AND SENSOR NETWORKING	R	SSSN	3	0	0	0	3	3	
805	PEC	PE-5	25ILA3508	PLC PROGRAMMING AND CONTROL	R	PLCPC	3	0	0	0	3	3	
806	PEC	PE-5	25NTO3510	MICRO/NANO FLUIDIC SYSTEMS FOR SENSORS	R	MFS	3	0	0	0	3	3	
807	PRI	PRI-CORE	25IE4048	ENGINEERING PROJECT	R	EPJ	0	0	8	16	8	12	
808	PRI	PRI-CORE	25IE4054	ENGINEERING CAPSTONE PROJECT - 2	R	ECP-2	0	0	8	16	8	12	
809	PRI	PRI-CORE	25IE4051	INTERNSHIP-1	R	INT-1	0	0	8	16	8	12	
810	PRI	PRI-CORE	25IE4052	INTERNSHIP-2	R	INT-2	0	0	8	16	8	12	
811	PRI	PRI-CORE	25IE4042	INTERNSHIP	R	INT	0	0	8	16	8	12	
812	PRI	PRI-CORE	25IE4055	INNOVATION PROJECT-1	R	IP-1	0	0	8	16	8	12	
813	PRI	PRI-CORE	25IE4056	INNOVATION PROJECT-2	R	IP-2	0	0	8	16	8	12	
814	PRI	PRI-CORE	25IE4057	RESEARCH PROJECT-1	R	RP-1	0	0	8	16	8	12	
815	PRI	PRI-CORE	25IE4058	RESEARCH PROJECT-2	R	RP-2	0	0	8	16	8	12	
816	PRI	PRI-CORE	25IE3041	TECHNICAL INTERNSHIP	R	TIP	0	0	0	4	0	4	
817	PRI	PRI-CORE	25IE2040	SOCIAL INTERNSHIP	R	SIP	0	0	0	4	0	4	
818	PRI	PRI-CORE	25IE4053	ENGINEERING CAPSTONE PROJECT - 1	R	ECP-1	0	0	8	16	8	12	
819	OEC	OE-1	OEGN1001	NATIONAL CADET CORPS - 1	R	NCC-1	2	0	4	0	4	6	
820	OEC	OE-1	OEGN1002	NATIONAL SERVICE SCHEME - 1	R	NSS-1	2	0	4	0	4	6	
821	OEC	OE-1	OEME1001	MECHATRONICS	R	MT	3	0	0	0	3	3	
822	OEC	OE-1	OEME1002	OPERATIONS RESEARCH	R	OR	3	0	0	0	3	3	
823	OEC	OE-1	OEME1003	INDUSTRIAL AUTOMATION AND CONTROL	R	IAC	3	0	0	0	3	3	
824	OEC	OE-1	OEBA1001	INTERNATIONAL RELATIONS	R	IR	3	0	0	0	3	3	
825	OEC	OE-1	OEBB1001	FINANCE FOR ENGINEERS	R	FE	3	0	0	0	3	3	
826	OEC	OE-1	OEBT1001	IPR AND PATENT LAWS	R	IPRPL	3	0	0	0	3	3	

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827	OEC	OE-1	OEBT1002	ENVIRONMENTAL BIOTECHNOLOGY	R	EB	3	0	0	0	3	3	
828	OEC	OE-1	OEBB1002M	FINANCIAL MATHEMATICS & RISK ANALYTICS	R	FMRA	3	0	2	0	4	5	
829	OEC	OE-1	OECE1001	SOLID AND HAZARDOUS WASTE MANAGEMENT	R	SHWM	3	0	0	0	3	3	
830	OEC	OE-1	OECM1001	ACCOUNTING FOR ENGINEERS	R	AE	3	0	0	0	3	3	
831	OEC	OE-1	OEC51001	FUNDAMENTAL OF DBMS	R	FDBMS	3	0	0	0	3	3	
832	OEC	OE-1	OEC51002	SUSTAINABILITY AND ENVIRONMENTAL AWARENESS IN THE DIGITAL ERA	R	SEADE	3	0	0	0	3	3	
833	OEC	OE-1	OECI1001	FUNDAMENTAL OF SOFTWARE ENGINEERING	R	FSE	3	0	0	0	3	3	
834	OEC	OE-1	OEEC1002	ML FOR ENGINEERING AND SCIENTIFIC APPLICATIONS	R	MLESA	3	0	0	0	3	3	
835	OEC	OE-1	OEEC1003	DATA SCIENCE: DL AND NN	R	DSDLNN	3	0	0	0	3	3	
836	OEC	OE-1	OEEC1001	IMAGE PROCESSING	R	IP	3	0	0	0	3	3	
837	OEC	OE-1	OEEE1001	RENEWABLE ENERGY RESOURCES	R	RER	3	0	0	0	3	3	
838	OEC	OE-1	OEEE1002M	SELF-DRIVING CARS	R	SDC	3	0	0	0	3	3	
839	OEC	OE-1	OEFA1001	ART & IDEAS	R	AI	3	0	0	0	3	3	
840	OEC	OE-1	OEAG1001	AGRICULTURE CROP PRODUCTION	R	ACP	3	0	0	0	3	3	
841	OEC	OE-1	OEAD1001	FUNDAMENTALS OF BIG DATA	R	FBD	3	0	0	0	3	3	
842	OEC	OE-1	OEAR1001	ARCHITECTURAL JOURNALISM	R	AJ	3	0	0	0	3	3	
843	OEC	OE-1	OEPY1001	ADVANCED ORGANIC CHEMISTRY	R	AOC	3	0	0	0	3	3	
844	OEC	OE-2	OEAG2006	INTRODUCTION TO HORTICULTURE	R	ITH	3	0	0	0	3	3	
845	OEC	OE-2	OEPY2006	REGULATORY AFFAIRS	R	RA	3	0	0	0	3	3	
846	OEC	OE-2	OEAD2006	DATA SCIENCE AND VISUALIZATION	R	DSV	3	0	0	0	3	3	
847	OEC	OE-2	OEFA2006	PHOTOGRAPHY TECHNIQUES	R	PT	3	0	0	0	3	3	
848	OEC	OE-2	OEEE2007M	ENERGY PRODUCTION, DISTRIBUTION & SAFETY	R	EPDS	3	0	0	0	3	3	
849	OEC	OE-2	OEEE2006	ENERGY ESTIMATION & AUDIT	R	EEA	3	0	0	0	3	3	
850	OEC	OE-2	OEME2006	ROBOTICS	R	RT	3	0	0	0	3	3	
851	OEC	OE-2	OEEC2007	SATELLITE SUB-SYSTEMS	R	SSS	3	0	0	0	3	3	
852	OEC	OE-2	OEEC2008	INTRODUCTION TO MEMS	R	IM	3	0	0	0	3	3	
853	OEC	OE-2	OEEC2009	ENERGY HARVESTING TECHNOLOGIES FOR IOT	R	EHTIOT	3	0	0	0	3	3	

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854	OEC	OE-2	OEEC2006	NANO ELECTRONICS	R	NE	3	0	0	0	3	3	
855	OEC	OE-2	OECI2006	FOUNDATIONS OF INFORMATION SYSTEMS	R	FIS	3	0	0	0	3	3	
856	OEC	OE-2	OEC2007	DESIGNING RESILIENT AND SUSTAINABLE URBAN SYSTEMS	R	DRSUS	3	0	0	0	3	3	
857	OEC	OE-2	OEC2006	FUNDAMENTALS OF CYBER SECURITY AND CLOUD COMPUTING	R	FCSCC	3	0	0	0	3	3	
858	OEC	OE-2	OECM2006	COST ACCOUNTING	R	CA	3	0	0	0	3	3	
859	OEC	OE-2	OEBB2007M	FOUNDATIONS OF FINANCIAL SYSTEMS & MARKETS	R	FFSM	3	0	2	0	4	5	
860	OEC	OE-2	OEBT2006	COMPUTER AIDED DRUG DESIGN	R	CADD	3	0	0	0	3	3	
861	OEC	OE-2	OEBT2007	BIOMATERIALS	R	BM	3	0	0	0	3	3	
862	OEC	OE-2	OEBB2006	MARKETING FOR ENGINEERS	R	ME	3	0	0	0	3	3	
863	OEC	OE-2	OEBA2006	INTERNAL SECURITY	R	IS	3	0	0	0	3	3	
864	OEC	OE-2	OEME2007	TOTAL QUALITY MANAGEMENT	R	TQM	3	0	0	0	3	3	
865	OEC	OE-2	OEGN2007	NATIONAL SERVICE SCHEME - 2	R	NSS-2	2	0	4	0	4	6	
866	OEC	OE-2	OEGN2006	NATIONAL CADET CORPS - 2	R	NCC-2	2	0	4	0	4	6	
867	OEC	OE-3	OEGN3011	NATIONAL CADET CORPS - 3	R	NCC-3	2	0	4	0	4	6	
868	OEC	OE-3	OEGN3012	NATIONAL SERVICE SCHEME - 3	R	NSS-3	2	0	4	0	4	6	
869	OEC	OE-3	OEME3011	HYBRID ELECTRIC VEHICLES	R	HEV	3	0	0	0	3	3	
870	OEC	OE-3	OEME3012	INDUSTRY 4.0	R	I4.0	3	0	0	0	3	3	
871	OEC	OE-3	OEBA3011	INTRODUCTION TO PUBLIC ADMINISTRATION	R	IPA	3	0	0	0	3	3	
872	OEC	OE-3	OEBB3011M	ACCOUNTING, COMPLIANCE & FINANCIAL STATEMENT ANALYSIS	R	ACFSA	3	0	2	0	4	5	
873	OEC	OE-3	OEBT3011	BIOLOGY FOR ENGINEERS	R	BE	3	0	0	0	3	3	
874	OEC	OE-3	OEC3011	FUNDAMENTALS OF INFORMATION TECHNOLOGY	R	FIT	3	0	0	0	3	3	
875	OEC	OE-3	OEC3012	ENVIRONMENTAL IMPACTS OF THE DIGITAL LIFESTYLE	R	EIDL	3	0	0	0	3	3	
876	OEC	OE-3	OECI3011	FUNDAMENTAL OF SOFTWARE TESTING METHODOLOGIES	R	FSTM	3	0	0	0	3	3	
877	OEC	OE-3	OEEC3011	WIRELESS AD-HOC NETWORKS	R	WAHN	3	0	0	0	3	3	
878	OEC	OE-3	OEEC3012	SWAM ROBOTICS CONTROL SYSTEMS	R	SRCS	3	0	0	0	3	3	
879	OEC	OE-3	OEEC3013	ELECTRONIC WARFARE, EMI &	R	EWEMIEMC	3	0	0	0	3	3	
880	OEC	OE-3	OEEE3011	ELECTRICAL POWER ENGINEERING	R	EPE	3	0	0	0	3	3	

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881	OEC	OE-3	OEME3013	FUNDAMENTALS OF ROBOTICS	R	FR	3	0	0	0	3	3	
882	OEC	OE-3	OEAD3011	MEDICAL DATA ANALYTICS	R	MDA	3	0	0	0	3	3	
883	VAC	VAC-CERT	25CC3197	TEKLA STRUCTURES AND STRUCTURAL DESIGNER	R	TSSD	0	0	0	2	0	2	
884	VAC	VAC-CERT	25CC3196	REVIT ARCHITECTURE	R	RA	0	0	0	2	0	2	
885	VAC	VAC-CERT	25CC3008	AUTOCAD	R	ACAD	0	0	0	8	0	8	
886	VAC	VAC-CERT	25CC3113	CYPECAD	R	CCAD	0	0	0	2	0	2	
887	AUC	AUC-CORE	25UC0008	INDIAN CONSTITUTION	R	CON	2	0	0	0	0	2	
888	AUC	AUC-CORE	25UC0017	INDIAN ANCIENT KNOWLEDGE SYSTEMS : VEDIC MATHEMATICS	R	IAKS-VM	2	0	0	0	0	2	
889	AUC	AUC-CORE	25UC0032	INSIGHTS TO SUSTAINABLE DEVELOPMENT GOALS	R	SDG	2	0	0	0	0	2	
890	AUC	AUC-CORE	25UC0009	ECOLOGY AND ENVIRONMENT	R	ENE	2	0	0	0	0	2	
891	AUC	AUC-CAREER	CRTCODL2V2	CAMPUS RECRUITMENT: CODING SKILLS TRAINING - DATA STRUCTURES	R	CRT: CST-DS	0	0	0	8	0	8	
892	AUC	AUC-CAREER	CRTCODL3V3	CAMPUS RECRUITMENT: CODING SKILLS TRAINING - ALGORITHMS	R	CRT: CST-	0	0	0	8	0	8	
893	AUC	AUC-CAREER	CRTVQRL1V1	CAMPUS RECRUITMENT: VERBAL APTITUDE TRAINING	R	CRT: VAT	0	0	0	8	0	8	
894	AUC	AUC-CAREER	CRTVQRL2V2	CAMPUS RECRUITMENT: QUANTITATIVE APTITUDE TRAINING	R	CRT: QAT	0	0	0	8	0	8	
895	AUC	AUC-CAREER	CRTVQRL3V3	CAMPUS RECRUITMENT: REASONING APTITUDE TRAINING	R	CRT: RAT	0	0	0	8	0	8	
896	AUC	AUC-CAREER	CRTCSSL1V1	CAMPUS RECRUITMENT: COMMUNICATION SKILLS TRAINING	R	CRT: CST	0	0	0	8	0	8	
897	AUC	AUC-CAREER	CRTCSSL2V2	CAMPUS RECRUITMENT: SOFT SKILLS TRAINING	R	CRT: SST	0	0	0	8	0	8	
898	AUC	AUC-CAREER	CRTTOLL1V1	CAMPUS RECRUITMENT: TOOL BASED TRAINING	R	CRT: TBT	0	0	0	8	0	8	
899	AUC	AUC-CAREER	CRTTOLL2V2	CAMPUS RECRUITMENT: TOOL BASED TRAINING	R	CRT: TBT	0	0	0	8	0	8	
900	AUC	AUC-CAREER	CRTINDL1V1	CAMPUS RECRUITMENT: INDUSTRY-SPECIFIC TRAINING	R	CRT: IST	0	0	0	8	0	8	
901	AUC	AUC-CAREER	CRTINDL2V2	CAMPUS RECRUITMENT: INDUSTRY-SPECIFIC TRAINING	R	CRT: IST	0	0	0	8	0	8	
902	AUC	AUC-CAREER	CADCORL1V1	CAREER ADVANCEMENT: TRAINING IN CORE DOMAIN	R	CAD: TICD	0	0	0	8	0	8	
903	AUC	AUC-CAREER	CADCORL2V2	CAREER ADVANCEMENT: TRAINING IN CORE DOMAIN	R	CAD: TICD	0	0	0	8	0	8	
904	AUC	AUC-CAREER	CADUPSL1V1	CAREER ADVANCEMENT: UPSC-CIVIL SERVICES EXAM TRAINING	R	CAD: UPSC	0	0	0	8	0	8	

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905	AUC	AUC-CAREER	CADUPSL2V2	CAREER ADVANCEMENT: UPSC-CIVIL SERVICES EXAM TRAINING	R	CAD: UPSC	0	0	0	8	0	8	
906	AUC	AUC-CAREER	CADGATL1V1	CAREER ADVANCEMENT: GATE TRAINING	R	CAD: GATE	0	0	0	8	0	8	
907	AUC	AUC-CAREER	CADGREL1V1	CAREER ADVANCEMENT: GRE, TOEFL & IELTS TRAINING	R	CAD: GRE-	0	0	0	8	0	8	
908	AUC	AUC-CAREER	CADCATL1V1	CAREER ADVANCEMENT: CAT, GMAT TRAINING	R	CAD: CAT-	0	0	0	8	0	8	
909	AUC	AUC-CAREER	CADENTL1V1	CAREER ADVANCEMENT: ENTREPRENEURIAL CAREER PATHWAY TRAINING	R	CAD: ECPT	0	0	0	8	0	8	
910	AUC	AUC-CAREER	CRTCODL1V1	CAMPUS RECRUITMENT: LOGIC BUILDING SKILLS TRAINING	R	CRT: LBST	0	0	0	8	0	8	
911	MIN	MIN-CORE	25MRPA01	FUNDAMENTALS OF AGRONOMY	R	FOA	3	0	2	0	4	5	
912	MIN	MIN-CORE	25MRPA02	INTRODUCTORY AGROMETEOROLOGY AND CLIMATE CHANGE	R	IACC	3	0	2	0	4	5	
913	MIN	MIN-CORE	25MRPA03	GEOINFORMATICS AND NANOTECHNOLOGY FOR PRECISION FARMING	R	GNPF	3	0	2	0	4	5	
914	MIN	MIN-CORE	25MRPA04	PROTECTED CULTIVATION AND POST-HARVEST TECHNOLOGIES	R	PCPHT	3	0	2	0	4	5	
915	MIN	MIN-CORE	25MRWS02	SOIL AND WATER CONSERVATION ENGINEERING	R	SWCE	3	0	2	0	4	5	
916	MIN	MIN-CORE	25MRWS04	RAINFED AGRICULTURE AND WATERSHED MANAGEMENT	R	RAWM	3	0	2	0	4	5	
917	MIN	MIN-CORE	25MRID01	INTRODUCTION TO INTERIOR DESIGN	R	IID	3	0	2	0	4	5	
918	MIN	MIN-CORE	25MRID02	SPACE PLANNING AND LAYOUT	R	SPL	3	0	2	0	4	5	
919	MIN	MIN-CORE	25MRID03	INTERIOR MATERIAL AND FINISHES	R	IMF	3	0	2	0	4	5	
920	MIN	MIN-CORE	25MRID04	FURNITURE AND ACCESSORIES DESIGN	R	FAD	3	0	2	0	4	5	
921	MIN	MIN-CORE	25MRAP01M	INTRODUCTION TO ANTHROPOLOGY	M	ITA	4	0	0	0	4	4	
922	MIN	MIN-CORE	25MRAP02M	CULTURAL EVOLUTION	M	CET	4	0	0	0	4	4	
923	MIN	MIN-CORE	25MRAP03M	HUMAN ECOLOGY AND ECOLOGICAL ANTHROPOLOGY	M	HEEA	4	0	0	0	4	4	
924	MIN	MIN-CORE	25MRAP04M	FUNDAMENTALS IN ARCHEOLOGICAL ANTHROPOLOGY CHRONOLOGY	M	FAAC	4	0	0	0	4	4	
925	MIN	MIN-CORE	25MRAR01	FUNDAMENTALS OF MACRO-ECONOMICS	R	FME	4	0	0	0	4	4	
926	MIN	MIN-CORE	25MRAR02	BASICS OF ECONOMETRICS	R	BOE	4	0	0	0	4	4	

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927	MIN	MIN-CORE	25MRAR03	INTERNATIONAL RELATIONS: THEORIES AND CONCEPTS	R	IRTC	4	0	0	0	4	4	
928	MIN	MIN-CORE	25MRAR04	BEHAVIOURAL ECONOMICS AND POLICY	R	BEP	4	0	0	0	4	4	
929	MIN	MIN-CORE	25MRFT01	INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY	R	IFST	3	0	2	0	4	5	
930	MIN	MIN-CORE	25MRFT02	FOOD ANALYSIS AND QUALITY ASSURANCE	R	FAQA	3	0	2	0	4	5	
931	MIN	MIN-CORE	25MRFT03	FOOD SAFETY AND REGULATIONS	R	FSR	3	1	0	0	4	4	
932	MIN	MIN-CORE	25MRFT04	FOOD ENGINEERING	R	FEG	3	0	2	0	4	5	
933	MIN	MIN-CORE	25MRBA01M	ORGANIZATIONAL BEHAVIOUR	M	OBR	4	0	0	0	4	4	
934	MIN	MIN-CORE	25MRBA02M	MARKETING MANAGEMENT	M	MMG	4	0	0	0	4	4	
935	MIN	MIN-CORE	25MRBA03M	FINANCIAL MANAGEMENT	M	FMG	4	0	0	0	4	4	
936	MIN	MIN-CORE	25MRBA04M	HUMAN RESOURCE MANAGEMENT	M	HRM	4	0	0	0	4	4	
937	MIN	MIN-CORE	25MRAC01M	AI FOR BUSINESS STRATEGY	M	ABS	4	0	0	0	4	4	
938	MIN	MIN-CORE	25MRAC02M	AI STRATEGY AND GOVERNANCE	M	ASG	4	0	0	0	4	4	
939	MIN	MIN-CORE	25MRAC03M	SUCCESSFUL AI STRATEGIES : A CEO'S PERSPECTIVES	M	SAI	4	0	0	0	4	4	
940	MIN	MIN-CORE	25MRAC04M	CRAFTING A COMPETITIVE ADVANTAGE	M	CCA	4	0	0	0	4	4	
941	MIN	MIN-CORE	25MRDM01M	FUNDAMENTALS OF DIGITAL MARKETING	M	FDM	4	0	0	0	4	4	
942	MIN	MIN-CORE	25MRDM02M	SOCIAL MEDIA MARKETING	M	SMM	4	0	0	0	4	4	
943	MIN	MIN-CORE	25MRDM03M	SERACH ENGINE OPTIMIZATION	M	SEO	4	0	0	0	4	4	
944	MIN	MIN-CORE	25MRDM04M	ARTIFICIAL INTELLIGENCE IN MARKETING	M	AIM	4	0	0	0	4	4	
945	MIN	MIN-CORE	25MRFA01M	FOUNDATIONS AND APPLICATIONS OF FINANCIAL TECHNOLOGY	M	AFT	4	0	0	0	4	4	
946	MIN	MIN-CORE	25MRFA02M	DECENTRALISED FINANCE: THE FUTURE OF FINANCE	M	DFFF	4	0	0	0	4	4	
947	MIN	MIN-CORE	25MRFA03M	FINTECH INNOVATIONS	M	FIV	4	0	0	0	4	4	
948	MIN	MIN-CORE	25MRFA04M	USING MACHINE LEARNING IN TRADING AND FINANCE	M	ML	4	0	0	0	4	4	
949	MIN	MIN-CORE	25MRIB01M	INTERNATIONAL BUSINESS ESSENTIALS	M	IBET	4	0	0	0	4	4	
950	MIN	MIN-CORE	25MRIB02M	INTERNATIONAL BUSINESS ENVIRONMENT	M	IBEV	4	0	0	0	4	4	
951	MIN	MIN-CORE	25MRIB03M	INTERNATIONAL BUSINESS OPERATIONS	M	IBO	4	0	0	0	4	4	

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952	MIN	MIN-CORE	25MRIB04M	INTERNATIONAL BUSINESS MODELS	M	IBM	4	0	0	0	4	4	
953	MIN	MIN-CORE	25MROB01M	ORGANIZATIONAL BEHAVIOUR	M	POM	4	0	0	0	4	4	
954	MIN	MIN-CORE	25MROB02M	ORGANIZATIONAL BEHAVIOUR MODELS	M	OBM	4	0	0	0	4	4	
955	MIN	MIN-CORE	25MROB03M	ORGANIZATIONAL CHANGE AND DEVELOPMENT	M	OCD	4	0	0	0	4	4	
956	MIN	MIN-CORE	25MROB04M	LEADERSHIP IN ORGANIZATION	M	LIO	4	0	0	0	4	4	
957	MIN	MIN-CORE	25MRIM01	APPLIED DESIGN THINKING	R	ADT	3	0	2	0	4	5	
958	MIN	MIN-CORE	25MRIM02	BUSINESS MODEL INNOVATION	R	BMI	3	0	2	0	4	5	
959	MIN	MIN-CORE	25MRIM03	VENTURE MANAGEMENT	R	VMT	3	0	2	0	4	5	
960	MIN	MIN-CORE	25MRIM04	BUSINESS AND LEADERSHIP	R	BL	3	0	2	0	4	5	
961	MIN	MIN-CORE	25MRTP01	INTRODUCTION TO TECHNOLOGICAL ENTREPRENEURSHIP	R	ITEP	3	0	2	0	4	5	
962	MIN	MIN-CORE	25MRTP02	LEAN STARTUP LAUNCHPAD	R	LSLP	3	0	2	0	4	5	
963	MIN	MIN-CORE	25MRTP03	ENTREPRENEURSHIP AND VENTURE CAPITAL	R	EVC	3	0	2	0	4	5	
964	MIN	MIN-CORE	25MRTP04	BUILDING AND SUSTAINING A SUCCESSFUL ENTERPRISE	R	BSSE	3	0	2	0	4	5	
965	MIN	MIN-CORE	25MRCL01	PRINCIPLES OF COMPANIES ACT AND CORPORATE GOVERNANCE	R	PCACG	3	0	2	0	4	5	
966	MIN	MIN-CORE	25MRCL02	MERGERS, ACQUISITIONS AND PRIVATE EQUITY	R	MAPE	3	0	2	0	4	5	
967	MIN	MIN-CORE	25MRCL03	INSOLVENCY AND BANKRUPTCY LAW	R	IBL	3	0	2	0	4	5	
968	MIN	MIN-CORE	25MRCL04	COMPETITION LAW AND PRACTICE	R	CLP	3	0	2	0	4	5	
969	MIN	MIN-CORE	25MRIP01	EMERGENCE AND DEVELOPMENT OF IPR	R	EDIPR	3	0	2	0	4	5	
970	MIN	MIN-CORE	25MRIP02	LAW OF COPYRIGHT	R	LOCR	3	0	2	0	4	5	
971	MIN	MIN-CORE	25MRIP03	LAW OF PATENTS	R	LOPS	3	0	2	0	4	5	
972	MIN	MIN-CORE	25MRIP04	LAW OF TRADEMARK	R	LOTM	3	0	2	0	4	5	
973	MIN	MIN-CORE	25MRM01	LINEAR ALGEBRA	R	LAG	2	2	0	0	4	4	
974	MIN	MIN-CORE	25MRM02	ADVANCED NUMERICAL ANALYSIS	R	ANA	2	2	0	0	4	4	
975	MIN	MIN-CORE	25MRM03	MATHEMATICAL MODELLING	R	MML	3	0	2	0	4	5	
976	MIN	MIN-CORE	25MRM04	STOCHASTIC PROCESSES & OPTIMIZATION	R	SPO	2	2	0	0	4	4	
977	MIN	MIN-CORE	25MRM05	FUZZY MATHEMATICS AND ITS APPLICATIONS	R	FMAA	2	2	0	0	4	4	

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978	MIN	MIN-CORE	25MRPY01	BASICS OF PHARMACOLOGY	R	BOP	3	0	2	0	4	5	
979	MIN	MIN-CORE	25MRPY02	ADVANCED PHARMACOLOGY - I	R	AP-I	3	0	2	0	4	5	
980	MIN	MIN-CORE	25MRPY03	EXPERIMENTAL PHARMACOLOGY	R	EPC	3	0	2	0	4	5	
981	MIN	MIN-CORE	25MRPY04	ADVANCED PHARMACOLOGY - II	R	AP-II	3	0	2	0	4	5	
982	MIN	MIN-CORE	25MRCA01	INTRODUCTION TO CREATIVE ARTS	R	ICA	0	0	6	4	4	10	
983	MIN	MIN-CORE	25MRCA02	DRAWING AND SKETCHING	R	DAS	0	0	6	4	4	10	
984	MIN	MIN-CORE	25MRCA03	PAINTING	R	PNT	0	0	6	4	4	10	
985	MIN	MIN-CORE	25MRCA04	CREATIVE WRITING	R	CWT	0	0	6	4	4	10	
986	MIN	MIN-CORE	25MRFM01	FILM AESTHETICS	R	FAS	0	0	6	4	4	10	
987	MIN	MIN-CORE	25MRFM02	SCREEN WRITING	R	SWT	0	0	6	4	4	10	
988	MIN	MIN-CORE	25MRFM03	CINEMATIC LIGHTING	R	CML	0	0	6	4	4	10	
989	MIN	MIN-CORE	25MRFM04	SOUND DESIGN	R	SDS	0	0	6	4	4	10	
990	MIN	MIN-CORE	25MRGD01	INTRODUCTION TO GRAPHIC DESIGN	R	IGD	0	0	6	4	4	10	
991	MIN	MIN-CORE	25MRGD02	TYPOGRAPHY	R	TPY	0	0	6	4	4	10	
992	MIN	MIN-CORE	25MRGD03	VISUAL IDENTITY AND BRANDING	R	VIB	0	0	6	4	4	10	
993	MIN	MIN-CORE	25MRGD04	PRINT DESIGN	R	PRDG	0	0	6	4	4	10	
994	MIN	MIN-CORE	25MRAG01	INTRODUCTION TO GAME MATH	R	IGM	0	0	6	4	4	10	
995	MIN	MIN-CORE	25MRAG02	DRAWING BASICS	R	DBS	0	0	6	4	4	10	
996	MIN	MIN-CORE	25MRAG03	GRAPHIC DESIGN	R	GDS	0	0	6	4	4	10	
997	MIN	MIN-CORE	25MRAG04	CONCEPTS OF 3D	R	C3D	0	0	6	4	4	10	
998	MIN	MIN-CORE	25MRWS03	IRRIGATION WATER MANAGEMENT	R	IWM	3	0	2	0	4	5	
999	MIN	MIN-CORE	25MRBN01M	INTRODUCTION TO BUSINESS ANALYTICS	M	IBA	4	0	0	0	4	4	
1000	MIN	MIN-CORE	25MRBN02M	FOUNDATIONS OF BUSINESS INTELLIGENCE	M	FBI	4	0	0	0	4	4	
1001	MIN	MIN-CORE	25MRBN03M	POWER BI FOR DATA SCIENCE AND ANALYTICS	M	PBDSA	4	0	0	0	4	4	
1002	MIN	MIN-CORE	25MRBN04M	BUSINESS ANALYTICS WITH EXCEL: ELEMENTARY TO ADVANCE	M	BAWEEA	4	0	0	0	4	4	
1003	MIN	MIN-CORE	25MRME01M	MICROECONOMICS - THE POWER OF MARKETS	M	MEPM	4	0	0	0	4	4	
1004	MIN	MIN-CORE	25MRME02M	FUNDAMENTALS OF ACCOUNTING	M	FOA	4	0	0	0	4	4	
1005	MIN	MIN-CORE	25MRME03M	FINANCIAL MANAGEMENT	M	FM	4	0	0	0	4	4	

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1006	MIN	MIN-CORE	25MRME04M	FINANCIAL MARKETS	M	FM	4	0	0	0	4	4	
1007	MIN	MIN-CORE	25MRPS01M	INTRODUCTION TO PSYCHOLOGY	M	ITP	4	0	0	0	4	4	
1008	MIN	MIN-CORE	25MRPS02M	PSYCHOLOGY OF EVERYDAY	M	POE	4	0	0	0	4	4	
1009	MIN	MIN-CORE	25MRPS03M	SOCIAL COGNITION	M	SC	4	0	0	0	4	4	
1010	MIN	MIN-CORE	25MRPS04M	THE SCIENCE OF WELL-BEING FOR TEENS	M	TSOWBFT	4	0	0	0	4	4	
1011	MIN	MIN-CORE	25MRCY01	INTRODUCTION TO CYBERLAW AND CYBERSPACE	R	ITCLCS	4	0	0	0	4	4	
1012	MIN	MIN-CORE	25MRCY02	CYBERLAW AND E-COMMERCE IMPLICATIONS	R	CLECI	4	0	0	0	4	4	
1013	MIN	MIN-CORE	25MRCY03	CYBERCRIMES IN INDIA	R	CCII	4	0	0	0	4	4	
1014	MIN	MIN-CORE	25MRCY04	INTRODUCTION TO CYBERSECURITY, INCIDENTAL RESPONSE AND DIGITAL FORENSIC	R	ITCIRDF	4	0	0	0	4	4	
1015	MSDC	MIN-SDP	25MRCY05	CYBER SECURITY: TOOLS, TECHNIQUES & COUNTERMEASURES	M	CSTTCM	4	0	0	0	4	4	
1016	MSDC	MIN-SDP	25MRPS05M	POSITIVE PSYCHOLOGY: RESILIENCE SKILLS	M	PPRS	4	0	0	0	4	4	
1017	MSDC	MIN-SDP	25MRME05M	HOW TO FINANCE YOUR VENTURE	M	HTFYV	4	0	0	0	4	4	
1018	MSDC	MIN-SDP	25MRBN05M	ADVANCED BUSINESS ANALYTICS	M	ABA	4	0	0	0	4	4	
1019	MSDC	MIN-SDP	25MRAG05	DIGITAL ART	R	DTA	0	0	6	4	4	10	
1020	MSDC	MIN-SDP	25MRBA05M	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	M	LSCM	0	0	6	4	4	10	
1021	MSDC	MIN-SDP	25MRGD05	PUBLICATION DESIGN	R	PUDG	0	0	6	4	4	10	
1022	MSDC	MIN-SDP	25MRFM05	DIGITAL PHOTOGRAPHY	R	DPG	0	0	6	4	4	10	
1023	MSDC	MIN-SDP	25MRCA05	SCULPTURE	R	SCP	0	0	6	4	4	10	
1024	MSDC	MIN-SDP	25MRPY05	PRACTICAL PHARMACOLOGY	R	PRI	0	0	6	4	4	10	
1025	MSDC	MIN-SDP	25MRCM06	TRANSFORM TECHNIQUES FOR ENGINEERING	R	TTE	2	0	2	4	4	8	
1026	MSDC	MIN-SDP	25MRCM07	STATISTICS WITH R PROGRAMMING	R	SWRP	2	0	2	4	4	8	
1027	MSDC	MIN-SDP	25MRCM08	MATRIX COMPUTATION	R	MCT	2	0	2	4	4	8	
1028	MSDC	MIN-SDP	25MRIP05	LAW OF DESIGNS, GEOGRAPHICAL INDICATIONS AND PLANT VARIETIES	R	LODGP	0	0	6	4	4	10	
1029	MSDC	MIN-SDP	25MRCL05	COMMERCIAL CONTRACT DRAFTING	R	CCD	0	0	6	4	4	10	
1030	MSDC	MIN-SDP	25MRTP05	TECH INNOVATION PROJECT FOR ENTREPRENEURS	R	TIPFE	0	0	6	4	4	10	
1031	MSDC	MIN-SDP	25MRIM05	PROJECT INNOVATE: STRATEGIES FOR ENTREPRENEURIAL GROWTH	R	PISEG	0	0	6	4	4	10	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1032	MSDC	MIN-SDP	25MROB05M	TEAM BUILDING AND COLLABORATION SKILLS FOR MANAGERS	M	TBCM	0	0	6	4	4	10	
1033	MSDC	MIN-SDP	25MRIB05M	PROFESSIONAL SKILLS FOR INTERNATIONAL BUSINESS	M	PIB	0	0	6	4	4	10	
1034	MSDC	MIN-SDP	25MRFA05M	TRADING ALGORITHMNS	M	TA	0	0	6	4	4	10	
1035	MSDC	MIN-SDP	25MRDM05M	CONTENT MARKETING	M	CM	0	0	6	4	4	10	
1036	MSDC	MIN-SDP	25MRAC05M	AI APPLICATIONS FOR BUSINESS SUCCESS	M	AIA	0	0	6	4	4	10	
1037	MSDC	MIN-SDP	25MRFT05	FOOD PACKAGING TECHNOLOGY	R	FPT	2	0	2	4	4	8	
1038	MSDC	MIN-SDP	25MRAR05	SOCIAL GEOGRAPHY AND CARTOGRAPHY	R	SGC	0	0	6	4	4	10	
1039	MSDC	MIN-SDP	25MRAP05M	SOCIAL CULTURE ANTHROPOLOGY	M	SCA	0	0	6	4	4	10	
1040	MSDC	MIN-SDP	25MRID05	DESIGN PRESENTATION AND COMMUNICATION	R	DPC	0	0	6	4	4	10	
1041	MSDC	MIN-SDP	25MRPA05	MODERN FARMING TECHNIQUES AND INNOVATIONS	R	AELP	0	0	6	4	4	10	
1042	BRIDGE	BRIDGE-	25UC0018	FUNDAMENTALS OF MATHEMATICS	R	FOM	3	0	0	0	0	3	

Category & Grouping

S#	Category	Group Name
1	MINOR	AI AND COMPETITIVE ADVANTAGE
2	MINOR	ANIMATION AND GAMING
3	MINOR	ANTHROPOLOGY
4	MINOR	ARTS
5	MINOR	BUSINESS ADMINISTRATION
6	MINOR	COMPUTATIONAL MATHEMATICS
7	MINOR	CORPORATE LAW
8	MINOR	CREATIVE ARTS
9	MINOR	DIGITAL MARKETING AND AUTOMATION
10	MINOR	FILM MAKING
11	MINOR	FINTECH AND ALGORITHMIC TRADING
12	MINOR	FOOD TECHNOLOGY
13	MINOR	GRAPHIC DESIGN
14	MINOR	INNOVATION MANAGEMENT AND ENTREPRENEURSHIP
15	MINOR	INTELLECTUAL PROPERTY LAW
16	MINOR	INTERIOR DESIGN
17	MINOR	INTERNATIONAL BUSINESS
18	MINOR	ORGANIZATIONAL BEHAVIOUR
19	MINOR	PHARMACOLOGY
20	MINOR	PRECISION AGRICULTURE
21	MINOR	TECHNOPRENEURSHIP
22	MINOR	WATER SCIENCE AND MANAGEMENT
23	MINOR	PSYCHOLOGY
24	MINOR	MANAGERIAL ECONOMICS AND FINANCE
25	MINOR	BUSINESS ANALYTICS
26	MINOR	CYBER SECURITY LAW
27	SPECIALIZATION	AGRI-BIOTECHNOLOGY
28	SPECIALIZATION	AI & AUTONOMOUS SYSTEMS
29	SPECIALIZATION	AI FOR COMPUTATIONAL INTELLIGENCE

S#	Category	Group Name
30	SPECIALIZATION	AI SYSTEMS FOR VISUAL INTELLIGENCE
31	SPECIALIZATION	AI-DRIVEN EDGE ARCHITECTURES & APPLICATIONS
32	SPECIALIZATION	AI-DRIVEN LANGUAGE TECHNOLOGIES
33	SPECIALIZATION	AUTOMOTIVE ELECTRONICS & AUTOSAR
34	SPECIALIZATION	AUTOMOTIVE ENERGY ENGINEERING
35	SPECIALIZATION	BIOINFORMATICS
36	SPECIALIZATION	BLOCKCHAIN ENGINEERING FOR WEB3
37	SPECIALIZATION	CLOUD & EDGE COMPUTING
38	SPECIALIZATION	CLOUD INFRASTRUCTURE DESIGN & ENGINEERING?
39	SPECIALIZATION	CLOUD NATIVE SECURITY
40	SPECIALIZATION	CLOUD NATIVE SOFTWARE ENGINEERING
41	SPECIALIZATION	CLOUD-BASED SCIENTIFIC COMPUTING
42	SPECIALIZATION	CROSS PLATFORM DEVELOPMENT FRAMEWORKS
43	SPECIALIZATION	CYBER PHYSICAL SYSTEMS & IOT
44	SPECIALIZATION	CYBER SECURITY & BLOCKCHAIN TECHNOLOGY
45	SPECIALIZATION	DATA COMMUNICATIONS
46	SPECIALIZATION	DATA ENGINEERING FOR AI
47	SPECIALIZATION	DATA SCIENCE & BIG DATA ANALYTICS
48	SPECIALIZATION	DISTRIBUTED LEDGER ANALYTICS
49	SPECIALIZATION	EMBEDDED SYSTEMS
50	SPECIALIZATION	E-MOBILITY ENGINEERING
51	SPECIALIZATION	ENGINEERING DESIGN
52	SPECIALIZATION	GAME DEVELOPMENT & UX DESIGN
53	SPECIALIZATION	GREEN ENERGY TECHNOLOGIES
54	SPECIALIZATION	GENERATIVE AI & MACHINE LEARNING
55	SPECIALIZATION	HARDWARE-SOFTWARE CO-DESIGN FOR SECURITY
56	SPECIALIZATION	HEALTHCARE DATA ANALYTICS
57	SPECIALIZATION	INDUSTRIAL AUTOMATION
58	SPECIALIZATION	INDUSTRIAL BIOTECHNOLOGY
59	SPECIALIZATION	IOT ANALYTICS

S#	Category	Group Name
60	SPECIALIZATION	MEDICAL BIOTECHNOLOGY
61	SPECIALIZATION	NANO TECHNOLOGY & OPTOELECTRONICS
62	SPECIALIZATION	ROBOTICS & AUTOMATION
63	SPECIALIZATION	SMART GRID TECHNOLOGIES
64	SPECIALIZATION	SMART MANUFACTURING
65	SPECIALIZATION	SOCIAL & DIGITAL MEDIA ANALYTICS
66	SPECIALIZATION	SOFTWARE MODELLING & DEVOPS
67	SPECIALIZATION	SPATIAL COMPUTING & IMMERSIVE TECHNOLOGIES
68	SPECIALIZATION	STRUCTURAL ENGINEERING
69	SPECIALIZATION	VLSI
70	SPECIALIZATION	INFRASTRUCTURE & ENVIRONMENTAL ENGINEERING
71	SPECIALIZATION	5G -6G WIRELESS TECHNOLOGIES
72	SPECIALIZATION	GENRATIVE AI FOR AGENTIC AND MULTI-MODAL INTELLIGENCE
73	SPECIALIZATION	HUMAN-CENTRIC AI SYSTEMS
74	SPECIALIZATION	DATA SCIENCE & ENGINEERING FOR AI
75	SPECIALIZATION	DATA LAKE SYSTEMS & STREAMING ANALYTICS
76	SPECIALIZATION	CLOUD NATIVE APPLICATION ENGINEERING & DEVOPS
77	SPECIALIZATION	AI DRIVEN EDGE COMPUTING
78	SPECIALIZATION	CLOUD AI & ACCELERATED COMPUTING
79	SPECIALIZATION	CYBER THREAT INTELLIGENCE AND SECURITY OPERATIONS
80	SPECIALIZATION	INTELLIGENT GAME DEVELOPMENT & IMMERSIVE TECHNOLOGIES
81	SPECIALIZATION	GREEN & SUSTAINABLE DIGITAL SYSTEMS
82	SPECIALIZATION	BIO-MEDICAL INSTRUMENTATION
83	SPECIALIZATION	RF & MICROWAVE
84	SPECIALIZATION	QUANTUM COMMUNICATIONS
85	SPECIALIZATION	QUANTUM TECHNOLOGIES
86	PROJECT	RESEARCH PROJECT
87	PROJECT	INNOVATION PROJECT
88	PROJECT	CAPSTONE PROJECT

Category & Grouping Courses

1. MINOR: AI AND COMPETITIVE ADVANTAGE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRAC01M	AI FOR BUSINESS STRATEGY	M	ABS	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRAC02M	AI STRATEGY AND GOVERNANCE	M	ASG	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRAC03M	SUCCESSFUL AI STRATEGIES : A CEO'S PERSPECTIVES	M	SAI	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRAC04M	CRAFTING A COMPETITIVE ADVANTAGE	M	CCA	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRAC05M	AI APPLICATIONS FOR BUSINESS SUCCESS	M	AIA	0	0	6	4	4	10	

2. MINOR: ANIMATION AND GAMING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRAG02	DRAWING BASICS	R	DBS	0	0	6	4	4	10	
2	MIN	MIN-CORE	25MRAG03	GRAPHIC DESIGN	R	GDS	0	0	6	4	4	10	
3	MIN	MIN-CORE	25MRAG04	CONCEPTS OF 3D	R	C3D	0	0	6	4	4	10	
4	MSDC	MIN-SDP	25MRAG05	DIGITAL ART	R	DTA	0	0	6	4	4	10	

3. MINOR: ANTHROPOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRAP01M	INTRODUCTION TO ANTHROPOLOGY	M	ITA	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRAP02M	CULTURAL EVOLUTION	M	CET	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRAP03M	HUMAN ECOLOGY AND ECOLOGICAL ANTHROPOLOGY	M	HEEA	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRAP04M	FUNDAMENTALS IN ARCHEOLOGICAL ANTHROPOLOGY CHRONOLOGY	M	FAAC	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRAP05M	SOCIAL CULTURE ANTHROPOLOGY	M	SCA	0	0	6	4	4	10	

4. MINOR: ARTS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRAR01	FUNDAMENTALS OF MACRO-ECONOMICS	R	FME	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRAR02	BASICS OF ECONOMETRICS	R	BOE	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRAR03	INTERNATIONAL RELATIONS: THEORIES AND CONCEPTS	R	IRTC	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRAR04	BEHAVIOURAL ECONOMICS AND POLICY	R	BEP	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRAR05	SOCIAL GEOGRAPHY AND CARTOGRAPHY	R	SGC	0	0	6	4	4	10	

5. MINOR: BUSINESS ADMINISTRATION

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRBA01M	ORGANIZATIONAL BEHAVIOUR	M	OBR	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRBA02M	MARKETING MANAGEMENT	M	MMG	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRBA03M	FINANCIAL MANAGEMENT	M	FMG	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRBA04M	HUMAN RESOURCE MANAGEMENT	M	HRM	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRBA05M	LOGISTICS AND SUPPLY CHAIN MANAGEMENT	M	LSCM	0	0	6	4	4	10	

6. MINOR: COMPUTATIONAL MATHEMATICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRCM01	LINEAR ALGEBRA	R	LAG	2	2	0	0	4	4	
2	MIN	MIN-CORE	25MRCM02	ADVANCED NUMERICAL ANALYSIS	R	ANA	2	2	0	0	4	4	
3	MIN	MIN-CORE	25MRCM03	MATHEMATICAL MODELLING	R	MML	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRCM04	STOCHASTIC PROCESSES & OPTIMIZATION	R	SPO	2	2	0	0	4	4	
5	MIN	MIN-CORE	25MRCM05	FUZZY MATHEMATICS AND ITS APPLICATIONS	R	FMAA	2	2	0	0	4	4	
6	MSDC	MIN-SDP	25MRCM06	TRANSFORM TECHNIQUES FOR ENGINEERING	R	TTE	2	0	2	4	4	8	
7	MSDC	MIN-SDP	25MRCM07	STATISTICS WITH R PROGRAMMING	R	SWRP	2	0	2	4	4	8	
8	MSDC	MIN-SDP	25MRCM08	MATRIX COMPUTATION	R	MCT	2	0	2	4	4	8	

7. MINOR: CORPORATE LAW

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRCL01	PRINCIPLES OF COMPANIES ACT AND CORPORATE GOVERNANCE	R	PCACG	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRCL02	MERGERS, ACQUISITIONS AND PRIVATE EQUITY	R	MAPE	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRCL03	INSOLVENCY AND BANKRUPTCY LAW	R	IBL	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRCL04	COMPETITION LAW AND PRACTICE	R	CLP	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRCL05	COMMERCIAL CONTRACT DRAFTING	R	CCD	0	0	6	4	4	10	

8. MINOR: CREATIVE ARTS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRCA01	INTRODUCTION TO CREATIVE ARTS	R	ICA	0	0	6	4	4	10	
2	MIN	MIN-CORE	25MRCA02	DRAWING AND SKETCHING	R	DAS	0	0	6	4	4	10	
3	MIN	MIN-CORE	25MRCA03	PAINTING	R	PNT	0	0	6	4	4	10	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
4	MIN	MIN-CORE	25MRCA04	CREATIVE WRITING	R	CWT	0	0	6	4	4	10	
5	MSDC	MIN-SDP	25MRCA05	SCULPTURE	R	SCP	0	0	6	4	4	10	

9. MINOR: DIGITAL MARKETING AND AUTOMATION

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRDM01M	FUNDAMENTALS OF DIGITAL MARKETING	M	FDM	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRDM02M	SOCIAL MEDIA MARKETING	M	SMM	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRDM03M	SEARCH ENGINE OPTIMIZATION	M	SEO	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRDM04M	ARTIFICIAL INTELLIGENCE IN MARKETING	M	AIM	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRDM05M	CONTENT MARKETING	M	CM	0	0	6	4	4	10	

10. MINOR: FILM MAKING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRFM01	FILM AESTHETICS	R	FAS	0	0	6	4	4	10	
2	MIN	MIN-CORE	25MRFM02	SCREEN WRITING	R	SWT	0	0	6	4	4	10	
3	MIN	MIN-CORE	25MRFM03	CINEMATIC LIGHTING	R	CML	0	0	6	4	4	10	
4	MIN	MIN-CORE	25MRFM04	SOUND DESIGN	R	SDS	0	0	6	4	4	10	
5	MSDC	MIN-SDP	25MRFM05	DIGITAL PHOTOGRAPHY	R	DPG	0	0	6	4	4	10	

11. MINOR: FINTECH AND ALGORITHMIC TRADING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRFA01M	FOUNDATIONS AND APPLICATIONS OF FINANCIAL TECHNOLOGY	M	AFT	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRFA02M	DECENTRALISED FINANCE: THE FUTURE OF FINANCE	M	DFFF	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRFA03M	FINTECH INNOVATIONS	M	FIV	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRFA04M	USING MACHINE LEARNING IN TRADING AND FINANCE	M	ML	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRFA05M	TRADING ALGORITHMS	M	TA	0	0	6	4	4	10	

12. MINOR: FOOD TECHNOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRFT01	INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY	R	IFST	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRFT02	FOOD ANALYSIS AND QUALITY ASSURANCE	R	FAQA	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRFT03	FOOD SAFETY AND REGULATIONS	R	FSR	3	1	0	0	4	4	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
4	MIN	MIN-CORE	25MRFT04	FOOD ENGINEERING	R	FEG	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRFT05	FOOD PACKAGING TECHNOLOGY	R	FPT	2	0	2	4	4	8	

13. MINOR: GRAPHIC DESIGN

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRGD01	INTRODUCTION TO GRAPHIC DESIGN	R	IGD	0	0	6	4	4	10	
2	MIN	MIN-CORE	25MRGD02	TYPOGRAPHY	R	TPY	0	0	6	4	4	10	
3	MIN	MIN-CORE	25MRGD03	VISUAL IDENTITY AND BRANDING	R	VIB	0	0	6	4	4	10	
4	MIN	MIN-CORE	25MRGD04	PRINT DESIGN	R	PRDG	0	0	6	4	4	10	
5	MSDC	MIN-SDP	25MRGD05	PUBLICATION DESIGN	R	PUDG	0	0	6	4	4	10	

14. MINOR: INNOVATION MANAGEMENT AND ENTREPRENEURSHIP

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRIM01	APPLIED DESIGN THINKING	R	ADT	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRIM02	BUSINESS MODEL INNOVATION	R	BMI	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRIM03	VENTURE MANAGEMENT	R	VMT	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRIM04	BUSINESS AND LEADERSHIP	R	BL	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRIM05	PROJECT INNOVATE: STRATEGIES FOR ENTREPRENEURIAL GROWTH	R	PISEG	0	0	6	4	4	10	

15. MINOR: INTELLECTUAL PROPERTY LAW

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRIP01	EMERGENCE AND DEVELOPMENT OF IPR	R	EDIPR	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRIP02	LAW OF COPYRIGHT	R	LOCR	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRIP03	LAW OF PATENTS	R	LOPS	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRIP04	LAW OF TRADEMARK	R	LOTM	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRIP05	LAW OF DESIGNS, GEOGRAPHICAL INDICATIONS AND PLANT VARIETIES	R	LODGP	0	0	6	4	4	10	

16. MINOR: INTERIOR DESIGN

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRID01	INTRODUCTION TO INTERIOR DESIGN	R	IID	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRID02	SPACE PLANNING AND LAYOUT	R	SPL	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRID03	INTERIOR MATERIAL AND FINISHES	R	IMF	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRID04	FURNITURE AND ACCESSORIES DESIGN	R	FAD	3	0	2	0	4	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
5	MSDC	MIN-SDP	25MRID05	DESIGN PRESENTATION AND COMMUNICATION	R	DPC	0	0	6	4	4	10	

17. MINOR: INTERNATIONAL BUSINESS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRIB01M	INTERNATIONAL BUSINESS ESSENTIALS	M	IBET	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRIB02M	INTERNATIONAL BUSINESS ENVIRONMENT	M	IBEV	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRIB03M	INTERNATIONAL BUSINESS OPERATIONS	M	IBO	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRIB04M	INTERNATIONAL BUSINESS MODELS	M	IBM	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRIB05M	PROFESSIONAL SKILLS FOR INTERNATIONAL BUSINESS	M	PIB	0	0	6	4	4	10	

18. MINOR: ORGANIZATIONAL BEHAVIOUR

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MROB01M	ORGANIZATIONAL BEHAVIOUR	M	POM	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MROB02M	ORGANIZATIONAL BEHAVIOUR MODELS	M	OBM	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MROB03M	ORGANIZATIONAL CHANGE AND DEVELOPMENT	M	OCD	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MROB04M	LEADERSHIP IN ORGANIZATION	M	LIO	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MROB05M	TEAM BUILDING AND COLLABORATION SKILLS FOR MANAGERS	M	TBCM	0	0	6	4	4	10	

19. MINOR: PHARMACOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRPY01	BASICS OF PHARMACOLOGY	R	BOP	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRPY02	ADVANCED PHARMACOLOGY - I	R	AP-I	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRPY03	EXPERIMENTAL PHARMACOLOGY	R	EPC	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRPY04	ADVANCED PHARMACOLOGY - II	R	AP-II	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRPY05	PRACTICAL PHARMACOLOGY	R	PRI	0	0	6	4	4	10	

20. MINOR: PRECISION AGRICULTURE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRPA01	FUNDAMENTALS OF AGRONOMY	R	FOA	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRPA02	INTRODUCTORY AGROMETEOROLOGY AND CLIMATE CHANGE	R	IACC	3	0	2	0	4	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
3	MIN	MIN-CORE	25MRPA03	GEOINFORMATICS AND NANOTECHNOLOGY FOR PRECISION FARMING	R	GNPF	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRPA04	PROTECTED CULTIVATION AND POST-HARVEST TECHNOLOGIES	R	PCPHT	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRPA05	MODERN FARMING TECHNIQUES AND INNOVATIONS	R	AELP	0	0	6	4	4	10	

21. MINOR: TECHNOPRENEURSHIP

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRTP01	INTRODUCTION TO TECHNOLOGICAL ENTREPRENEURSHIP	R	ITEP	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRTP02	LEAN STARTUP LAUNCHPAD	R	LSLP	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRTP03	ENTREPRENEURSHIP AND VENTURE CAPITAL	R	EVC	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRTP04	BUILDING AND SUSTAINING A SUCCESSFUL ENTERPRISE	R	BSSE	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRTP05	TECH INNOVATION PROJECT FOR ENTREPRENEURS	R	TIPFE	0	0	6	4	4	10	

22. MINOR: WATER SCIENCE AND MANAGEMENT

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRPA01	FUNDAMENTALS OF AGRONOMY	R	FOA	3	0	2	0	4	5	
2	MIN	MIN-CORE	25MRWS02	SOIL AND WATER CONSERVATION ENGINEERING	R	SWCE	3	0	2	0	4	5	
3	MIN	MIN-CORE	25MRWS04	RAINFED AGRICULTURE AND WATERSHED MANAGEMENT	R	RAWM	3	0	2	0	4	5	
4	MIN	MIN-CORE	25MRWS03	IRRIGATION WATER MANAGEMENT	R	IWM	3	0	2	0	4	5	
5	MSDC	MIN-SDP	25MRPA05	MODERN FARMING TECHNIQUES AND INNOVATIONS	R	AELP	0	0	6	4	4	10	

23. MINOR: PSYCHOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRPS01M	INTRODUCTION TO PSYCHOLOGY	M	ITP	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRPS02M	PSYCHOLOGY OF EVERYDAY	M	POE	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRPS03M	SOCIAL COGNITION	M	SC	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRPS04M	THE SCIENCE OF WELL-BEING FOR TEENS	M	TSOWBFT	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRPS05M	POSITIVE PSYCHOLOGY: RESILIENCE SKILLS	M	PPRS	4	0	0	0	4	4	

24. MINOR: MANAGERIAL ECONOMICS AND FINANCE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRME01M	MICROECONOMICS - THE POWER OF MARKETS	M	MEPM	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRME02M	FUNDAMENTALS OF ACCOUNTING	M	FOA	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRME03M	FINANCIAL MANAGEMENT	M	FM	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRME04M	FINANCIAL MARKETS	M	FM	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRME05M	HOW TO FINANCE YOUR VENTURE	M	HTFYV	4	0	0	0	4	4	

25. MINOR: BUSINESS ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRBN01M	INTRODUCTION TO BUSINESS ANALYTICS	M	IBA	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRBN02M	FOUNDATIONS OF BUSINESS INTELLIGENCE	M	FBI	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRBN03M	POWER BI FOR DATA SCIENCE AND ANALYTICS	M	PBDSA	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRBN04M	BUSINESS ANALYTICS WITH EXCEL: ELEMENTARY TO ADVANCE	M	BAWEEA	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRBN05M	ADVANCED BUSINESS ANALYTICS	M	ABA	4	0	0	0	4	4	

26. MINOR: CYBER SECURITY LAW

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	MIN	MIN-CORE	25MRCY01	INTRODUCTION TO CYBERLAW AND CYBERSPACE	R	ITCLCS	4	0	0	0	4	4	
2	MIN	MIN-CORE	25MRCY02	CYBERLAW AND E-COMMERCE IMPLICATIONS	R	CLECI	4	0	0	0	4	4	
3	MIN	MIN-CORE	25MRCY03	CYBERCRIMES IN INDIA	R	CCII	4	0	0	0	4	4	
4	MIN	MIN-CORE	25MRCY04	INTRODUCTION TO CYBERSECURITY, INCIDENTAL RESPONSE AND DIGITAL FORENSIC	R	ITCIRDF	4	0	0	0	4	4	
5	MSDC	MIN-SDP	25MRCY05	CYBER SECURITY: TOOLS, TECHNIQUES & COUNTERMEASURES	M	CSTTCM	4	0	0	0	4	4	

27. SPECIALIZATION: AGRI-BIOTECHNOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25ABT3101	BIOSENSORS AND BIOELECTRONICS	R	BSBE	3	0	2	0	4	5	
2	PEC	PE-1	25ABT3101A	BIOSENSORS AND BIOELECTRONICS	A	BSBE	4	1	2	0	6	7	
3	PEC	PE-1	25ABT3101E	BIOSENSORS AND BIOELECTRONICS	E	BSBE	4	1	2	0	6	7	
4	PEC	PE-2	25ABT3202	IOT APPLICATIONS IN PRECISION AGRICULTURE	R	IOTAPA	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
5	PEC	PE-2	25ABT3203	MACHINE LEARNING FOR PRECISION AGRICULTURE	R	MLPA	3	0	0	0	3	3	
6	PEC	PE-3	25ABT3304	IMAGE PROCESSING FOR AGRICULTURAL APPLICATIONS	R	IPAA	3	0	0	2	3.5	5	
7	PEC	PE-3	25ABT3304A	IMAGE PROCESSING FOR AGRICULTURAL APPLICATIONS	A	IPAA	4	1	0	2	5.5	7	
8	PEC	PE-3	25ABT3304E	IMAGE PROCESSING FOR AGRICULTURAL APPLICATIONS	E	IPAA	4	1	0	2	5.5	7	
9	PEC	PE-4	25ABT3405	BIOINSTRUMENTATION	R	BIIS	3	0	0	0	3	3	
10	PEC	PE-4	25ABT3406	DATA ACQUISITION AND COMMUNICATION SYSTEMS FOR AGRICULTURE	R	DACSA	3	0	0	0	3	3	
11	PEC	PE-5	25ABT3507	MICROFLUIDICS FOR AGRICULTURAL APPLICATIONS	R	MAP	3	0	0	0	3	3	
12	PEC	PE-5	25ABT3508	BIOINFORMATICS FOR AGRICULTURE	R	BIA	3	0	0	0	3	3	

28. SPECIALIZATION: AI & AUTONOMOUS SYSTEMS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25AAS3101	AUTONOMOUS DRIVER ASSISTIVE SYSTEMS	R	ADAS	3	0	2	0	4	5	
2	PEC	PE-1	25AAS3101A	AUTONOMOUS DRIVER ASSISTIVE SYSTEMS	A	ADAS	4	1	2	0	6	7	
3	PEC	PE-1	25AAS3101E	AUTONOMOUS DRIVER ASSISTIVE SYSTEMS	E	ADAS	4	1	2	0	6	7	
4	PEC	PE-1	25AAS3102	AI AND CONTROLS FOR AUTONOMUS FUTURE TRANSPORT	R	AICAFT	3	0	2	0	4	5	
5	PEC	PE-1	25AAS3102A	AI AND CONTROLS FOR AUTONOMUS FUTURE TRANSPORT	A	AICAFT	4	1	2	0	6	7	
6	PEC	PE-1	25AAS3102E	AI AND CONTROLS FOR AUTONOMUS FUTURE TRANSPORT	E	AICAFT	4	1	2	0	6	7	
7	PEC	PE-1	25AAS3112	ECU DESIGN FOR AUTONOMOUS SYSTEMS	R	EDAS	3	0	2	0	4	5	
8	PEC	PE-1	25AAS3112A	ECU DESIGN FOR AUTONOMOUS SYSTEMS	A	EDAS	4	1	2	0	6	7	
9	PEC	PE-1	25AAS3112E	ECU DESIGN FOR AUTONOMOUS SYSTEMS	E	EDAS	4	1	2	0	6	7	
10	PEC	PE-2	25AAS3203	AI AND IOT FOR AUTONOMOUS VEHICLE	R	AIAV	3	0	0	0	3	3	
11	PEC	PE-2	25AAS3205	AUTONOMOUS VEHICLE ECU DESIGN WITH AUTOSAR	R	AVECUD	3	0	0	0	3	3	
12	PEC	PE-2	25AAS3213	PERCEPTION ENGINEERING FOR AUTONOMY	R	PEA	3	0	0	0	3	3	
13	PEC	PE-2	25AAS3202	INTRODUCTION TO INTELLIGENT DRONES	R	IID	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
14	PEC	PE-3	25AAS3304	APPLIED DEEP LEARNING FOR AUTONOMOUS SYSTEMS	R	ADLAS	3	0	0	2	3.5	5	
15	PEC	PE-3	25AAS3304A	APPLIED DEEP LEARNING FOR AUTONOMOUS SYSTEMS	A	ADLAS	4	1	0	2	5.5	7	
16	PEC	PE-3	25AAS3304E	APPLIED DEEP LEARNING FOR AUTONOMOUS SYSTEMS	E	ADLAS	4	1	0	2	5.5	7	
17	PEC	PE-3	25AAS3309	AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS	R	AAAV	3	0	0	2	3.5	5	
18	PEC	PE-3	25AAS3309A	AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS	A	AAAV	4	1	0	2	5.5	7	
19	PEC	PE-3	25AAS3309E	AUTONOMOUS ELECTRIC MOBILITY - SYSTEMS AND APPLICATIONS	E	AAAV	4	1	0	2	5.5	7	
20	PEC	PE-3	25AAS3314	AI FOR AUTONOMOUS NAVIGATION, CONTROL & EDGE INTELLIGENCE	R	ANCE	3	0	0	2	3.5	5	
21	PEC	PE-3	25AAS3314A	AI FOR AUTONOMOUS NAVIGATION, CONTROL & EDGE INTELLIGENCE	A	ANCE	4	1	0	2	5.5	7	
22	PEC	PE-3	25AAS3314E	AI FOR AUTONOMOUS NAVIGATION, CONTROL & EDGE INTELLIGENCE	E	ANCE	4	1	0	2	5.5	7	
23	PEC	PE-4	25AAS3405	EXPERT SYSTEMS	R	ES	3	0	0	0	3	3	
24	PEC	PE-4	25AAS3406	SELF-DRIVING CARS	R	SDC	3	0	0	0	3	3	
25	PEC	PE-4	25AAS3415	REAL-TIME NETWORKS, COMMUNICATION & SECURITY FOR AUTONOMOUS SYSTEMS	R	RTNCSAS	3	0	0	0	3	3	
26	PEC	PE-4	25AAS3410	CYBERSECURITY IN AUTONOMOUS VEHICLE	R	CAV	3	0	0	0	3	3	
27	PEC	PE-5	25AAS3507	LOCALIZATION & PROGRAMMING REAL-TIME AUTONOMOUS SYSTEMS	R	LPRAS	3	0	0	0	3	3	
28	PEC	PE-5	25AAS3508	REINFORCEMENT LEARNING FOR AUTONOMOUS SYSTEM	R	RLA	3	0	0	0	3	3	
29	PEC	PE-5	25AAS3511	AI DRIVEN ECU DESIGN FOR AUTONOMOUS VEHICLES	R	AEDATT	3	0	0	0	3	3	
30	PEC	PE-5	25AAS3516	CYBER-PHYSICAL SECURITY IN AUTONOMOUS PLATFORMS	R	CPSAP	3	0	0	0	3	3	

29. SPECIALIZATION: AI FOR COMPUTATIONAL INTELLIGENCE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25ACI3101	GENERATIVE ADVERSARIAL NETWORKS	R	GANWS	3	0	2	0	4	5	
2	PEC	PE-1	25ACI3101A	GENERATIVE ADVERSARIAL NETWORKS	A	GANWS	4	1	2	0	6	7	
3	PEC	PE-1	25ACI3101E	GENERATIVE ADVERSARIAL NETWORKS	E	GANWS	4	1	2	0	6	7	
4	PEC	PE-2	25ACI3202	EXPLAINABLE AI AND COMMUNICATIONS	R	EAIC	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
5	PEC	PE-3	25ACI3303	FUZZY LOGIC WITH SET THEORY	R	FLST	3	0	0	2	3.5	5	
6	PEC	PE-3	25ACI3303A	FUZZY LOGIC WITH SET THEORY	A	FLST	4	1	0	2	5.5	7	
7	PEC	PE-3	25ACI3303E	FUZZY LOGIC WITH SET THEORY	E	FLST	4	1	0	2	5.5	7	
8	PEC	PE-4	25ACI3404	HEURISTIC ALGORITHMS	R	HA	3	0	0	0	3	3	
9	PEC	PE-4	25ACI3405	SWARM INTELLIGENCE APPROACHES	R	SIA	3	0	0	0	3	3	
10	PEC	PE-5	25ACI3506	DATA MANIPULATION	R	DM	3	0	0	0	3	3	
11	PEC	PE-5	25ACI3507	REINFORCEMENT LEARNING	R	RIL	3	0	0	0	3	3	
12	PEC	PE-5	25ACI3508	EVOLUTIONARY COMPUTATION	R	ECP	3	0	0	0	3	3	

30. SPECIALIZATION: AI SYSTEMS FOR VISUAL INTELLIGENCE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25AVI3101	DEEP LEARNING	R	DL	3	0	2	0	4	5	
2	PEC	PE-1	25AVI3101A	DEEP LEARNING	A	DL	4	1	2	0	6	7	
3	PEC	PE-1	25AVI3101E	DEEP LEARNING	E	DL	4	1	2	0	6	7	
4	PEC	PE-1	25AVI3102	AI DRIVEN VIDEO PROCESSING	R	AIDVP	3	0	2	0	4	5	
5	PEC	PE-1	25AVI3102A	AI DRIVEN VIDEO PROCESSING	A	AIDVP	4	1	2	0	6	7	
6	PEC	PE-1	25AVI3102E	AI DRIVEN VIDEO PROCESSING	E	AIDVP	4	1	2	0	6	7	
7	PEC	PE-4	25AVI3405	VISUAL RECOGNITION AND SCENE UNDERSTANDING	R	VRSU	3	0	0	0	3	3	
8	PEC	PE-5	25AVI3507	HUMAN COMPUTER INTERACTION	R	HCI	3	0	0	0	3	3	
9	PEC	PE-5	25AVI3508	OBJECT LOCALIZATION	R	OL	3	0	0	0	3	3	

31. SPECIALIZATION: AI-DRIVEN EDGE ARCHITECTURES & APPLICATIONS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25ADE3101	EDGE COMPUTING FUNDAMENTALS	R	ECF	3	0	2	0	4	5	
2	PEC	PE-1	25ADE3101A	EDGE COMPUTING FUNDAMENTALS	A	ECF	4	1	2	0	6	7	
3	PEC	PE-1	25ADE3101E	EDGE COMPUTING FUNDAMENTALS	E	ECF	4	1	2	0	6	7	
4	PEC	PE-2	25ADE3202	AI AT THE EDGE	R	AIAE	3	0	0	0	3	3	
5	PEC	PE-3	25ADE3303	EDGE AI ARCHITECTURES AND APPLICATIONS	R	EAIAA	3	0	0	2	3.5	5	
6	PEC	PE-3	25ADE3303A	EDGE AI ARCHITECTURES AND APPLICATIONS	A	EAIAA	4	1	0	2	5.5	7	
7	PEC	PE-3	25ADE3303E	EDGE AI ARCHITECTURES AND APPLICATIONS	E	EAIAA	4	1	0	2	5.5	7	
8	PEC	PE-4	25ADE3404	EDGE AI AND 5G	R	EAI5G	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
9	PEC	PE-4	25ADE3405	EDGE AI SECURITY AND PROTECTION	R	EAISP	3	0	0	0	3	3	
10	PEC	PE-5	25ADE3506	EDGE AI DEVELOPMENT FRAMEWORKS AND TOOLS	R	EADFT	3	0	0	0	3	3	
11	PEC	PE-5	25ADE3507	EDGE AI ANALYTICS AND DATA MANAGEMENT	R	EAIADM	3	0	0	0	3	3	
12	PEC	PE-5	25ADE3508	EDGE AI AND SUSTAINABILITY	R	EAIAS	3	0	0	0	3	3	

32. SPECIALIZATION: AI-DRIVEN LANGUAGE TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25ALT3101	APPLIED MACHINE LEARNING FOR TEXT ANALYSIS	R	AMLFTA	3	0	2	0	4	5	
2	PEC	PE-1	25ALT3101A	APPLIED MACHINE LEARNING FOR TEXT ANALYSIS	A	AMLFTA	4	1	2	0	6	7	
3	PEC	PE-1	25ALT3101E	APPLIED MACHINE LEARNING FOR TEXT ANALYSIS	E	AMLFTA	4	1	2	0	6	7	
4	PEC	PE-2	25ALT3202	DEEP LEARNING FOR NATURAL LANGUAGE PROCESSING	R	DLFNL	3	0	0	0	3	3	
5	PEC	PE-3	25ALT3303	CONVERSATIONAL AI AND CHATBOT DEVELOPMENT	R	CAICBD	3	0	0	2	3.5	5	
6	PEC	PE-3	25ALT3303A	CONVERSATIONAL AI AND CHATBOT DEVELOPMENT	A	CAICBD	4	1	0	2	5.5	7	
7	PEC	PE-3	25ALT3303E	CONVERSATIONAL AI AND CHATBOT DEVELOPMENT	E	CAICBD	4	1	0	2	5.5	7	
8	PEC	PE-4	25ALT3404	TEXT UNDERSTANDING	R	TUS	3	0	0	0	3	3	
9	PEC	PE-4	25ALT3405	NATURAL LANGUAGE PROCESSING	R	NLP	3	0	0	0	3	3	
10	PEC	PE-4	25ALT3506	LANGUAGE UNDERSTANDING WITH PRE-TRAINED MODELS	R	LUWPTM	3	0	0	0	3	3	
11	PEC	PE-5	25ALT3507	LARGE LANGUAGE MODEL FOR SPEECH PROCESSING	R	LLMFSP	3	0	0	0	3	3	

33. SPECIALIZATION: AUTOMOTIVE ELECTRONICS & AUTOSAR

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25AEA3101	AUTOMOTIVE SENSOR AND APPLICATIONS	R	ASA	3	0	2	0	4	5	
2	PEC	PE-1	25AEA3101A	AUTOMOTIVE SENSOR AND APPLICATIONS	A	ASA	4	1	2	0	6	7	
3	PEC	PE-1	25AEA3101E	AUTOMOTIVE SENSOR AND APPLICATIONS	E	ASA	4	1	2	0	6	7	
4	PEC	PE-2	25AEA3202	AUTOTRONICS	R	AT	3	0	0	0	3	3	
5	PEC	PE-2	25AEA3203	AUTOMOTIVE POLLUTION AND ITS CONTROL	R	APC	3	0	0	0	3	3	
6	PEC	PE-3	25AEA3304	ALTERNATE DRIVES, TRACTION AND CONTROLS	R	ADTC	3	0	0	2	3.5	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
7	PEC	PE-3	25AEA3304A	ALTERNATE DRIVES, TRACTION AND CONTROLS	A	ADTC	4	1	0	2	5.5	7	
8	PEC	PE-3	25AEA3304E	ALTERNATE DRIVES, TRACTION AND CONTROLS	E	ADTC	4	1	0	2	5.5	7	
9	PEC	PE-4	25AEA3405	VEHICLE CONTROL SYSTEMS	R	VCS	3	0	0	0	3	3	
10	PEC	PE-4	25AEA3406	AUTOMOTIVE ELECTRICAL AND ELECTRONIC SYSTEMS	R	AEES	3	0	0	0	3	3	
11	PEC	PE-5	25AEA3507	SOFT COMPUTING TECHNIQUES FOR AUTOMOTIVE APPLICATIONS	R	SCTAA	3	0	0	0	3	3	
12	PEC	PE-5	25AEA3508	AUTOMOTIVE NETWORKING AND PROTOCOLS	R	ANP	3	0	0	0	3	3	

34. SPECIALIZATION: AUTOMOTIVE ENERGY ENGINEERING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25AEE3101	AUTOMOBILE ENGINEERING	R	AEG	3	0	2	0	4	5	
2	PEC	PE-1	25AEE3101A	AUTOMOBILE ENGINEERING	A	AEG	4	1	2	0	6	7	
3	PEC	PE-1	25AEE3101E	AUTOMOBILE ENGINEERING	E	AEG	4	1	2	0	6	7	
4	PEC	PE-2	25AEE3202	AUTOTRONICS AND SAFETY	R	AESS	3	0	0	0	3	3	
5	PEC	PE-2	25AEE3203	REFRIGERATION & AIR CONDITIONING	R	RAC	3	0	0	0	3	3	
6	PEC	PE-3	25AEE3304	THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS	R	TMEES	3	0	0	2	3.5	5	
7	PEC	PE-3	25AEE3304A	THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS	A	TMEES	4	1	0	2	5.5	7	
8	PEC	PE-3	25AEE3304E	THERMAL MANAGEMENT OF ELECTRIC AND ELECTRONIC SYSTEMS	E	TMEES	4	1	0	2	5.5	7	
9	PEC	PE-4	25AEE3405	SPECIAL PURPOSE VEHICLES	R	SPV	3	0	0	0	3	3	
10	PEC	PE-4	25AEE3406	VEHICLE DYNAMICS	R	VDS	3	0	0	0	3	3	
11	PEC	PE-5	25AEE3507	AUTONOMOUS VEHICLES	R	AVS	3	0	0	0	3	3	
12	PEC	PE-5	25AEE3508	ALTERNATE ENERGY SOURCES FOR AUTOMOBILES	R	AESA	3	0	0	0	3	3	

35. SPECIALIZATION: BIOINFORMATICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25BIS3101	MOLECULAR MODELLING AND DRUG DESIGN	R	MMDD	3	0	2	0	4	5	
2	PEC	PE-1	25BIS3101A	MOLECULAR MODELLING AND DRUG DESIGN	A	MMDD	4	1	2	0	6	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
3	PEC	PE-1	25BIS3101E	MOLECULAR MODELLING AND DRUG DESIGN	E	MMDD	4	1	2	0	6	7	
4	PEC	PE-2	25BIS3202	BIOMEDICAL INFORMATICS	R	BMI	3	0	0	0	3	3	
5	PEC	PE-2	25BIS3203	PYTHON AND R PROGRAMMING	R	P&RP	3	0	0	0	3	3	
6	PEC	PE-3	25BIS3304	STRUCTURAL BIOLOGY	R	SB	3	0	0	2	3.5	5	
7	PEC	PE-3	25BIS3304A	STRUCTURAL BIOLOGY	A	SB	4	1	0	2	5.5	7	
8	PEC	PE-3	25BIS3304E	STRUCTURAL BIOLOGY	E	SB	4	1	0	2	5.5	7	
9	PEC	PE-4	25BIS3405	APPLIED BIOINFORMATICS	R	ABI	3	0	0	0	3	3	
10	PEC	PE-4	25BIS3406	NGS SEQUENCING AND DATA ANALYSIS	R	NGSDA	3	0	0	0	3	3	
11	PEC	PE-5	25BIS3507	SYSTEMS BIOLOGY	R	SSB	3	0	0	0	3	3	
12	PEC	PE-5	25BIS3508	DATA BASE MANAGEMENT SYSTEM FOR BIOLOGIST	R	DBMS	3	0	0	0	3	3	

36. SPECIALIZATION: BLOCKCHAIN ENGINEERING FOR WEB3

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25BEW3101	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY, CRYPTOCURRENCIES AND TOKENS	R	IBCTCCT	3	0	2	0	4	5	
2	PEC	PE-1	25BEW3101A	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY, CRYPTOCURRENCIES AND TOKENS	A	IBCTCCT	4	1	2	0	6	7	
3	PEC	PE-1	25BEW3101E	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY, CRYPTOCURRENCIES AND TOKENS	E	IBCTCCT	4	1	2	0	6	7	
4	PEC	PE-2	25BEW3202	SMART CONTRACTS	R	SC	3	0	0	0	3	3	
5	PEC	PE-2	25BEW3110	SMART CONTRACT DEVELOPMENT & TESTING	R	SCDT	3	0	0	0	3	3	
6	PEC	PE-2	25BEW3211	BLOCKCHAIN NETWORK ARCHITECTURE & CONSENSUS MECHANISMS	R	BNAC	3	0	0	0	3	3	
7	PEC	PE-3	25BEW3303	DECENTRALIZED APPLICATIONS AND DECENTRALIZED WEB	R	DADW	3	0	0	2	3.5	5	
8	PEC	PE-3	25BEW3303A	DECENTRALIZED APPLICATIONS AND DECENTRALIZED WEB	A	DADW	4	1	0	2	5.5	7	
9	PEC	PE-3	25BEW3303E	DECENTRALIZED APPLICATIONS AND DECENTRALIZED WEB	E	DADW	4	1	0	2	5.5	7	
10	PEC	PE-3	25BEW3312	WEB3 APPLICATION DEVELOPMENT & INTEGRATION	R	WADI	3	0	0	2	3.5	5	
11	PEC	PE-3	25BEW3312A	WEB3 APPLICATION DEVELOPMENT & INTEGRATION	A	WADI	4	1	0	2	5.5	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
12	PEC	PE-3	25BEW3312E	WEB3 APPLICATION DEVELOPMENT & INTEGRATION	E	WADI	4	1	0	2	5.5	7	
13	PEC	PE-4	25BEW3404	BLOCKCHAIN PLATFORMS AND PROTOCOLS	R	BCPFP	3	0	0	0	3	3	
14	PEC	PE-4	25BEW3405	BLOCKCHAIN SECURITY	R	BCF	3	0	0	0	3	3	
15	PEC	PE-4	25BEW3406	ORACLES AND DATA FEEDS	R	ODF	3	0	0	0	3	3	
16	PEC	PE-4	25BEW3413	DECENTRALIZED FINANCE (DEFI) SYSTEMS ENGINEERING	R	DFSE	3	0	0	0	3	3	
17	PEC	PE-4	25BEW3414	POST-QUANTUM CRYPTOGRAPHY FOR BLOCKCHAIN	R	PQCB	3	0	0	0	3	3	
18	PEC	PE-5	25BEW3507	BLOCKCHAIN SCALABILITY AND LAYER 2 SOLUTIONS	R	BCSALS	3	0	0	0	3	3	
19	PEC	PE-5	25BEW3508	REGULATORY LANDSCAPE AND COMPLIANCE	R	RLAC	3	0	0	0	3	3	
20	PEC	PE-5	25BEW3509	FUTURE TRENDS IN BLOCKCHAIN AND WEB3	R	FTBCAW	3	0	0	0	3	3	
21	PEC	PE-5	25BEW3515	DECENTRALIZED STORAGE, IDENTITY & MIDDLEWARE SYSTEMS	R	DSIM	3	0	0	0	3	3	
22	PEC	PE-5	25BEW3516	QUANTUM ALGORITHMS FOR BLOCKCHAIN DATA ANALYSIS	R	QABA	3	0	0	0	3	3	

37. SPECIALIZATION: CLOUD & EDGE COMPUTING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CEC3101	CLOUD INFRASTRUCTURE AND SERVICES	R	CIS	3	0	2	0	4	5	
2	PEC	PE-2	25CEC3202	ADVANCED OPERATING SYSTEMS	R	AOS	3	0	0	0	3	3	
3	PEC	PE-2	25CEC3203	FUNCTIONAL AND CONCURRENT PROGRAMMING	R	FCP	3	0	0	0	3	3	
4	PEC	PE-2	25CEC3204	CLOUD DEVOPS	R	CD	3	0	0	0	3	3	
5	PEC	PE-3	25CEC3305	CLOUD AND SERVERLESS COMPUTING	R	CSC	3	0	0	2	3.5	5	
6	PEC	PE-3	25CEC3305A	CLOUD AND SERVERLESS COMPUTING	A	CSC	4	1	0	2	5.5	7	
7	PEC	PE-3	25CEC3305E	CLOUD AND SERVERLESS COMPUTING	E	CSC	4	1	0	2	5.5	7	
8	PEC	PE-4	25CEC3406	ADVANCED COMPUTER ARCHITECTURE	R	ACA	3	0	0	0	3	3	
9	PEC	PE-4	25CEC3407	PARALLEL ALGORITHMS	R	PA	3	0	0	0	3	3	
10	PEC	PE-4	25CEC3408	CLOUD SECURITY	R	CS	3	0	0	0	3	3	
11	PEC	PE-4	25CEC3409	ARCHITECTING CLOUD SOLUTIONS*	R	ACS	3	0	0	0	3	3	
12	PEC	PE-5	25CEC3510	EDGE COMPUTING	R	EC	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
13	PEC	PE-5	25CEC3511	HIGH PERFORMANCE COMPUTING	R	HPC	3	0	0	0	3	3	
14	PEC	PE-5	25CEC3512	DESIGN OF DISTRIBUTED APPLICATIONS ON CLOUD (DDA)	R	DDAC	3	0	0	0	3	3	
15	PEC	PE-5	25CEC3513	CLOUD NETWORKING	R	CN	3	0	0	0	3	3	

38. SPECIALIZATION: CLOUD INFRASTRUCTURE DESIGN & ENGINEERING?

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CID3101	CLOUD INFRASTRUCTURE ENGINEERING	R	CIE	3	0	2	0	4	5	
2	PEC	PE-1	25CID3101A	CLOUD INFRASTRUCTURE ENGINEERING	A	CIE	4	1	2	0	6	7	
3	PEC	PE-1	25CID3101E	CLOUD INFRASTRUCTURE ENGINEERING	E	CIE	4	1	2	0	6	7	
4	PEC	PE-2	25CID3202	ENTERPRISE CLOUD COMPUTING: TECHNOLOGY, ARCHITECTURE, APPLICATIONS	R	ECT	3	0	0	0	3	3	
5	PEC	PE-2	25CID3203	ARCHITECTING HIGHLY AVAILABLE AND SCALABLE CLOUD ENVIRONMENTS	R	AHASCE	3	0	0	0	3	3	
6	PEC	PE-3	25CID3304	CLOUD INFRASTRUCTURE ARCHITECTURE AND ENGINEERING	R	CIA	3	0	0	2	3.5	5	
7	PEC	PE-3	25CID3304A	CLOUD INFRASTRUCTURE ARCHITECTURE AND ENGINEERING	A	CIA	4	1	0	2	5.5	7	
8	PEC	PE-3	25CID3304E	CLOUD INFRASTRUCTURE ARCHITECTURE AND ENGINEERING	E	CIA	4	1	0	2	5.5	7	
9	PEC	PE-4	25CID3405	RELIABLE CLOUD INFRASTRUCTURE: DESIGN AND PROCESS	R	RID	3	0	0	0	3	3	
10	PEC	PE-4	25CID3406	HYBRID CLOUD INTEGRATION AND MANAGEMENT	R	HCIM	3	0	0	0	3	3	
11	PEC	PE-5	25CID3507	CLOUD ENGINEERING	R	CE	3	0	0	0	3	3	
12	PEC	PE-5	25CID3508	CLOUD DATA MANAGEMENT AND STORAGE SOLUTIONS	R	CDMSS	3	0	0	0	3	3	

39. SPECIALIZATION: CLOUD NATIVE SECURITY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CNS3101	INTRODUCTION TO CLOUD NATIVE COMPUTING	R	ITCNC	3	0	2	0	4	5	
2	PEC	PE-1	25CNS3101A	INTRODUCTION TO CLOUD NATIVE COMPUTING	A	ITCNC	4	1	2	0	6	7	
3	PEC	PE-1	25CNS3101E	INTRODUCTION TO CLOUD NATIVE COMPUTING	E	ITCNC	4	1	2	0	6	7	
4	PEC	PE-2	25CNS3202	FUNDAMENTALS OF CLOUD SECURITY	R	FOCS	2	0	2	0	3	4	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
5	PEC	PE-3	25CNS3303	CONTAINER SECURITY	R	CTSY	3	0	0	2	3.5	5	
6	PEC	PE-3	25CNS3303A	CONTAINER SECURITY	A	CTSY	4	1	0	2	5.5	7	
7	PEC	PE-3	25CNS3303E	CONTAINER SECURITY	E	CTSY	4	1	0	2	5.5	7	
8	PEC	PE-4	25CNS3404	MICROSERVICES SECURITY	R	MSS	3	0	0	0	3	3	
9	PEC	PE-4	25CNS3405	INFRASTRUCTURE AS CODE SECURITY	R	ISACS	3	0	0	0	3	3	
10	PEC	PE-4	25CNS3406	IDENTITY AND ACCESS MANAGEMENT IN CLOUD NATIVE ENVIRONMENTS	R	IAMCNE	3	0	0	0	3	3	
11	PEC	PE-4	25CNS3407	NETWORK SECURITY IN CLOUD NATIVE ARCHITECTURES	R	NSCNA	3	0	0	0	3	3	
12	PEC	PE-5	25CNS3508	MONITORING AND LOGGING FOR CLOUD NATIVE SECURITY	R	MLCNS	3	0	0	0	3	3	
13	PEC	PE-5	25CNS3509	COMPLIANCE AND GOVERNANCE IN CLOUD NATIVE ENVIRONMENTS	R	CGCNE	3	0	0	0	3	3	
14	PEC	PE-5	25CNS3510	SERVERLESS SECURITY	R	SLSY	3	0	0	0	3	3	
15	PEC	PE-5	25CNS3512	FUTURE TRENDS IN CLOUD NATIVE SECURITY	R	FTCNS	3	0	0	0	3	3	

40. SPECIALIZATION: CLOUD NATIVE SOFTWARE ENGINEERING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CNE3101	FOUNDATIONS OF CLOUD NATIVE COMPUTING	R	FCNC	3	0	2	0	4	5	
2	PEC	PE-1	25CNE3101A	FOUNDATIONS OF CLOUD NATIVE COMPUTING	A	FCNC	4	1	2	0	6	7	
3	PEC	PE-1	25CNE3101E	FOUNDATIONS OF CLOUD NATIVE COMPUTING	E	FCNC	4	1	2	0	6	7	
4	PEC	PE-2	25CNE3202	CLOUD NATIVE APPLICATION DEVELOPMENT	R	CNAD	3	0	0	0	3	3	
5	PEC	PE-2	25CNE3203	CLOUD NATIVE DESIGN PROCESS	R	CNDP	3	0	0	0	3	3	
6	PEC	PE-3	25CNE3304	SOFTWARE ENGINEERING FOR CLOUD COMPUTING	R	SEC	3	0	0	2	3.5	5	
7	PEC	PE-3	25CNE3304A	SOFTWARE ENGINEERING FOR CLOUD COMPUTING	A	SEC	4	1	0	2	5.5	7	
8	PEC	PE-3	25CNE3304E	SOFTWARE ENGINEERING FOR CLOUD COMPUTING	E	SEC	4	1	0	2	5.5	7	
9	PEC	PE-4	25CNE3405	SERVERLESS COMPUTING AND EVENT-DRIVEN ARCHITECTURES	R	SCEDA	3	0	0	0	3	3	
10	PEC	PE-4	25CNE3406	CLOUD NATIVE SOFTWARE ARCHITECTURES	R	CNSA	3	0	0	0	3	3	
11	PEC	PE-5	25CNE3507	CLOUD NATIVE NETWORKING AND STORAGE SYSTEMS	R	CNNSS	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
12	PEC	PE-5	25CNE3508	CLOUD INFRASTRUCTURE AND VIRTUALIZATION	R	CIAV	3	0	0	0	3	3	

41. SPECIALIZATION: CLOUD-BASED SCIENTIFIC COMPUTING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CSC3101	FUNDAMENTALS OF CLOUD-BASED SCIENTIFIC COMPUTING	R	FCS	3	0	2	0	4	5	
2	PEC	PE-1	25CSC3101A	FUNDAMENTALS OF CLOUD-BASED SCIENTIFIC COMPUTING	A	FCS	4	1	2	0	6	7	
3	PEC	PE-1	25CSC3101E	FUNDAMENTALS OF CLOUD-BASED SCIENTIFIC COMPUTING	E	FCS	4	1	2	0	6	7	
4	PEC	PE-2	25CSC3202	DEVELOPMENT OF SCIENTIFIC APPLICATIONS USING CLOUD-BASED TECHNOLOGY	R	DSA	3	0	0	0	3	3	
5	PEC	PE-2	25CSC3203	DISTRIBUTED SCIENTIFIC COMPUTING IN THE CLOUD	R	DSCC	3	0	0	0	3	3	
6	PEC	PE-3	25CSC3304	CLOUD BASED HIGH PERFORMANCE COMPUTING	R	CHC	3	0	0	2	3.5	5	
7	PEC	PE-3	25CSC3304A	CLOUD BASED HIGH PERFORMANCE COMPUTING	A	CHC	4	1	0	2	5.5	7	
8	PEC	PE-3	25CSC3304E	CLOUD BASED HIGH PERFORMANCE COMPUTING	E	CHC	4	1	0	2	5.5	7	
9	PEC	PE-4	25CSC3405	CLOUD-BASED GRID COMPUTING	R	CGC	3	0	0	0	3	3	
10	PEC	PE-4	25CSC3406	CLOUD COMPUTING FOR SCIENTIFIC DISCOVERY	R	CCFSD	3	0	0	0	3	3	
11	PEC	PE-5	25CSC3507	CLOUD-BASED SCALABLE COMPUTING AND BIG DATA ANALYTICS	R	CSCBD	3	0	0	0	3	3	
12	PEC	PE-5	25CSC3508	PARALLEL COMPUTING FOR SCIENTISTS USING CLOUD PLATFORMS	R	PCSCP	3	0	0	0	3	3	

42. SPECIALIZATION: CROSS PLATFORM DEVELOPMENT FRAMEWORKS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CPD3101	FUNDAMENTALS OF MOBILE APPLICATION DEVELOPMENT	R	FMAD	3	0	2	0	4	5	
2	PEC	PE-1	25CPD3101A	FUNDAMENTALS OF MOBILE APPLICATION DEVELOPMENT	A	FMAD	4	1	2	0	6	7	
3	PEC	PE-1	25CPD3101E	FUNDAMENTALS OF MOBILE APPLICATION DEVELOPMENT	E	FMAD	4	1	2	0	6	7	
4	PEC	PE-2	25CPD3202	REACT NATIVE FOR ANDROID AND IOS DEVELOPMENT	R	RNA	3	0	0	0	3	3	
5	PEC	PE-2	25CPD3203	FRAMEWORK BASED CROSS PLATFORM APP DEVELOPMENT	R	FBCPD	3	0	0	0	3	3	
6	PEC	PE-3	25CPD3304	SECURE MOBILE APPLICATION DEVELOPMENT	R	SMAD	3	0	0	2	3.5	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
7	PEC	PE-3	25CPD3304A	SECURE MOBILE APPLICATION DEVELOPMENT	A	SMAD	4	1	0	2	5.5	7	
8	PEC	PE-3	25CPD3304E	SECURE MOBILE APPLICATION DEVELOPMENT	E	SMAD	4	1	0	2	5.5	7	
9	PEC	PE-4	25CPD3406	META REACT NATIVE SPECIALIZATION	R	MRNS	3	0	0	0	3	3	
10	PEC	PE-4	25CPD3405	UX DESIGN	R	UXD	3	0	0	0	3	3	
11	PEC	PE-5	25CPD3507	ADVANCED MOBILE APPLICATION DEVELOPMENT	R	AMAD	3	0	0	0	3	3	
12	PEC	PE-5	25CPD3508	CROSS PLATFORM USER INTERFACE DESIGN	R	CPED	3	0	0	0	3	3	

43. SPECIALIZATION: CYBER PHYSICAL SYSTEMS & IOT

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CPS3101	IOT SENSING AND ACTUATING DEVICES	R	ISAD	3	0	2	0	4	5	
2	PEC	PE-1	25CPS3101A	IOT SENSING AND ACTUATING DEVICES	A	ISAD	4	1	2	0	6	7	
3	PEC	PE-1	25CPS3101E	IOT SENSING AND ACTUATING DEVICES	E	ISAD	4	1	2	0	6	7	
4	PEC	PE-2	25CPS3202	INTERNET OF THINGS ARCHITECTURES AND PROTOCOLS	R	IOTAP	3	0	0	0	3	3	
5	PEC	PE-3	25CPS3303	CYBER PHYSICAL SYSTEMS	R	CPS	3	0	0	2	3.5	5	
6	PEC	PE-3	25CPS3303A	CYBER PHYSICAL SYSTEMS	A	CPS	4	1	0	2	5.5	7	
7	PEC	PE-3	25CPS3303E	CYBER PHYSICAL SYSTEMS	E	CPS	4	1	0	2	5.5	7	
8	PEC	PE-4	25CPS3404	FOUNDATIONS OF HYBRID AND EMBEDDED SYSTEMS	R	DVP	3	0	0	0	3	3	
9	PEC	PE-5	25CPS3507	EDGE COMPUTING	R	EC	3	0	0	0	3	3	
10	PEC	PE-5	25CPS3505	CLOUD COMPUTING FOR IOT ENGINEERS	R	CCIOTE	3	0	0	0	3	3	
11	PEC	PE-5	25CPS3506	WIRELESS SENSOR NETWORKS	R	WSN	3	0	0	0	3	3	

44. SPECIALIZATION: CYBER SECURITY & BLOCKCHAIN TECHNOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CSB3101	CRYPT ANALYSIS & CYBER DEFENSE	R	CACD	3	0	2	0	4	5	
2	PEC	PE-1	25CSB3101A	CRYPT ANALYSIS & CYBER DEFENSE	A	CACD	4	1	2	0	6	7	
3	PEC	PE-1	25CSB3101E	CRYPT ANALYSIS & CYBER DEFENSE	E	CACD	4	1	2	0	6	7	
4	PEC	PE-2	25CSB3202	NETWORK AND INFRASTRUCTURE SECURITY	R	NS	3	0	0	0	3	3	
5	PEC	PE-2	25CSB3203	INTRODUCTION TO BLOCKCHAIN AND CRYPTO CURRENCIES	R	IBCC	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
6	PEC	PE-3	25CSB3304	DIGITAL FORENSICS	R	DF	3	0	0	2	3.5	5	
7	PEC	PE-3	25CSB3304A	DIGITAL FORENSICS	A	DF	4	1	0	2	5.5	7	
8	PEC	PE-3	25CSB3304E	DIGITAL FORENSICS	E	DF	4	1	0	2	5.5	7	
9	PEC	PE-4	25CSB3405	DATABASE SYSTEM AND SECURITY	R	DSS	3	0	0	0	3	3	
10	PEC	PE-4	25CSB3406	PROGRAMMING FOR SMART CONTRACTS	R	PSC	3	0	0	0	3	3	
11	PEC	PE-4	25CSB3407	CLOUD SECURITY	R	CS	3	0	0	0	3	3	
12	PEC	PE-5	25CSB3508	SECURE SOFTWARE ENGINEERING	R	SSE	3	0	0	0	3	3	
13	PEC	PE-5	25CSB3509	WEB SECURITY	R	WS	3	0	0	0	3	3	
14	PEC	PE-5	25CSB3510	SECURITY GOVERNANCE & MANAGEMENT	R	SGM	3	0	0	0	3	3	

45. SPECIALIZATION: DATA COMMUNICATIONS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25DCM3101	TCP/IP AND OTHER PROTOCOL SUITE	R	TCP	3	0	2	0	4	5	
2	PEC	PE-1	25DCM3101A	TCP/IP AND OTHER PROTOCOL SUITE	A	TCP	4	1	2	0	6	7	
3	PEC	PE-1	25DCM3101E	TCP/IP AND OTHER PROTOCOL SUITE	E	TCP	4	1	2	0	6	7	
4	PEC	PE-2	25DCM3202	CLOUD COMPUTING AND NETWORKS SECURITY	R	CCNS	3	0	0	0	3	3	
5	PEC	PE-3	25DCM3303	VOIP AND BROADBAND NETWORKS	R	VOIP	3	0	0	2	3.5	5	
6	PEC	PE-3	25DCM3303A	VOIP AND BROADBAND NETWORKS	A	VOIP	4	1	0	2	5.5	7	
7	PEC	PE-3	25DCM3303E	VOIP AND BROADBAND NETWORKS	E	VOIP	4	1	0	2	5.5	7	
8	PEC	PE-4	25DCM3404	5G MOBILE AND IEEE STANDARDS	R	5GMI	3	0	0	0	3	3	
9	PEC	PE-5	25DCM3505	IP MULTIMEDIA SUB-SYSTEM AND EMERGING TECHNOLOGIES	R	IMSET	3	0	0	0	3	3	

46. SPECIALIZATION: DATA ENGINEERING FOR AI

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25DEA3101	FUNDAMENTALS OF DATA ENGINEERING	R	FDE	3	0	2	0	4	5	
2	PEC	PE-1	25DEA3101A	FUNDAMENTALS OF DATA ENGINEERING	A	FDE	4	1	2	0	6	7	
3	PEC	PE-1	25DEA3101E	FUNDAMENTALS OF DATA ENGINEERING	E	FDE	4	1	2	0	6	7	
4	PEC	PE-2	25DEA3202	DATA EXPLORATION AND PREPARATION	R	DEP	3	0	0	0	3	3	
5	PEC	PE-3	25DEA3303	BIG DATA TECHNOLOGIES	R	BDT	3	0	0	2	3.5	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
6	PEC	PE-3	25DEA3303A	BIG DATA TECHNOLOGIES	A	BDT	4	1	0	2	5.5	7	
7	PEC	PE-3	25DEA3303E	BIG DATA TECHNOLOGIES	E	BDT	4	1	0	2	5.5	7	
8	PEC	PE-4	25DEA3404	DATA WAREHOUSING AND BUSINESS INTELLIGENCE	R	DWBI	3	0	0	0	3	3	
9	PEC	PE-5	25DEA3505	MACHINE LEARNING ENGINEERING FOR BIG DATA	R	MLEBD	3	0	0	0	3	3	

47. SPECIALIZATION: DATA SCIENCE & BIG DATA ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25DSB3101	DATA ANALYTICS AND VISUALIZATION	R	DAV	3	0	2	0	4	5	
2	PEC	PE-1	25DSB3101A	DATA ANALYTICS AND VISUALIZATION	A	DAV	4	1	2	0	6	7	
3	PEC	PE-1	25DSB3101E	DATA ANALYTICS AND VISUALIZATION	E	DAV	4	1	2	0	6	7	
4	PEC	PE-2	25DSB3202	DATA WAREHOUSING AND MINING	R	DWHM	3	0	0	0	3	3	
5	PEC	PE-3	25DSB3303	BIG DATA ANALYTICS	R	BDA	3	0	0	2	3.5	5	
6	PEC	PE-3	25DSB3303A	BIG DATA ANALYTICS	A	BDA	4	1	0	2	5.5	7	
7	PEC	PE-3	25DSB3303E	BIG DATA ANALYTICS	E	BDA	4	1	0	2	5.5	7	
8	PEC	PE-4	25DSB3404	BIG DATA OPTIMIZATION	R	BDO	3	0	0	0	3	3	
9	PEC	PE-4	25DSB3407	DATA ANALYTICS ON CLOUD	R	DAC	3	0	0	0	3	3	
10	PEC	PE-4	25DSB3408	DIGITAL MEDIA ANALYTICS	R	DMA	3	0	0	0	3	3	
11	PEC	PE-5	25DSB3509	ADVANCED DATABASES	R	AD	3	0	0	0	3	3	
12	PEC	PE-5	25DSB3510	BUSINESS ANALYTICS	R	BA	3	0	0	0	3	3	
13	PEC	PE-5	25DSB3511	GRAPH & WEB ANALYTICS	R	GWA	3	0	0	0	3	3	
14	PEC	PE-5	25DSB3512	DATA GOVERNANCE ON CLOUD	R	DGC	3	0	0	0	3	3	

48. SPECIALIZATION: DISTRIBUTED LEDGER ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25DLA3101	BLOCKCHAIN SYSTEMS AND DISTRIBUTED LEDGER FOUNDATIONS	R	SNTSA	3	0	2	0	4	5	
2	PEC	PE-1	25DLA3101A	BLOCKCHAIN SYSTEMS AND DISTRIBUTED LEDGER FOUNDATIONS	A	SNTSA	4	1	2	0	6	7	
3	PEC	PE-1	25DLA3101E	BLOCKCHAIN SYSTEMS AND DISTRIBUTED LEDGER FOUNDATIONS	E	SNTSA	4	1	2	0	6	7	
4	PEC	PE-2	25DLA3202	MACHINE LEARNING FOR FINANCIAL RISK & BEHAVIORAL INTELLIGENCE	R	MLFRBI	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
5	PEC	PE-2	25DLA3203	BLOCKCHAIN TECHNOLOGY FOR DIGITAL TRANSFORMATION	R	BTDI	3	0	0	0	3	3	
6	PEC	PE-3	25DLA3304	MULTI AGENT SYSTEMS	R	MAS	3	0	0	2	3.5	5	
7	PEC	PE-3	25DLA3304A	MULTI AGENT SYSTEMS	A	MAS	4	1	0	2	5.5	7	
8	PEC	PE-3	25DLA3304E	MULTI AGENT SYSTEMS	E	MAS	4	1	0	2	5.5	7	
9	PEC	PE-3	25DLA3303	SMART CONTRACTS & WEB3 APPLICATION ENGINEERING	R	SCW3	3	0	0	2	3.5	5	
10	PEC	PE-3	25DLA3303A	SMART CONTRACTS & WEB3 APPLICATION ENGINEERING	A	SCW3	4	1	0	2	5.5	7	
11	PEC	PE-3	25DLA3303E	SMART CONTRACTS & WEB3 APPLICATION ENGINEERING	E	SCW3	4	1	0	2	5.5	7	
12	PEC	PE-4	25DLA3405	BLOCKCHAIN ANALYTICS	R	BCA	3	0	0	0	3	3	
13	PEC	PE-4	25DLA3406	CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY	R	CBT	3	0	0	0	3	3	
14	PEC	PE-4	25DLA3404	TOKENOMICS, DIGITAL ASSETS & CRYPTO INFRASTRUCTURE	R	TDCI	3	0	0	0	3	3	
15	PEC	PE-5	25DLA3507	DISTRIBUTED LEDGER ARCHITECTURE FOR AUTOMATION	R	DLAA	3	0	0	0	3	3	
16	PEC	PE-5	25DLA3508	PERMISSIONED DISTRIBUTED LEDGER	R	PDL	3	0	0	0	3	3	
17	PEC	PE-5	25DLA3505	PRIVACY, COMPLIANCE & DECENTRALIZED SECURITY ENGINEERING	R	PCDS	3	0	0	0	3	3	

49. SPECIALIZATION: EMBEDDED SYSTEMS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25EDS3101	ADVANCED EMBEDDED SYSTEMS	R	AES	3	0	2	0	4	5	
2	PEC	PE-1	25EDS3101A	ADVANCED EMBEDDED SYSTEMS	A	AES	4	1	2	0	6	7	
3	PEC	PE-1	25EDS3101E	ADVANCED EMBEDDED SYSTEMS	E	AES	4	1	2	0	6	7	
4	PEC	PE-2	25EDS3202	EMBEDDED SYSTEMS FOR IOT	R	ESIOT	3	0	0	0	3	3	
5	PEC	PE-3	25EDS3303	EMBEDDED AND REAL-TIME SYSTEMS	R	ERTS	3	0	0	2	3.5	5	
6	PEC	PE-3	25EDS3303A	EMBEDDED AND REAL-TIME SYSTEMS	A	ERTS	4	1	0	2	5.5	7	
7	PEC	PE-3	25EDS3303E	EMBEDDED AND REAL-TIME SYSTEMS	E	ERTS	4	1	0	2	5.5	7	
8	PEC	PE-4	25EDS3404	CLOUD ARCHITECTURE IN IOT	R	CAIOT	3	0	0	0	3	3	
9	PEC	PE-5	25EDS3505	EDGE COMPUTING AND DATA ANALYTICS IN IOT	R	ECDAI	3	0	0	0	3	3	

50. SPECIALIZATION: E-MOBILITY ENGINEERING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25EME3101	POWER TRAIN DESIGN FOR ELECTRIC VEHICLE	R	PTDEV	3	0	2	0	4	5	
2	PEC	PE-1	25EME3101A	POWER TRAIN DESIGN FOR ELECTRIC VEHICLE	A	PTDEV	4	1	2	0	6	7	
3	PEC	PE-1	25EME3101E	POWER TRAIN DESIGN FOR ELECTRIC VEHICLE	E	PTDEV	4	1	2	0	6	7	
4	PEC	PE-2	25EME3202	COMMUNICATION PROTOCOLS AND TESTING OF ELECTRIC VEHICLE	R	CPTEV	3	0	0	0	3	3	
5	PEC	PE-2	25EME3203	AUTONOMOUS VEHICLES AND AUTOMOTIVE ELECTRONICS	R	AVAE	3	0	0	0	3	3	
6	PEC	PE-3	25EME3304	CHARGING STATIONS FOR ELECTRIC VEHICLES	R	CSEV	3	0	0	2	3.5	5	
7	PEC	PE-3	25EME3304A	CHARGING STATIONS FOR ELECTRIC VEHICLES	A	CSEV	4	1	0	2	5.5	7	
8	PEC	PE-3	25EME3304E	CHARGING STATIONS FOR ELECTRIC VEHICLES	E	CSEV	4	1	0	2	5.5	7	
9	PEC	PE-4	25EME3405	INTRODUCTION TO BATTERY-MANAGEMENT SYSTEMS	R	IBMS	3	0	0	0	3	3	
10	PEC	PE-4	25EME3406	BATTERY STATE ESTIMATION ALGORITHMS FOR ELECTRIC VEHICLE	R	BSAEV	3	0	0	0	3	3	
11	PEC	PE-5	25EME3507	AI AND IOT FOR ELECTRIC VEHICLE	R	AIEV	3	0	0	0	3	3	
12	PEC	PE-5	25EME3508	EV SYSTEM AND WIRING DESIGN	R	ESWS	3	0	0	0	3	3	

51. SPECIALIZATION: ENGINEERING DESIGN

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25EGD3101	ADVANCED STRENGTH OF MATERIALS	R	ASM	3	0	2	0	4	5	
2	PEC	PE-1	25EGD3101A	ADVANCED STRENGTH OF MATERIALS	A	ASM	4	1	2	0	6	7	
3	PEC	PE-1	25EGD3101E	ADVANCED STRENGTH OF MATERIALS	E	ASM	4	1	2	0	6	7	
4	PEC	PE-2	25EGD3202	CREEP, FATIGUE AND FRACTURE MECHANICS	R	CFFM	3	0	0	0	3	3	
5	PEC	PE-2	25EGD3203	THEORY OF ELASTICITY AND PLASTICITY	R	KDARS	3	0	0	0	3	3	
6	PEC	PE-3	25EGD3304	MODELING, ANALYSIS AND DESIGN OF ROBOTIC SYSTEMS	R	MADRS	3	0	0	2	3.5	5	
7	PEC	PE-3	25EGD3304A	MODELING, ANALYSIS AND DESIGN OF ROBOTIC SYSTEMS	A	MADRS	4	1	0	2	5.5	7	
8	PEC	PE-3	25EGD3304E	MODELING, ANALYSIS AND DESIGN OF ROBOTIC SYSTEMS	E	MADRS	4	1	0	2	5.5	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
9	PEC	PE-4	25EGD3405	SUSTAINABLE DESIGN AND SOCIAL INNOVATION IN ENGINEERING DESIGN	R	SDSIED	3	0	0	0	3	3	
10	PEC	PE-4	25EGD3406	ADVANCED VIBRATIONS	R	AV	3	0	0	0	3	3	
11	PEC	PE-5	25EGD3507	MECHANICS OF COMPOSITE MATERIALS	R	MOCM	3	0	0	0	3	3	
12	PEC	PE-5	25EGD3508	HYBRID AND ELECTRIC VEHICLE DESIGN	R	HEVD	3	0	0	0	3	3	

52. SPECIALIZATION: GAME DEVELOPMENT & UX DESIGN

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25GDU3101	PROGRAMMING FOR GAME DEVELOPMENT	R	PGD	3	0	2	0	4	5	
2	PEC	PE-1	25GDU3101A	PROGRAMMING FOR GAME DEVELOPMENT	A	PGD	4	1	2	0	6	7	
3	PEC	PE-1	25GDU3101E	PROGRAMMING FOR GAME DEVELOPMENT	E	PGD	4	1	2	0	6	7	
4	PEC	PE-2	25GDU3202	UX DESIGN	R	UXD	3	0	0	0	3	3	
5	PEC	PE-3	25GDU3303	AR AND VR APPLICATION DEVELOPMENT	R	AR&VR	3	0	0	2	3.5	5	
6	PEC	PE-3	25GDU3303A	AR AND VR APPLICATION DEVELOPMENT	A	AR&VR	4	1	0	2	5.5	7	
7	PEC	PE-3	25GDU3303E	AR AND VR APPLICATION DEVELOPMENT	E	AR&VR	4	1	0	2	5.5	7	
8	PEC	PE-4	25GDU3404	COMPUTER GRAPHICS	R	CG	3	0	0	0	3	3	
9	PEC	PE-4	25GDU3405	3D MODELLING & ANIMATION	R	3DMA	3	0	0	0	3	3	
10	PEC	PE-5	25GDU3506	PRINCIPLES OF GAME DESIGN	R	PRGD	3	0	0	0	3	3	
11	PEC	PE-5	25GDU3507	BUSINESS OF GAMES & ENTREPRENEURSHIP	R	BGE	3	0	0	0	3	3	

53. SPECIALIZATION: GREEN ENERGY TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25GET3101	SOLAR PV AND MICRO ENERGY TECHNOLOGIES	R	SPMET	3	0	2	0	4	5	
2	PEC	PE-1	25GET3101A	SOLAR PV AND MICRO ENERGY TECHNOLOGIES	A	SPMET	4	1	2	0	6	7	
3	PEC	PE-1	25GET3101E	SOLAR PV AND MICRO ENERGY TECHNOLOGIES	E	SPMET	4	1	2	0	6	7	
4	PEC	PE-2	25GET3202	WIND AND ENERGY STORAGE TECHNOLOGIES	R	WEST	3	0	0	0	3	3	
5	PEC	PE-2	25GET3203	ENERGY ECONOMICS AND POLICY	R	EEP	3	0	0	0	3	3	
6	PEC	PE-3	25GET3304	GRID INTEGRATION OF RENEWABLE ENERGY SOURCES	R	GIRES	3	0	0	2	3.5	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
7	PEC	PE-3	25GET3304A	GRID INTEGRATION OF RENEWABLE ENERGY SOURCES	A	GIRES	4	1	0	2	5.5	7	
8	PEC	PE-3	25GET3304E	GRID INTEGRATION OF RENEWABLE ENERGY SOURCES	E	GIRES	4	1	0	2	5.5	7	
9	PEC	PE-4	25GET3405	ENERGY MANAGEMENT AND GREEN BUILDING	R	EMGB	3	0	0	0	3	3	
10	PEC	PE-4	25GET3406	HYDROGEN FUEL CELL TECHNOLOGY	R	HFCT	3	0	0	0	3	3	
11	PEC	PE-5	25GET3507	AI AND IOT FOR GREEN ENERGY INTEGRATION	R	AIGEI	3	0	0	0	3	3	
12	PEC	PE-5	25GET3508	POWER ELECTRONICS FOR RENEWABLE ENERGY SYSTEMS	R	PERES	3	0	0	0	3	3	

54. SPECIALIZATION: GENERATIVE AI & MACHINE LEARNING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25GAM3101	NATURAL LANGUAGE PROCESSING AND APPLICATIONS	R	NLPA	3	0	2	0	4	5	
2	PEC	PE-1	25GAM3101A	NATURAL LANGUAGE PROCESSING AND APPLICATIONS	A	NLPA	4	1	2	0	6	7	
3	PEC	PE-1	25GAM3101E	NATURAL LANGUAGE PROCESSING AND APPLICATIONS	E	NLPA	4	1	2	0	6	7	
4	PEC	PE-2	25GAM3202	DEEP LEARNING FOR COMPUTER VISION APPLICATIONS	R	DLCVA	3	0	0	0	3	3	
5	PEC	PE-3	25GAM3303	GENERATIVE AI ARCHITECTURES	R	GAA	3	0	0	2	3.5	5	
6	PEC	PE-3	25GAM3303A	GENERATIVE AI ARCHITECTURES	A	GAA	4	1	0	2	5.5	7	
7	PEC	PE-3	25GAM3303E	GENERATIVE AI ARCHITECTURES	E	GAA	4	1	0	2	5.5	7	
8	PEC	PE-4	25GAM3404	DESIGN OF LARGE LANGUAGE MODELS	R	DLLM	3	0	0	0	3	3	
9	PEC	PE-5	25GAM3505	AI PRODUCT DEVELOPMENT AND MANAGEMENT	R	APDM	3	0	0	0	3	3	

55. SPECIALIZATION: HARDWARE-SOFTWARE CO-DESIGN FOR SECURITY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25HSS3101	INTRODUCTION TO HARDWARE-SOFTWARE CO-DESIGN	R	ITHSCD	3	0	2	0	4	5	
2	PEC	PE-1	25HSS3101A	INTRODUCTION TO HARDWARE-SOFTWARE CO-DESIGN	A	ITHSCD	4	1	2	0	6	7	
3	PEC	PE-1	25HSS3101E	INTRODUCTION TO HARDWARE-SOFTWARE CO-DESIGN	E	ITHSCD	4	1	2	0	6	7	
4	PEC	PE-2	25HSS3202	FUNDAMENTALS OF COMPUTER SECURITY	R	FOCS	3	0	0	0	3	3	
5	PEC	PE-3	25HSS3303	HARDWARE SECURITY MECHANISMS	R	HSM	3	0	0	2	3.5	5	
6	PEC	PE-3	25HSS3303A	HARDWARE SECURITY MECHANISMS	A	HSM	4	1	0	2	5.5	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
7	PEC	PE-3	25HSS3303E	HARDWARE SECURITY MECHANISMS	E	HSM	4	1	0	2	5.5	7	
8	PEC	PE-4	25HSS3404	SOFTWARE SECURITY PRINCIPLES	R	SSP	3	0	0	0	3	3	
9	PEC	PE-4	25HSS3405	SECURE CO-DESIGN METHODOLOGIES	R	SCDM	3	0	0	0	3	3	
10	PEC	PE-4	25HSS3406	HARDWARE TROJAN DETECTION AND PREVENTION	R	HTDAP	3	0	0	0	3	3	
11	PEC	PE-5	25HSS3507	SIDE-CHANNEL ATTACKS AND COUNTER MEASURES	R	SCACM	3	0	0	0	3	3	
12	PEC	PE-5	25HSS3508	FORMAL METHODS FOR HARDWARE- SOFTWARE SECURITY	R	FMHSS	3	0	0	0	3	3	
13	PEC	PE-5	25HSS3509	TRUSTED PLATFORM MODULES AND SECURE ELEMENTS	R	TPMASE	3	0	0	0	3	3	
14	PEC	PE-5	25HSS3511	HARDWARE-SOFTWARE CO-DESIGN	R	HSCCS	3	0	0	0	3	3	
15	PEC	PE-5	25HSS3512	FUTURE TRENDS IN HARDWARE- SOFTWARE CO-DESIGN FOR SECURITY	R	FTHSCS	3	0	0	0	3	3	

56. SPECIALIZATION: HEALTHCARE DATA ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25HDA3101	INTELLIGENT SYSTEMS FOR DISEASE PREDICTION & DRUG DISCOVERY	R	ISDPDD	3	0	2	0	4	5	
2	PEC	PE-1	25HDA3101A	INTELLIGENT SYSTEMS FOR DISEASE PREDICTION & DRUG DISCOVERY	A	ISDPDD	4	1	2	0	6	7	
3	PEC	PE-1	25HDA3101E	INTELLIGENT SYSTEMS FOR DISEASE PREDICTION & DRUG DISCOVERY	E	ISDPDD	4	1	2	0	6	7	
4	PEC	PE-2	25HDA3204	PYTHON FOR GENOMIC DATA SCIENCE	R	PFGDS	3	0	0	0	3	3	
5	PEC	PE-2	25HDA3202	BIO MEDICAL INFORMATICS	R	BMI	3	0	0	0	3	3	
6	PEC	PE-2	25HDA3203	GENETIC PROGRAMMING	R	GP	3	0	0	0	3	3	
7	PEC	PE-3	25HDA3305	COMPUTATIONAL NEUROSCIENCE	R	CNSE	3	0	0	2	3.5	5	
8	PEC	PE-3	25HDA3305A	COMPUTATIONAL NEUROSCIENCE	A	CNSE	4	1	0	2	5.5	7	
9	PEC	PE-3	25HDA3305E	COMPUTATIONAL NEUROSCIENCE	E	CNSE	4	1	0	2	5.5	7	
10	PEC	PE-4	25HDA3406	NGS SEQUENCING AND DATA ANALYSIS	R	NGSDA	3	0	0	0	3	3	
11	PEC	PE-4	25HDA3407	INTRODUCTION TO GENOMIC TECHNOLOGIES	R	IGT	3	0	0	0	3	3	
12	PEC	PE-5	25HDA3511	EPI GENETIC CONTROL FOR GENE EXPRESSION	R	ECBI	3	0	0	0	3	3	
13	PEC	PE-5	25HDA3510	GENOMIC DATASCIENCE AND CLUSTERING	R	GDSC	3	0	0	0	3	3	
14	PEC	PE-5	25HDA3509	MOLECULAR MODELLING AND DRUG DESIGN	R	MMOD	3	0	0	0	3	3	

57. SPECIALIZATION: INDUSTRIAL AUTOMATION

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25ILA3101	INTRODUCTION TO INDUSTRIAL INTERNET OF THINGS	R	IIIoT	3	0	2	0	4	5	
2	PEC	PE-1	25ILA3101A	INTRODUCTION TO INDUSTRIAL INTERNET OF THINGS	A	IIIoT	4	1	2	0	6	7	
3	PEC	PE-1	25ILA3101E	INTRODUCTION TO INDUSTRIAL INTERNET OF THINGS	E	IIIoT	4	1	2	0	6	7	
4	PEC	PE-2	25ILA3202	INDUSTRIAL AUTOMATION AND ROBOTICS	R	IAR	3	0	0	0	3	3	
5	PEC	PE-2	25ILA3203	EDGE COMPUTING FOR INDUSTRY 4.0	R	ECI	3	0	0	0	3	3	
6	PEC	PE-3	25ILA3304	INDUSTRIAL DRIVES AND CONTROL	R	ID&C	3	0	0	2	3.5	5	
7	PEC	PE-3	25ILA3304A	INDUSTRIAL DRIVES AND CONTROL	A	ID&C	4	1	0	2	5.5	7	
8	PEC	PE-3	25ILA3304E	INDUSTRIAL DRIVES AND CONTROL	E	ID&C	4	1	0	2	5.5	7	
9	PEC	PE-4	25ILA3405	INDUSTRIAL COMMUNICATION PROTOCOLS AND CYBER SECURITY	R	ICPCS	3	0	0	0	3	3	
10	PEC	PE-4	25ILA3406	DIGITAL MANUFACTURING AND DESIGN	R	DMD	3	0	0	0	3	3	
11	PEC	PE-5	25ILA3507	SMART SENSORS AND SENSOR NETWORKING	R	SSSN	3	0	0	0	3	3	
12	PEC	PE-5	25ILA3508	PLC PROGRAMMING AND CONTROL	R	PLCPC	3	0	0	0	3	3	

58. SPECIALIZATION: INDUSTRIAL BIOTECHNOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25IBT3101	PHARMACEUTICAL BIOTECHNOLOGY	R	PBT	3	0	2	0	4	5	
2	PEC	PE-1	25IBT3101A	PHARMACEUTICAL BIOTECHNOLOGY	A	PBT	4	1	2	0	6	7	
3	PEC	PE-1	25IBT3101E	PHARMACEUTICAL BIOTECHNOLOGY	E	PBT	4	1	2	0	6	7	
4	PEC	PE-2	25IBT3202	PHARMACOVIGILANCE AND SAFETY	R	PCS	3	0	0	0	3	3	
5	PEC	PE-2	25IBT3203	BIOPROCESS ECONOMICS AND PLANT DESIGN	R	BEPD	3	0	0	0	3	3	
6	PEC	PE-3	25IBT3304	ENZYME ENGINEERING	R	EE	3	0	0	2	3.5	5	
7	PEC	PE-3	25IBT3304A	ENZYME ENGINEERING	A	EE	4	1	0	2	5.5	7	
8	PEC	PE-3	25IBT3304E	ENZYME ENGINEERING	E	EE	4	1	0	2	5.5	7	
9	PEC	PE-4	25IBT3405	BIOPROCESS VALIDATION AND CGMP	R	BVCGMP	3	0	2	0	4	5	
10	PEC	PE-4	25IBT3406	FOOD TECHNOLOGY	R	FT	3	0	0	0	3	3	
11	PEC	PE-5	25IBT3507	MICROBIAL TECHNOLOGY	R	MBT	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
12	PEC	PE-5	25IBT3508	METABOLIC ENGINEERING	R	MBE	3	0	0	0	3	3	

59. SPECIALIZATION: IOT ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25IOT3101	INDUSTRIAL INTERNET OF THINGS	R	IIOT	3	0	2	0	4	5	
2	PEC	PE-1	25IOT3101A	INDUSTRIAL INTERNET OF THINGS	A	IIOT	4	1	2	0	6	7	
3	PEC	PE-1	25IOT3101E	INDUSTRIAL INTERNET OF THINGS	E	IIOT	4	1	2	0	6	7	
4	PEC	PE-2	25IOT3202	EDGE COMPUTING	R	EC	3	0	0	0	3	3	
5	PEC	PE-2	25IOT3203	PRECISION AGRICULTURE	R	PA	3	0	0	0	3	3	
6	PEC	PE-2	25IOT3204	SMART FARMING	R	SF	3	0	0	0	3	3	
7	PEC	PE-3	25IOT3305	DEEP LEARNING	R	DL	3	0	0	2	3.5	5	
8	PEC	PE-3	25IOT3305A	DEEP LEARNING	A	DL	4	1	0	2	5.5	7	
9	PEC	PE-3	25IOT3305E	DEEP LEARNING	E	DL	4	1	0	2	5.5	7	
10	PEC	PE-4	25IOT3406	DATA VISUALIZATION TECHNIQUES	R	DVT	3	0	0	0	3	3	
11	PEC	PE-4	25IOT3407	APPLIED MACHINE LEARNING FOR AGRICULTURE	R	AMLA	3	0	0	0	3	3	
12	PEC	PE-5	25IOT3508	BIG DATA ANALYTICS	R	BDA	3	0	0	0	3	3	

60. SPECIALIZATION: MEDICAL BIOTECHNOLOGY

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25MBT3101	STEM CELL TECHNOLOGY	R	SCT	3	0	2	0	4	5	
2	PEC	PE-1	25MBT3101A	STEM CELL TECHNOLOGY	A	SCT	4	1	2	0	6	7	
3	PEC	PE-1	25MBT3101E	STEM CELL TECHNOLOGY	E	SCT	4	1	2	0	6	7	
4	PEC	PE-2	25MBT3203	NANOBIOTECHNOLOGY	R	TE	3	0	0	0	3	3	
5	PEC	PE-2	25MBT3202	VIROLOGY	R	VR	3	0	0	0	3	3	
6	PEC	PE-3	25MBT3304	HEALTHCARE BIOTECHNOLOGY	R	HBT	3	0	0	2	3.5	5	
7	PEC	PE-3	25MBT3304A	HEALTHCARE BIOTECHNOLOGY	A	HBT	4	1	0	2	5.5	7	
8	PEC	PE-3	25MBT3304E	HEALTHCARE BIOTECHNOLOGY	E	HBT	4	1	0	2	5.5	7	
9	PEC	PE-4	25MBT3406	NEUROBIOLOGY	R	NB	3	0	0	0	3	3	
10	PEC	PE-4	25MBT3405	CANCER BIOLOGY	R	CB	3	0	0	0	3	3	
11	PEC	PE-5	25MBT3508	TISSUE ENGINEERING	R	NBT	3	0	0	0	3	3	
12	PEC	PE-5	25MBT3507	BIOELECTRONICS AND BIOSENSORS	R	BB	3	0	0	0	3	3	

61. SPECIALIZATION: NANO TECHNOLOGY & OPTOELECTRONICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25NTO3102	NANOSCALE ENGINEERING FOR CLEAN ENERGY	R	NEC	3	0	2	0	4	5	
2	PEC	PE-1	25NTO3102A	NANOSCALE ENGINEERING FOR CLEAN ENERGY	A	NEC	4	1	2	0	6	7	
3	PEC	PE-1	25NTO3102E	NANOSCALE ENGINEERING FOR CLEAN ENERGY	E	NEC	4	1	2	0	6	7	
4	PEC	PE-1	25NTO3101	THIN FILM TECHNOLOGIES FOR NANOELECTRONICS	R	TTN	3	0	2	0	4	5	
5	PEC	PE-1	25NTO3101A	THIN FILM TECHNOLOGIES FOR NANOELECTRONICS	A	TTN	4	1	2	0	6	7	
6	PEC	PE-1	25NTO3101E	THIN FILM TECHNOLOGIES FOR NANOELECTRONICS	E	TTN	4	1	2	0	6	7	
7	PEC	PE-2	25NTO3204	NANOPHOTONICS AND BIOPHOTONICS	R	NAB	3	0	0	0	3	3	
8	PEC	PE-2	25NTO3203	NANOTECHNOLOGY AND NANOSENSORS	R	NAN	3	0	0	0	3	3	
9	PEC	PE-3	25NTO3306	NANOROBOTICS FOR ADVANCED APPLICATIONS	R	NAA	3	0	0	2	3.5	5	
10	PEC	PE-3	25NTO3306A	NANOROBOTICS FOR ADVANCED APPLICATIONS	A	NAA	4	1	0	2	5.5	7	
11	PEC	PE-3	25NTO3306E	NANOROBOTICS FOR ADVANCED APPLICATIONS	E	NAA	4	1	0	2	5.5	7	
12	PEC	PE-3	25NTO3305	NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS	R	NBA	3	0	0	2	3.5	5	
13	PEC	PE-3	25NTO3305A	NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS	A	NBA	4	1	0	2	5.5	7	
14	PEC	PE-3	25NTO3305E	NANOMATERIALS FOR BIO-MEDICAL APPLICATIONS	E	NBA	4	1	0	2	5.5	7	
15	PEC	PE-4	25NTO3408	INDUSTRIAL NANOTECHNOLOGY	R	INT	3	0	0	0	3	3	
16	PEC	PE-4	25NTO3407	COMPUTATIONAL DATA SCIENCE FOR NANOTECHNOLOGY	R	CDN	3	0	0	0	3	3	
17	PEC	PE-5	25NTO3510	MICRO/NANO FLUIDIC SYSTEMS FOR SENSORS	R	MFS	3	0	0	0	3	3	
18	PEC	PE-5	25NTO3509	BIOSENSING AND BIOELECTRONICS	R	BAB	3	0	0	0	3	3	

62. SPECIALIZATION: ROBOTICS & AUTOMATION

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25RAN3102	ADVANCED ROBOTICS	R	AR	3	0	2	0	4	5	
2	PEC	PE-1	25RAN3102A	ADVANCED ROBOTICS	A	AR	4	1	2	0	6	7	
3	PEC	PE-1	25RAN3102E	ADVANCED ROBOTICS	E	AR	4	1	2	0	6	7	
4	PEC	PE-1	25RAN3101	ROBOT MOTION PLANNING, DYNAMICS AND CONTROL	R	RMPDC	3	0	2	0	4	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
5	PEC	PE-1	25RAN3101A	ROBOT MOTION PLANNING, DYNAMICS AND CONTROL	A	RMPDC	4	1	2	0	6	7	
6	PEC	PE-1	25RAN3101E	ROBOT MOTION PLANNING, DYNAMICS AND CONTROL	E	RMPDC	4	1	2	0	6	7	
7	PEC	PE-2	25RAN3203	ROBOT MANIPULATION AND WHEELED MOBILE ROBOTS	R	RMWR	3	0	0	0	3	3	
8	PEC	PE-2	25RAN3202	AUTONOMOUS VEHICLES AND AUTOMOTIVE ELECTRONICS	R	AVAE	3	0	0	0	3	3	
9	PEC	PE-3	25RAN3304	AUTONOMOUS MOBILE ROBOT SYSTEMS	R	AMRS	3	0	0	2	3.5	5	
10	PEC	PE-3	25RAN3304A	AUTONOMOUS MOBILE ROBOT SYSTEMS	A	AMRS	4	1	0	2	5.5	7	
11	PEC	PE-3	25RAN3304E	AUTONOMOUS MOBILE ROBOT SYSTEMS	E	AMRS	4	1	0	2	5.5	7	
12	PEC	PE-4	25RAN3406	HUMAN MACHINE INTERFACE AND BRAIN MACHINE INTERFACE	R	HMIBMI	3	0	0	0	3	3	
13	PEC	PE-4	25RAN3405	ARTIFICIAL INTELLIGENCE FOR ROBOTICS	R	AIR	3	0	0	0	3	3	
14	PEC	PE-5	25RAN3507	COMPUTER VISION AND APPLICATIONS	R	CVA	3	0	0	0	3	3	

63. SPECIALIZATION: SMART GRID TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25SGT3101	DISTRIBUTED ENERGY RESOURCES AND SMART GRIDS	R	DERSG	3	0	2	0	4	5	
2	PEC	PE-1	25SGT3101A	DISTRIBUTED ENERGY RESOURCES AND SMART GRIDS	A	DERSG	3	1	2	0	5	6	
3	PEC	PE-1	25SGT3101E	DISTRIBUTED ENERGY RESOURCES AND SMART GRIDS	E	DERSG	4	1	2	0	6	7	
4	PEC	PE-2	25SGT3203	MICROGRID DYNAMICS AND CONTROL	R	MDC	3	0	0	0	3	3	
5	PEC	PE-2	25SGT3202	DISTRIBUTION SYSTEM PRACTICES	R	DSP	3	0	0	0	3	3	
6	PEC	PE-3	25SGT3304	ENERGY MANAGEMENT SYSTEMS AND SCADA	R	EMS&SCADA	3	0	0	2	3.5	5	
7	PEC	PE-3	25SGT3304A	ENERGY MANAGEMENT SYSTEMS AND SCADA	A	EMS&SCADA	4	1	0	2	5.5	7	
8	PEC	PE-3	25SGT3304E	ENERGY MANAGEMENT SYSTEMS AND SCADA	E	EMS&SCADA	4	1	0	2	5.5	7	
9	PEC	PE-4	25SGT3405	SMART GRID COMMUNICATION AND CYBERSECURITY	R	SGCCS	3	0	0	0	3	3	
10	PEC	PE-4	25SGT3406	SMART METERS AND SMART CITIES	R	SMSC	3	0	0	0	3	3	
11	PEC	PE-5	25SGT3508	SMART GRID PROTECTION	R	SGP	3	0	0	0	3	3	
12	PEC	PE-5	25SGT3507	INTERNET OF THINGS AND SMART GRID ANALYTICS	R	IOT&SGA	3	0	0	0	3	3	

64. SPECIALIZATION: SMART MANUFACTURING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25SMF3101	AI AND IOT IN MANUFACTURING	R	AIM	3	0	2	0	4	5	
2	PEC	PE-1	25SMF3101A	AI AND IOT IN MANUFACTURING	A	AIM	4	1	2	0	6	7	
3	PEC	PE-1	25SMF3101E	AI AND IOT IN MANUFACTURING	E	AIM	4	1	2	0	6	7	
4	PEC	PE-2	25SMF3202	FLEXIBLE MANUFACTURING SYSTEMS	R	FMS	3	0	0	0	3	3	
5	PEC	PE-2	25SMF3203	PRECISION AND MICRO MANUFACTURING	R	PMM	3	0	0	0	3	3	
6	PEC	PE-3	25SMF3304	ADDITIVE AND HYBRID MANUFACTURING	R	AHM	3	0	0	2	3.5	5	
7	PEC	PE-3	25SMF3304A	ADDITIVE AND HYBRID MANUFACTURING	A	AHM	4	1	0	2	5.5	7	
8	PEC	PE-3	25SMF3304E	ADDITIVE AND HYBRID MANUFACTURING	E	AHM	4	1	0	2	5.5	7	
9	PEC	PE-4	25SMF3405	DIGITAL MANUFACTURING	R	DM	3	0	0	0	3	3	
10	PEC	PE-4	25SMF3406	PRECISION INNOVATION & ENTREPRENEURSHIP	R	PIE	3	0	0	0	3	3	
11	PEC	PE-5	25SMF3507	SUSTAINABLE MANUFACTURING	R	SM	3	0	0	0	3	3	
12	PEC	PE-5	25SMF3508	MACHINE TO MACHINE COMMUNICATION	R	MMC	3	0	0	0	3	3	

65. SPECIALIZATION: SOCIAL & DIGITAL MEDIA ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25SDM3101	SENTIMENT ANALYSIS	R	SA	3	0	2	0	4	5	
2	PEC	PE-1	25SDM3101A	SENTIMENT ANALYSIS	A	SA	4	1	2	0	6	7	
3	PEC	PE-1	25SDM3101E	SENTIMENT ANALYSIS	E	SA	4	1	2	0	6	7	
4	PEC	PE-2	25SDM3203	META SOCIAL MEDIA ANALYTICS	R	MSMA	3	0	0	0	3	3	
5	PEC	PE-2	25SDM3202	OPINION MINING AND RECOMMENDER SYSTEMS	R	OMRS	3	0	0	0	3	3	
6	PEC	PE-3	25SDM3304	SOCIAL MEDIA MARKETING ANALYTICS	R	SMMA	3	0	0	2	3.5	5	
7	PEC	PE-3	25SDM3304A	SOCIAL MEDIA MARKETING ANALYTICS	A	SMMA	4	1	0	2	5.5	7	
8	PEC	PE-3	25SDM3304E	SOCIAL MEDIA MARKETING ANALYTICS	E	SMMA	4	1	0	2	5.5	7	
9	PEC	PE-4	25SDM3406	ETHICAL SOCIAL MEDIA	R	ESM	3	0	0	0	3	3	
10	PEC	PE-4	25SDM3405	DIGITAL MEDIA ANALYTICS	R	DMA	3	0	0	0	3	3	
11	PEC	PE-5	25SDM3508	SEARCH ENGINE OPTIMIZATION	R	SEO	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
12	PEC	PE-5	25SDM3507	INTELLIGENT SOCIAL MEDIA MONITORING SYSTEMS	R	ISMMS	3	0	0	0	3	3	

66. SPECIALIZATION: SOFTWARE MODELLING & DEVOPS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25SMD3101	SOFTWARE VERIFICATION & VALIDATION	R	SVV	3	0	2	0	4	5	
2	PEC	PE-1	25SMD3101A	SOFTWARE VERIFICATION & VALIDATION	A	SVV	4	1	2	0	6	7	
3	PEC	PE-1	25SMD3101E	SOFTWARE VERIFICATION & VALIDATION	E	SVV	4	1	2	0	6	7	
4	PEC	PE-2	25SMD3202	DESIGN PATTERNS & CLEAN CODING TECHNIQUES	R	DPCT	3	0	0	2	3.5	5	
5	PEC	PE-3	25SMD3303	CONTINUOUS DELIVERY & DEVOPS	R	CDD	3	0	0	2	3.5	5	
6	PEC	PE-3	25SMD3303A	CONTINUOUS DELIVERY & DEVOPS	A	CDD	4	1	0	2	5.5	7	
7	PEC	PE-3	25SMD3303E	CONTINUOUS DELIVERY & DEVOPS	E	CDD	4	1	0	2	5.5	7	
8	PEC	PE-4	25SMD3405	SOFTWARE ARCHITECTURE & DESIGN	R	SAD	3	0	0	0	3	3	
9	PEC	PE-4	25SMD3404	SOFTWARE PROJECT MANAGEMENT	R	SPM	3	0	0	0	3	3	
10	PEC	PE-5	25SMD3507	CROSS-PLATFORM USER INTERFACE DESIGN	R	CPUIF	3	0	0	0	3	3	
11	PEC	PE-5	25SMD3506	SOFTWARE RELIABILITY	R	SR	3	0	0	0	3	3	

67. SPECIALIZATION: SPATIAL COMPUTING & IMMERSIVE TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25SCI3101	SPATIAL DATA VISUALIZATION	R	SDV	3	0	2	0	4	5	
2	PEC	PE-1	25SCI3101A	SPATIAL DATA VISUALIZATION	A	SDV	4	1	2	0	6	7	
3	PEC	PE-1	25SCI3101E	SPATIAL DATA VISUALIZATION	E	SDV	4	1	2	0	6	7	
4	PEC	PE-2	25SCI3202	SPATIAL COMPUTING FOR MULTIPLAYER GAMES	R	SCMG	3	0	0	0	3	3	
5	PEC	PE-3	25SCI3303	SPATIAL COMPUTING PLATFORMS AND DEVELOPMENT	R	SCPD	3	0	0	2	3.5	5	
6	PEC	PE-3	25SCI3303A	SPATIAL COMPUTING PLATFORMS AND DEVELOPMENT	A	SCPD	4	1	0	2	5.5	7	
7	PEC	PE-3	25SCI3303E	SPATIAL COMPUTING PLATFORMS AND DEVELOPMENT	E	SCPD	4	1	0	2	5.5	7	
8	PEC	PE-4	25SCI3404	SPATIAL AND SOCIAL IMPLICATIONS OF IMMERSIVE TECHNOLOGIES	R	SSIIT	3	0	0	0	3	3	
9	PEC	PE-4	25SCI3405	SPATIAL AUDIO DESIGN FOR GAMES	R	SADG	3	0	0	0	3	3	
10	PEC	PE-5	25SCI3506	SPATIAL USER INTERFACE DESIGN	R	SUID	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
11	PEC	PE-5	25SCI3507	INTRODUCTION TO SPATIAL COMPUTING	R	ITSC	3	0	0	0	3	3	

68. SPECIALIZATION: STRUCTURAL ENGINEERING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25STE3101	ADVANCED CONCRETE TECHNOLOGY	R	ACT	3	0	2	0	4	5	
2	PEC	PE-1	25STE3101A	ADVANCED CONCRETE TECHNOLOGY	A	ACT	4	1	2	0	6	7	
3	PEC	PE-1	25STE3101E	ADVANCED CONCRETE TECHNOLOGY	E	ACT	4	1	2	0	6	7	
4	PEC	PE-2	25STE3202	ADVANCED STRUCTURAL ANALYSIS	R	ASA	3	0	0	0	3	3	
5	PEC	PE-3	25STE3303	PRESTRESSED CONCRETE	R	PSC	3	0	0	2	3.5	5	
6	PEC	PE-3	25STE3303A	PRESTRESSED CONCRETE	A	PSC	4	1	0	2	5.5	7	
7	PEC	PE-3	25STE3303E	PRESTRESSED CONCRETE	E	PSC	4	1	0	2	5.5	7	
8	PEC	PE-4	25STE3404	SUSTAINABLE CONSTRUCTION TECHNOLOGY	R	SCT	3	0	0	0	3	3	
9	PEC	PE-5	25STE3505	CONSTRUCTION PLANNING AND SCHEDULING	R	CPS	3	0	0	0	3	3	

69. SPECIALIZATION: VLSI

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25VLS3101	ANALOG VLSI DESIGN	R	AVD	3	0	2	0	4	5	
2	PEC	PE-1	25VLS3101A	ANALOG VLSI DESIGN	A	AVD	4	1	2	0	6	7	
3	PEC	PE-1	25VLS3101E	ANALOG VLSI DESIGN	E	AVD	4	1	2	0	6	7	
4	PEC	PE-2	25VLS3202	TESTING AND VERIFICATION OF VLSI CIRCUITS	R	TVVC	3	0	0	0	3	3	
5	PEC	PE-3	25VLS3303	VLSI PHYSICAL DESIGN AUTOMATION	R	VPDA	3	0	0	2	3.5	5	
6	PEC	PE-3	25VLS3303A	VLSI PHYSICAL DESIGN AUTOMATION	A	VPDA	4	1	0	2	5.5	7	
7	PEC	PE-3	25VLS3303E	VLSI PHYSICAL DESIGN AUTOMATION	E	VPDA	4	1	0	2	5.5	7	
8	PEC	PE-4	25VLS3404	MIXED SIGNAL IC DESIGN	R	MSID	3	0	0	0	3	3	
9	PEC	PE-5	25VLS3505	SYSTEM-ON-CHIP	R	SOC	3	0	0	0	3	3	

70. SPECIALIZATION: INFRASTRUCTURE & ENVIRONMENTAL ENGINEERING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25WRE3101	ADVANCED FOUNDATION ENGINEERING	R	AFE	3	0	2	0	4	5	
2	PEC	PE-1	25WRE3101A	ADVANCED FOUNDATION ENGINEERING	A	AFE	4	1	2	0	6	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
3	PEC	PE-1	25WRE3101E	ADVANCED FOUNDATION ENGINEERING	E	AFE	4	1	2	0	6	7	
4	PEC	PE-2	25WRE3202	INTELLIGENT TRANSPORTATION SYSTEMS	R	ITS	3	0	0	0	3	3	
5	PEC	PE-3	25WRE3303	GROUND IMPROVEMENT TECHNIQUES	R	GIT	3	0	0	2	3.5	5	
6	PEC	PE-3	25WRE3303A	GROUND IMPROVEMENT TECHNIQUES	A	GIT	4	1	0	2	5.5	7	
7	PEC	PE-3	25WRE3303E	GROUND IMPROVEMENT TECHNIQUES	E	GIT	4	1	0	2	5.5	7	
8	PEC	PE-4	25WRE3404	RIVER ENGINEERING	R	REG	3	0	0	0	3	3	
9	PEC	PE-5	25WRE3505	ENVIRONMENTAL IMPACT ASSESSMENT AND LIFE CYCLE ANALYSIS	R	EIALCA	3	0	0	0	3	3	

71. SPECIALIZATION: 5G -6G WIRELESS TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25WLT3101	4G WIRELESS TECHNOLOGIES AND CELLULAR COMMUNICATION	R	4GW	3	0	2	0	4	5	
2	PEC	PE-1	25WLT3101A	4G WIRELESS TECHNOLOGIES AND CELLULAR COMMUNICATION	A	4GW	4	1	2	0	6	7	
3	PEC	PE-1	25WLT3101E	4G WIRELESS TECHNOLOGIES AND CELLULAR COMMUNICATION	E	4GW	4	1	2	0	6	7	
4	PEC	PE-2	25WLT3202	MODERN SATELLITE COMMUNICATION SYSTEMS	R	MSCS	3	0	0	0	3	3	
5	PEC	PE-3	25WLT3303	5G NR-WIRELESS TECHNOLOGIES	R	5GWT	3	0	0	2	3.5	5	
6	PEC	PE-3	25WLT3303A	5G NR-WIRELESS TECHNOLOGIES	A	5GWT	4	1	0	2	5.5	7	
7	PEC	PE-3	25WLT3303E	5G NR-WIRELESS TECHNOLOGIES	E	5GWT	4	1	0	2	5.5	7	
8	PEC	PE-5	25WLT3505	MACHINE LEARNING FOR WIRELESS COMMUNICATION	R	MLWC	3	0	0	0	3	3	
9	PEC	PE-5	25WLT3404	OPTICAL WIRELESS COMMUNICATIONS	R	OWC	3	0	0	0	3	3	

72. SPECIALIZATION: GENERATIVE AI FOR AGENTIC AND MULTI-MODAL INTELLIGENCE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25GMI3101	PRINCIPLES OF DEEP NEURAL COMPUTATION	R	PDNC	3	0	2	0	4	5	
2	PEC	PE-1	25GMI3101A	PRINCIPLES OF DEEP NEURAL COMPUTATION	A	PDNC	4	1	2	0	6	7	
3	PEC	PE-1	25GMI3101E	PRINCIPLES OF DEEP NEURAL COMPUTATION	E	PDNC	4	1	2	0	6	7	
4	PEC	PE-2	25GMI3202	ENGINEERING LARGE LANGUAGE MODEL SYSTEMS	R	ELLSMS	3	0	0	0	3	3	
5	PEC	PE-3	25GMI3303	REINFORCEMENT LEARNING	R	RL	3	0	0	2	3.5	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
6	PEC	PE-3	25GMI3303A	REINFORCEMENT LEARNING	A	RL	4	1	0	2	5.5	7	
7	PEC	PE-3	25GMI3303E	REINFORCEMENT LEARNING	E	RL	4	1	0	2	5.5	7	
8	PEC	PE-4	25GMI3404	GENERATIVE AI, AGENTIC AI & RETRIEVAL AUGMENTED GENERATION	R	GAAR	3	0	0	0	3	3	
9	PEC	PE-5	25GMI3505	MULTI-MODAL INTELLIGENCE	R	MMI	3	0	0	0	3	3	

73. SPECIALIZATION: HUMAN-CENTRIC AI SYSTEMS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25HCA3101	MULTI-MODAL INFORMATION PROCESSING	R	MMIP	3	0	2	0	4	5	
2	PEC	PE-1	25HCA3101A	MULTI-MODAL INFORMATION PROCESSING	A	MMIP	4	1	2	0	6	7	
3	PEC	PE-1	25HCA3101E	MULTI-MODAL INFORMATION PROCESSING	E	MMIP	4	1	2	0	6	7	
4	PEC	PE-2	25HCA3202	NATURAL LANGUAGE PROCESSING	R	NLP	3	0	0	0	3	3	
5	PEC	PE-2	25HCA3203	COMPUTER VISION & OBJECT DETECTION	R	CVOD	3	0	0	0	3	3	
6	PEC	PE-2	25HCA3204	COMPUTATIONAL PARALINGUISTICS	R	CPL	3	0	0	0	3	3	
7	PEC	PE-3	25HCA3305	LARGE LANGUAGE MODELS & CONVERSATIONAL AI	R	LLMC	3	0	0	2	3.5	5	
8	PEC	PE-3	25HCA3305A	LARGE LANGUAGE MODELS & CONVERSATIONAL AI	A	LLMC	4	1	0	2	5.5	7	
9	PEC	PE-3	25HCA3305E	LARGE LANGUAGE MODELS & CONVERSATIONAL AI	E	LLMC	4	1	0	2	5.5	7	
10	PEC	PE-3	25HCA3306	IMAGE PROCESSING & SCENE UNDERSTANDING	R	IPSU	3	0	0	2	3.5	5	
11	PEC	PE-3	25HCA3306A	IMAGE PROCESSING & SCENE UNDERSTANDING	A	IPSU	4	1	0	2	5.5	7	
12	PEC	PE-3	25HCA3306E	IMAGE PROCESSING & SCENE UNDERSTANDING	E	IPSU	4	1	0	2	5.5	7	
13	PEC	PE-3	25HCA3307	SPEECH PROCESSING	R	SP	3	0	0	2	3.5	5	
14	PEC	PE-3	25HCA3307A	SPEECH PROCESSING	A	SP	4	1	0	2	5.5	7	
15	PEC	PE-3	25HCA3307E	SPEECH PROCESSING	E	SP	4	1	0	2	5.5	7	
16	PEC	PE-4	25HCA3408	VISION TRANSFORMERS & GENERATIVE MODELS FOR VISION	R	VTGM	3	0	0	0	3	3	
17	PEC	PE-5	25HCA3509	AI ETHICS, FAIRNESS & RESPONSIBLE DEPLOYMENT	R	AIFD	3	0	0	0	3	3	
18	PEC	PE-5	25HCA3510	HUMAN-AI INTERACTION & USER-CENTERED DESIGN	R	HAI	3	0	0	0	3	3	

74. SPECIALIZATION: DATA SCIENCE & ENGINEERING FOR AI

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25DSE3101	DATA ANALYTICS & VISUALIZATION	R	DAV	3	0	2	0	4	5	
2	PEC	PE-1	25DSE3101A	DATA ANALYTICS & VISUALIZATION	A	DAV	4	1	2	0	6	7	
3	PEC	PE-1	25DSE3101E	DATA ANALYTICS & VISUALIZATION	E	DAV	4	1	2	0	6	7	
4	PEC	PE-2	25DSE3202	DATA EXPLORATION & PREPARATION	R	DEP	3	0	0	0	3	3	
5	PEC	PE-2	25DSE3203	DATA WAREHOUSING& BUSINESS INTELLIGENCE	R	DWBI	3	0	0	0	3	3	
6	PEC	PE-3	25DSE3304	BIG DATA ENGINEERING	R	BDE	3	0	0	2	3.5	5	
7	PEC	PE-3	25DSE3304A	BIG DATA ENGINEERING	A	BDE	4	1	0	2	5.5	7	
8	PEC	PE-3	25DSE3304E	BIG DATA ENGINEERING	E	BDE	4	1	0	2	5.5	7	
9	PEC	PE-3	25DSE3305	BUSINESS ANALYTICS	R	BA	3	0	0	2	3.5	5	
10	PEC	PE-3	25DSE3305A	BUSINESS ANALYTICS	A	BA	4	1	0	2	5.5	7	
11	PEC	PE-3	25DSE3305E	BUSINESS ANALYTICS	E	BA	4	1	0	2	5.5	7	
12	PEC	PE-4	25DSE3406	AI-DRIVEN DATA ENGINEERING	R	AIDE	3	0	0	0	3	3	
13	PEC	PE-4	25DSE3407	DATA GOVERNANCE ON CLOUD	R	DGC	3	0	0	0	3	3	
14	PEC	PE-5	25DSE3508	DATA ANALYTICS ON CLOUD	R	DAC	3	0	0	0	3	3	
15	PEC	PE-5	25DSE3509	GRAPH & WEB ANALYTICS	R	GWA	3	0	0	0	3	3	

75. SPECIALIZATION: DATA LAKE SYSTEMS & STREAMING ANALYTICS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25DLS3101	STREAMING DATA ARCHITECTURES & FRAMEWORKS	R	SDAF	3	0	2	0	4	5	
2	PEC	PE-1	25DLS3101A	STREAMING DATA ARCHITECTURES & FRAMEWORKS	A	SDAF	4	1	2	0	6	7	
3	PEC	PE-1	25DLS3101E	STREAMING DATA ARCHITECTURES & FRAMEWORKS	E	SDAF	4	1	2	0	6	7	
4	PEC	PE-2	25DLS3202	DESIGNING REAL-TIME DATA PIPELINES	R	RTDP	3	0	0	0	3	3	
5	PEC	PE-3	25DLS3303	DATA LAKES & STREAM-ORIENTED STORAGE SYSTEMS	R	DLSS	3	0	0	2	3.5	5	
6	PEC	PE-3	25DLS3303A	DATA LAKES & STREAM-ORIENTED STORAGE SYSTEMS	A	DLSS	4	1	0	2	5.5	7	
7	PEC	PE-3	25DLS3303E	DATA LAKES & STREAM-ORIENTED STORAGE SYSTEMS	E	DLSS	4	1	0	2	5.5	7	
8	PEC	PE-4	25DLS3404	REAL-TIME ANALYTICS & COMPLEX EVENT PROCESSING	R	RTAC	3	0	0	0	3	3	
9	PEC	PE-5	25DLS3505	STREAMING ANALYTICS FOR IOT AND EDGE ENVIRONMENTS	R	SAIE	3	0	0	0	3	3	

76. SPECIALIZATION: CLOUD NATIVE APPLICATION ENGINEERING & DEVOPS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CND3101	CLOUD-NATIVE APPLICATION DEVELOPMENT & CONTAINER ORCHESTRATION	R	CNAD	3	0	2	0	4	5	
2	PEC	PE-1	25CND3101A	CLOUD-NATIVE APPLICATION DEVELOPMENT & CONTAINER ORCHESTRATION	A	CNAD	4	1	2	0	6	7	
3	PEC	PE-1	25CND3101E	CLOUD-NATIVE APPLICATION DEVELOPMENT & CONTAINER ORCHESTRATION	E	CNAD	4	1	2	0	6	7	
4	PEC	PE-2	25CND3202	CLOUD-NATIVE ARCHITECTURE & INFRASTRUCTURE AS CODE	R	CNAI	3	0	0	0	3	3	
5	PEC	PE-3	25CND3303	ADVANCED DEVOPS, OBSERVABILITY & RELIABILITY ENGINEERING	R	DORS	3	0	0	2	3.5	5	
6	PEC	PE-3	25CND3303A	ADVANCED DEVOPS, OBSERVABILITY & RELIABILITY ENGINEERING	A	DORS	4	1	0	2	5.5	7	
7	PEC	PE-3	25CND3303E	ADVANCED DEVOPS, OBSERVABILITY & RELIABILITY ENGINEERING	E	DORS	4	1	0	2	5.5	7	
8	PEC	PE-4	25CND3404	CLOUD-NATIVE MLOPS & A1-DRIVEN APPLICATION DEPLOYMENT	R	CNMA	3	0	0	0	3	3	
9	PEC	PE-5	25CND3505	HIGH-PERFORMANCE & SECURE CLOUD-NATIVE SYSTEMS	R	HPCS	3	0	0	0	3	3	

77. SPECIALIZATION: AI DRIVEN EDGE COMPUTING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25AEC3101	EDGE AI HARDWARE ARCHITECTURES & ACCELERATION	R	EHA	3	0	2	0	4	5	
2	PEC	PE-1	25AEC3101A	EDGE AI HARDWARE ARCHITECTURES & ACCELERATION	A	EHA	4	1	2	0	6	7	
3	PEC	PE-1	25AEC3101E	EDGE AI HARDWARE ARCHITECTURES & ACCELERATION	E	EHA	4	1	2	0	6	7	
4	PEC	PE-2	25AEC3202	SECURE & SCALABLE EDGE AI NETWORKING	R	SEAN	3	0	0	0	3	3	
5	PEC	PE-3	25AEC3303	SERVICE MESH & OBSERVABILITY FOR EDGE AI	R	SMOA	3	0	0	2	3.5	5	
6	PEC	PE-3	25AEC3303A	SERVICE MESH & OBSERVABILITY FOR EDGE AI	A	SMOA	4	1	0	2	5.5	7	
7	PEC	PE-3	25AEC3303E	SERVICE MESH & OBSERVABILITY FOR EDGE AI	E	SMOA	4	1	0	2	5.5	7	
8	PEC	PE-4	25AEC3404	SERVERLESS & COST-OPTIMIZED AI AT THE EDGE	R	SCAE	3	0	0	0	3	3	
9	PEC	PE-5	25AEC3505	EDGE AI ORCHESTRATION & LIFECYCLE MANAGEMENT	R	EAOM	3	0	0	0	3	3	

78. SPECIALIZATION: CLOUD AI & ACCELERATED COMPUTING

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CAC3101	GPU PROGRAMMING & HARDWARE ACCELERATION FOR AI & HPC	R	GPAH	3	0	2	0	4	5	
2	PEC	PE-1	25CAC3101A	GPU PROGRAMMING & HARDWARE ACCELERATION FOR AI & HPC	A	GPAH	4	1	2	0	6	7	
3	PEC	PE-1	25CAC3101E	GPU PROGRAMMING & HARDWARE ACCELERATION FOR AI & HPC	E	GPAH	4	1	2	0	6	7	
4	PEC	PE-2	25CAC3202	PARALLEL & FUNCTIONAL PROGRAMMING FOR SCIENTIFIC APPLICATIONS	R	PFPS	3	0	0	0	3	3	
5	PEC	PE-3	25CAC3303	ADVANCED COMPUTER ARCHITECTURES FOR HARDWARE ACCELERATION	R	ACHA	3	0	0	2	3.5	5	
6	PEC	PE-3	25CAC3303A	ADVANCED COMPUTER ARCHITECTURES FOR HARDWARE ACCELERATION	A	ACHA	4	1	0	2	5.5	7	
7	PEC	PE-3	25CAC3303E	ADVANCED COMPUTER ARCHITECTURES FOR HARDWARE ACCELERATION	E	ACHA	4	1	0	2	5.5	7	
8	PEC	PE-3	25CAC3304	QUANTUM PROGRAMMING FUNDAMENTALS	R	QPF	3	0	0	2	3.5	5	
9	PEC	PE-3	25CAC3304A	QUANTUM PROGRAMMING FUNDAMENTALS	A	QPF	4	1	0	2	5.5	7	
10	PEC	PE-3	25CAC3304E	QUANTUM PROGRAMMING FUNDAMENTALS	E	QPF	4	1	0	2	5.5	7	
11	PEC	PE-4	25CAC3405	CLOUD ARCHITECTURES FOR HPC & AI WORKLOADS	R	CHAW	3	0	0	0	3	3	
12	PEC	PE-4	25CAC3406	QUANTUM ALGORITHMS FOR AI & OPTIMIZATION	R	QAAO	3	0	0	0	3	3	
13	PEC	PE-5	25CAC3507	MLOPS & SCIENTIFIC WORKFLOW AUTOMATION IN CLOUD	R	MSWC	3	0	0	0	3	3	
14	PEC	PE-5	25CAC3508	HYBRID QUANTUM-CLASSICAL CLOUD SYSTEMS	R	HQCC	3	0	0	0	3	3	

79. SPECIALIZATION: CYBER THREAT INTELLIGENCE AND SECURITY OPERATIONS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25CTI3101	DIGITAL FORENSICS & INCIDENT RESPONSE	R	DFIR	3	0	2	0	4	5	
2	PEC	PE-1	25CTI3101A	DIGITAL FORENSICS & INCIDENT RESPONSE	A	DFIR	4	1	2	0	6	7	
3	PEC	PE-1	25CTI3101E	DIGITAL FORENSICS & INCIDENT RESPONSE	E	DFIR	4	1	2	0	6	7	
4	PEC	PE-1	25CTI3102	MALWARE ANALYSIS & REVERSE ENGINEERING	R	MARE	3	0	2	0	4	5	
5	PEC	PE-1	25CTI3102A	MALWARE ANALYSIS & REVERSE ENGINEERING	A	MARE	4	1	2	0	6	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
6	PEC	PE-1	25CTI3102E	MALWARE ANALYSIS & REVERSE ENGINEERING	E	MARE	4	1	2	0	6	7	
7	PEC	PE-2	25CTI3203	ETHICAL HACKING & OFFENSIVE SECURITY	R	EHOS	3	0	0	0	3	3	
8	PEC	PE-2	25CTI3204	VULNERABILITY ASSESSMENT & PENETRATION TESTING	R	VAPT	3	0	0	0	3	3	
9	PEC	PE-3	25CTI3305	BLUE TEAM OPERATIONS & SIEM	R	BTOS	3	0	0	2	3.5	5	
10	PEC	PE-3	25CTI3305A	BLUE TEAM OPERATIONS & SIEM	A	BTOS	4	1	0	2	5.5	7	
11	PEC	PE-3	25CTI3305E	BLUE TEAM OPERATIONS & SIEM	E	BTOS	4	1	0	2	5.5	7	
12	PEC	PE-3	25CTI3306	SOC MANAGEMENT	R	SOC	3	0	0	2	3.5	5	
13	PEC	PE-3	25CTI3306A	SOC MANAGEMENT	A	SOC	4	1	0	2	5.5	7	
14	PEC	PE-3	25CTI3306E	SOC MANAGEMENT	E	SOC	4	1	0	2	5.5	7	
15	PEC	PE-4	25CTI3407	CLOUD SECURITY	R	CS	3	0	0	0	3	3	
16	PEC	PE-4	25CTI3408	DEVSECOPS & INFRASTRUCTURE SECURITY	R	DSI	3	0	0	0	3	3	
17	PEC	PE-5	25CTI3509	QUANTUM CRYPTOGRAPHY & POST-QUANTUM SECURITY	R	QCPS	3	0	0	0	3	3	
18	PEC	PE-5	25CTI3510	APPLIED CRYPTOGRAPHY FOR CYBERSECURITY	R	ACC	3	0	0	0	3	3	

80. SPECIALIZATION: INTELLIGENT GAME DEVELOPMENT & IMMERSIVE TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25IGD3101	GAME DEVELOPMENT WITH UNREAL ENGINE (C++)	R	GDUE	3	0	2	0	4	5	
2	PEC	PE-1	25IGD3101A	GAME DEVELOPMENT WITH UNREAL ENGINE (C++)	A	GDUE	4	1	2	0	6	7	
3	PEC	PE-1	25IGD3101E	GAME DEVELOPMENT WITH UNREAL ENGINE (C++)	E	GDUE	4	1	2	0	6	7	
4	PEC	PE-1	25IGD3102	GAME DEVELOPMENT WITH UNITY ENGINE (C#)	R	GDUN	3	0	2	0	4	5	
5	PEC	PE-1	25IGD3102A	GAME DEVELOPMENT WITH UNITY ENGINE (C#)	A	GDUN	4	1	2	0	6	7	
6	PEC	PE-1	25IGD3102E	GAME DEVELOPMENT WITH UNITY ENGINE (C#)	E	GDUN	4	1	2	0	6	7	
7	PEC	PE-2	25IGD3203	MULTIPLAYER GAME DEVELOPMENT AND NETWORKING	R	MGDN	3	0	0	0	3	3	
8	PEC	PE-2	25IGD3204	GAME DEVOPS AND CLOUD DEPLOYMENT	R	GDCD	3	0	0	0	3	3	
9	PEC	PE-3	25IGD3305	3D GAME PROGRAMMING AND PHYSICS SIMULATION	R	3DPS	3	0	0	2	3.5	5	
10	PEC	PE-3	25IGD3305A	3D GAME PROGRAMMING AND PHYSICS SIMULATION	A	3DPS	4	1	0	2	5.5	7	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
11	PEC	PE-3	25IGD3305E	3D GAME PROGRAMMING AND PHYSICS SIMULATION	E	3DPS	4	1	0	2	5.5	7	
12	PEC	PE-3	25IGD3306	PROCEDURAL WORLD BUILDING	R	PWB	3	0	0	2	3.5	5	
13	PEC	PE-3	25IGD3306A	PROCEDURAL WORLD BUILDING	A	PWB	4	1	0	2	5.5	7	
14	PEC	PE-3	25IGD3306E	PROCEDURAL WORLD BUILDING	E	PWB	4	1	0	2	5.5	7	
15	PEC	PE-4	25IGD3407	IMMERSIVE GAME DEVELOPMENT	R	IGD	3	0	0	0	3	3	
16	PEC	PE-4	25IGD3408	SPATIAL COMPUTING FOR INTERACTIVE SYSTEMS	R	SCIS	3	0	0	0	3	3	
17	PEC	PE-5	25IGD3509	GAME AI AND AUTONOMOUS AGENTS	R	GAIA	3	0	0	0	3	3	
18	PEC	PE-5	25IGD3510	GENERATIVE AI IN GAME DESIGN	R	GAID	3	0	0	0	3	3	

81. SPECIALIZATION: GREEN & SUSTAINABLE DIGITAL SYSTEMS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25GSD3101	GREEN SOFTWARE ENGINEERING	R	GSE	3	0	2	0	4	5	
2	PEC	PE-1	25GSD3101A	GREEN SOFTWARE ENGINEERING	A	GSE	4	1	2	0	6	7	
3	PEC	PE-1	25GSD3101E	GREEN SOFTWARE ENGINEERING	E	GSE	4	1	2	0	6	7	
4	PEC	PE-2	25GSD3202	GREEN ALGORITHMS AND SUSTAINABLE APP DESIGN	R	GAD	3	0	0	0	3	3	
5	PEC	PE-3	25GSD3303	SUSTAINABLE CLOUD AND EDGE COMPUTING	R	SCE	3	0	0	2	3.5	5	
6	PEC	PE-3	25GSD3303A	SUSTAINABLE CLOUD AND EDGE COMPUTING	A	SCE	4	1	0	2	5.5	7	
7	PEC	PE-3	25GSD3303E	SUSTAINABLE CLOUD AND EDGE COMPUTING	E	SCE	4	1	0	2	5.5	7	
8	PEC	PE-4	25GSD3404	HARDWARE FOR SUSTAINABLE DIGITAL INFRASTRUCTURE	R	HSDI	3	0	0	0	3	3	
9	PEC	PE-5	25GSD3505	SMART INFRASTRUCTURE FOR GREEN DATA CENTERS	R	SIGD	3	0	0	0	3	3	

82. SPECIALIZATION: BIO-MEDICAL INSTRUMENTATION

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25BMI3101	BIOMEDICAL SIGNAL AND IMAGE PROCESSING	R	BSIP	3	0	2	0	4	5	
2	PEC	PE-1	25BMI3101A	BIOMEDICAL SIGNAL AND IMAGE PROCESSING	A	BSIP	4	1	2	0	6	7	
3	PEC	PE-1	25BMI3101E	BIOMEDICAL SIGNAL AND IMAGE PROCESSING	E	BSIP	4	1	2	0	6	7	
4	PEC	PE-2	25BMI3202	ADVANCED BIOMEDICAL SIGNAL PROCESSING	R	ABSP	3	0	0	0	3	3	
5	PEC	PE-3	25BMI3303	MATERIALS FOR BIO-MEDICAL APPLICATIONS	R	MBMA	3	0	0	2	3.5	5	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
6	PEC	PE-3	25BMI3303A	MATERIALS FOR BIO-MEDICAL APPLICATIONS	A	MBMA	4	1	0	2	5.5	7	
7	PEC	PE-3	25BMI3303E	MATERIALS FOR BIO-MEDICAL APPLICATIONS	E	MBMA	4	1	0	2	5.5	7	
8	PEC	PE-4	25BMI3404	NANOTECHNOLOGY AND NANOSENSORS	R	NTN	3	0	0	0	3	3	
9	PEC	PE-5	25BMI3505	BIOSENSING AND BIOELECTRONICS	R	BSBE	3	0	0	0	3	3	

83. SPECIALIZATION: RF & MICROWAVE

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25RFM3101	MICROWAVE ENGINEERING	R	ME	3	0	2	0	4	5	
2	PEC	PE-1	25RFM3101A	MICROWAVE ENGINEERING	A	ME	4	1	2	0	6	7	
3	PEC	PE-1	25RFM3101E	MICROWAVE ENGINEERING	E	ME	4	1	2	0	6	7	
4	PEC	PE-2	25RFM3202	ADVANCED ANTENNA DESIGN FOR WIRELESS AND 5G APPLICATIONS	R	AADW	3	0	0	0	3	3	
5	PEC	PE-3	25RFM3303	MODERN RADAR SYSTEMS & NAVIGATIONAL AIDS	R	MRSN	3	0	0	2	3.5	5	
6	PEC	PE-3	25RFM3303A	MODERN RADAR SYSTEMS & NAVIGATIONAL AIDS	A	MRSN	4	1	0	2	5.5	7	
7	PEC	PE-3	25RFM3303E	MODERN RADAR SYSTEMS & NAVIGATIONAL AIDS	E	MRSN	4	1	0	2	5.5	7	
8	PEC	PE-4	25RFM3404	RF AND MILLIMETER-WAVE CIRCUIT DESIGN	R	RMWCD	3	0	0	0	3	3	
9	PEC	PE-5	25RFM3505	SATELLITE DESIGN	R	SD	3	0	0	0	3	3	

84. SPECIALIZATION: QUANTUM COMMUNICATIONS

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25QCS3101	QUANTUM HARDWARE AND CONTROL SYSTEMS	R	QHCS	3	0	2	0	4	5	
2	PEC	PE-1	25QCS3101A	QUANTUM HARDWARE AND CONTROL SYSTEMS	A	QHCS	4	1	2	0	6	7	
3	PEC	PE-1	25QCS3101E	QUANTUM HARDWARE AND CONTROL SYSTEMS	E	QHCS	4	1	2	0	6	7	
4	PEC	PE-2	25QCS3202	QUANTUM OPTICS	R	QO	3	0	0	0	3	3	
5	PEC	PE-3	25QCS3303	QUANTUM SENSING	R	QS	3	0	0	2	3.5	5	
6	PEC	PE-3	25QCS3303A	QUANTUM SENSING	A	QS	4	1	0	2	5.5	7	
7	PEC	PE-3	25QCS3303E	QUANTUM SENSING	E	QS	4	1	0	2	5.5	7	
8	PEC	PE-4	25QCS3404	QUANTUM RADAR	R	QR	3	0	0	0	3	3	
9	PEC	PE-5	25QCS3506	QUANTUM INFORMATION THEORY	R	QIT	3	0	0	0	3	3	

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
10	PEC	PE-5	25QCS3505	QUANTUM SATELLITE COMMUNICATIONS	R	QSC	3	0	0	0	3	3	

85. SPECIALIZATION: QUANTUM TECHNOLOGIES

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PEC	PE-1	25QTS3101	QUANTUM COMPUTATION : CIRCUITS, ALGORITHMS & FAULT TOLERANCE	R	QCCAFT	3	0	2	0	4	5	
2	PEC	PE-1	25QTS3101A	QUANTUM COMPUTATION : CIRCUITS, ALGORITHMS & FAULT TOLERANCE	A	QCCAFT	4	1	2	0	6	7	
3	PEC	PE-1	25QTS3101E	QUANTUM COMPUTATION : CIRCUITS, ALGORITHMS & FAULT TOLERANCE	E	QCCAFT	4	1	2	0	6	7	
4	PEC	PE-2	25QTS3202	QUANTUM CRYPTOGRAPHY & QUANTUM COMMUNICATION	R	QCQC	3	0	0	0	3	3	
5	PEC	PE-3	25QTS3303	QUANTUM SENSING & METROLOGY	R	QSM	3	0	0	2	3.5	5	
6	PEC	PE-3	25QTS3303A	QUANTUM SENSING & METROLOGY	A	QSM	4	1	0	2	5.5	7	
7	PEC	PE-3	25QTS3303E	QUANTUM SENSING & METROLOGY	E	QSM	4	1	0	2	5.5	7	
8	PEC	PE-4	25QTS3404	QUANTUM MATERIALS & TOPOLOGICAL MATTER	R	QMTM	3	0	0	0	3	3	
9	PEC	PE-5	25QTS3505	QUANTUM AI & MACHINE LEARNING	R	QAIML	3	0	0	0	3	3	

86. PROJECT: RESEARCH PROJECT

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PRI	PRI-CORE	25IE4057	RESEARCH PROJECT-1	R	RP-1	0	0	8	16	8	12	
2	PRI	PRI-CORE	25IE4058	RESEARCH PROJECT-2	R	RP-2	0	0	8	16	8	12	

87. PROJECT: INNOVATION PROJECT

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PRI	PRI-CORE	25IE4055	INNOVATION PROJECT-1	R	IP-1	0	0	8	16	8	12	
2	PRI	PRI-CORE	25IE4056	INNOVATION PROJECT-2	R	IP-2	0	0	8	16	8	12	

88. PROJECT: CAPSTONE PROJECT

S#	Cat	Sub-Cat	CourseCode	Course Title	Mode	Acrym	L	T	P	S	CR	CH	Pre-req
1	PRI	PRI-CORE	25IE4053	ENGINEERING CAPSTONE PROJECT - 1	R	ECP-1	0	0	8	16	8	12	
2	PRI	PRI-CORE	25IE4054	ENGINEERING CAPSTONE PROJECT - 2	R	ECP-2	0	0	8	16	8	12	

Program Articulation Matrix

S#	Cat	Course	CO	CO Description	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	PS01	PS02
1	HAS	25FL3054 - FLG	CO1	Acquire a working knowledge of the basic elements of the French language viz. letters, vowels, accents, articles, useful expressions, etc.					2								
2	HAS	25FL3054 - FLG	CO2	Classify questions and respond in the affirmative or negative with ?tre and avoir and form plurals						2		2		2			
3	HAS	25FL3054 - FLG	CO3	Utilize and apply the adjectives and essential verbs.								3		3			
4	HAS	25FL3054 - FLG	CO4	Construct and use in speech, vocabulary, reading, questions and answers											3		
5	HAS	25FL3055 - GLG	CO1	Classify their understanding of greeting wishes, alphabets and numbers learning. To understand the greetings in formal and informal way					2			2					
6	HAS	25FL3055 - GLG	CO2	Apply their knowledge of essential daily expressions, present, past and future tense. Conjugating the verbs in the Singular and Plural groups, Past participle tense and the futertense and relations with the verbs										3			
7	HAS	25FL3055 - GLG	CO3	Utilize their understanding with suitable prepositions, questions, and possessive pronouns, and the importance of four German cases. Prepositions in Akkusativ and Dativ										3			
8	HAS	25FL3055 - GLG	CO4	Develop their knowledge about how to move in public places, such as shopping centres, restaurants, tourist places, etc, and preparation of them for German A1 level examination.								3			3		

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
9	HAS	25FL3058 - JLG	CO1	Classify Hiragana, Katakana, and basic Kanji characters used in greetings and simple scripts					2			2					
10	HAS	25FL3058 - JLG	CO2	Apply their knowledge of essential daily expressions, numbers, months, dates, time, body parts, colors, and common vocabulary to effectively communicate in basic everyday situations										3			
11	HAS	25FL3058 - JLG	CO3	Utilize their understanding of present, past, and future tenses, along with the ability to construct interrogative sentences, to express themselves in various timeframes and ask questions effectively in different conversational contexts. pen_spark								3		3			
12	HAS	25FL3058 - JLG	CO4	Develop their knowledge of verbs, including negative conjugations, and prepositions to discuss hobbies, deliver self-introductions, and navigate basic interview scenarios in Japanese								3			3		
13	HAS	25FL3064 - KLG	CO1	Understanding of key features of Korean, Introduction to Hangul, Everyday greetings & expressions			2					2					
14	HAS	25FL3064 - KLG	CO2	Learning of important grammar particles & Parts of speeches			2					2					
15	HAS	25FL3064 - KLG	CO3	Verbs, Adjectives & additional vocabularies for daily life conversation		2								2			
16	HAS	25FL3064 - KLG	CO4	Sentence formation & Different aspects of tenses		2							2				
17	HAS	25MB4053 - MPF	CO1	Understanding Personal Finance	2												
18	HAS	25MB4053 - MPF	CO2	Applying and Building a Budget and Tracking Your Money		3											

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
19	HAS	25MB4053 - MPF	CO3	Applying and Managing Debt and Credit in present context			3										
20	HAS	25MB4053 - MPF	CO4	Applying Saving and Investment to present scenario			3										
21	HAS	25MB4054 - BME	CO1	Understand the basic concepts of marketing management						2							
22	HAS	25MB4054 - BME	CO2	Understand the concepts of Marketing environment, consumer behaviour and Segmentation, Targeting and Positioning (STP)						2							
23	HAS	25MB4054 - BME	CO3	Apply the marketing mix strategies with special focus on technology products			2										
24	HAS	25MB4054 - BME	CO4	Apply promotion and distribution strategies for marketing of high tech products and services			2										
25	HAS	25MB4055 - OMG	CO1	Remember and understand the various management theories and management approaches.	2								2				
26	HAS	25MB4055 - OMG	CO2	Remember and understand organization theories, structures and organization principles.	2								2				
27	HAS	25MB4055 - OMG	CO3	Have basic knowledge and understanding of motivation, motivational theories, leadership theories, moral and behavioral sciences and also understand the management concept, administration and management objectives.	2								2				
28	HAS	25MB4055 - OMG	CO4	Remember and understand the various issues in industrial relations, trade unions and college bargaining and industrial safety.	2								2				
29	HAS	25MB4056 - PMT	CO1	Understand the basic management concepts along with an insight into levels of management									2				

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
30	HAS	25MB4056 - PMT	CO2	Understand the key contributions of classical approach to Management											2		
31	HAS	25MB4056 - PMT	CO3	Understand and apply Quantitative methods to improve Management performance.									3				
32	HAS	25MB4056 - PMT	CO4	Understand the key contributions of Behavioural and contemporary approaches to Management.									3				
33	HAS	25MB4058 - SSYB	CO1	Six sigma principalsSix Sigma Foundations, Principles, Roles and Responsibilities			3	3									
34	HAS	25MB4058 - SSYB	CO2	Quality Tools and Six Sigma Metrics			3		3								
35	HAS	25MB4058 - SSYB	CO3	Six Sigma Principles			3	3									
36	HAS	25MB4058 - SSYB	CO4	Six Sigma Principles and practice					3							3	
37	HAS	25MB4060 - FINT	CO1	Understanding the comprehension of finance functions and diverse business models to facilitate informed decision-making processes within financial management		2											
38	HAS	25MB4060 - FINT	CO2	Analyzing the investment decisions through an understanding of capital budgeting techniques, both traditional and modern, emphasizing long-term implications.				2									
39	HAS	25MB4060 - FINT	CO3	Analyze and make informed decisions regarding working capital management, considering the short-term financial health of organizations through practical case studies.				2									
40	HAS	25MB4060 - FINT	CO4	Developing proficiency in comprehending and utilizing various sources of finance while discerning the implications of different dividend policies in practical financial scenarios.				2									

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
41	HAS	25MB4068 - FMFE	CO1	Understanding the comprehension of finance functions and diverse business models to facilitate informed decision-making processes within financial management		2											
42	HAS	25MB4068 - FMFE	CO2	Analyzing the investment decisions through an understanding of capital budgeting techniques, both traditional and modern, emphasizing long-term implications.				2									
43	HAS	25MB4068 - FMFE	CO3	Analyze and make informed decisions regarding working capital management, considering the short-term financial health of organizations through practical case studies.				2									
44	HAS	25MB4068 - FMFE	CO4	Developing proficiency in comprehending and utilizing various sources of finance while discerning the implications of different dividend policies in practical financial scenarios.				2									
45	HAS	25MB4070 - SLSI	CO1	Understand the fundamental concepts of sustainability and the role of leadership in driving sustainable practices	2					2						2	
46	HAS	25MB4070 - SLSI	CO2	Analyze the strategic implications of sustainability in business and policymaking		3			3						3		3
47	HAS	25MB4070 - SLSI	CO3	Evaluate sustainable business models and leadership frameworks for long-term impact			3				3						3
48	HAS	25MB4070 - SLSI	CO4	Develop strategic solutions and leadership approaches to address real-world sustainability challenges				3					3	3			
49	HAS	25MB4071 - RSQM	CO1	Interpreting the basic systems of manpower and materials management	2		2	3								2	

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
50	HAS	25MB4071 - RSQM	CO2	Explaining the basic systems of machinery management			2	2								2	
51	HAS	25MB4071 - RSQM	CO3	Classify the basic systems of safety management	2		2	2								2	
52	HAS	25MB4071 - RSQM	CO4	Understand the basic systems of quality management	2		2	2								2	
53	HAS	25MB4072 - IPTBF	CO1	Explain investment concepts, risk - return trade-off, and factors influencing required rate of return.	2	2											
54	HAS	25MB4072 - IPTBF	CO2	Apply fundamental and technical analysis to evaluate securities, industries, and firms.	3				3								
55	HAS	25MB4072 - IPTBF	CO3	Construct and analyze portfolios using CAPM, APT, and modern portfolio theories.			3					3					
56	HAS	25MB4072 - IPTBF	CO4	Evaluate portfolio performance using risk-adjusted performance measures and selection models.						3				3			
57	HAS	25MB4073 - IM	CO1	Develop value proposition for the problem identified	2	3											
58	HAS	25MB4073 - IM	CO2	Build MVP for the solution developed			3			2							
59	HAS	25MB4073 - IM	CO3	Devise go to market strategy				2	3								
60	HAS	25MB4073 - IM	CO4	Create a Pitch-deck with funding strategy							1	2					
61	HAS	25MB4231 - DMK	CO1	Outline the key concepts of digital marketing.	1												
62	HAS	25MB4231 - DMK	CO2	Apply SEO to a website.	2												
63	HAS	25MB4231 - DMK	CO3	Use the key PPC concepts to draw visitors to a business websites		2											
64	HAS	25MB4231 - DMK	CO4	Analyze Campaign Management to manage the marketing concepts		3											3

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
65	HAS	25MB4231 - DMK	CO5	Analyze digital marketing strategies		3											
66	HAS	25UC0021 - SIL-1	CO1	Apply effective communication and collaboration skills to work with diverse populations in addressing social issues within the community								3	3				
67	HAS	25UC0021 - SIL-1	CO2	Build technological solutions to real-world problems or challenges with peers to achieve common goals.								3	3				
68	HAS	25UC0021 - SIL-1	CO3	Plan effectively to communicate ideas and collaborate with others to achieve artistic or recreational goals.				3									
69	HAS	25UC0021 - SIL-1	CO4	Develop innovative solutions by thinking critically and creatively within a collaborative social immersive learning environment				3							3		
70	HAS	25UC0021 - SIL-1	CO5	Identify the strategies to promote personal well-being for healthy living through social interaction and shared experiences.			3								3		
71	HAS	25UC0022 - SIL-2	CO1	Apply effective communication and collaboration skills to work with diverse populations in addressing social issues within the community		3						3	3				
72	HAS	25UC0022 - SIL-2	CO2	Build technological solutions to real-world problems or challenges with peers to achieve common goals		3						3	3				
73	HAS	25UC0022 - SIL-2	CO3	Plan effectively to communicate ideas and collaborate with others to achieve artistic or recreational goals.		3						3	3				
74	HAS	25UC0022 - SIL-2	CO4	Develop innovative solutions by thinking critically and creatively within a collaborative social immersive learning environment		3						3	3				

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
75	HAS	25UC0022 - SIL-2	CO5	Identify the strategies to promote personal well-being for healthy living through social interaction and shared experiences		3						3	3				
76	HAS	25UC0026 - UHV	CO1	Understanding the basic concepts of value education								2	2				
77	HAS	25UC0026 - UHV	CO2	Gain basic understanding of principles in harmony among human beings								2	2				
78	HAS	25UC0026 - UHV	CO3	Gain knowledge in the concept of Harmony in the family and society								3	3				
79	HAS	25UC0026 - UHV	CO4	Acquire knowledge in the concepts of harmony in the nature								3	3				
80	HAS	25UC1102 - LSE	CO1	Understand the essential listening, speaking, and reading skills, preparing them form effective communication in various personal and professional contexts.										2			
81	HAS	25UC1102 - LSE	CO2	Apply essential writing and non-verbal communication skills, preparing them for effective written and non-verbal interactions in various personal and professional										3			
82	HAS	25UC1203 - DTI	CO1	Understand the importance of Design thinking mindset for identifying contextualized		2											
83	HAS	25UC1203 - DTI	CO2	Analyze the problem statement by empathizing with user							3						
84	HAS	25UC1203 - DTI	CO3	Develop ideation and test the prototypes made			3										
85	HAS	25UC1203 - DTI	CO4	Explore the fundamentals of entrepreneurship skills for transforming the challenge											2		

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
86	HAS	25UC1204 - CSE	CO1	Understand the essential career skills, including resume writing, interview techniques, group discussions, and exploring career opportunities, preparing them for successful career advancement									3	3			
87	HAS	25UC1204 - CSE	CO2	Apply a comprehensive understanding of essential team skills, preparing them for successful collaboration and contribution in professional team environments.									3	3			
88	BSC	25CE1201 - EG	CO1	Understand the significance of engineering geology, basics of geological processes that modify the surface of the earth, earthquakes, landslides	1				1				1			1	
89	BSC	25CE1201 - EG	CO2	Understand the basics of minerals and rocks, geological structures	1				1				1			1	
90	BSC	25CE1201 - EG	CO3	Understand the geological conditions to identify suitable site for civil engineering projects.	1				1				1			1	
91	BSC	25CE1201 - EG	CO4	Understand Geological conditions to identify potential sites for groundwater, sites for dam and reservoir and tunnels	1				1				1			1	
92	BSC	25CE1201 - EG	CO5	Apply and analyze the geological conditions for suitability of the site for a major civil engineering project	1				1				1			1	
93	BSC	25CE2212 - EE	CO1	To Understand the demand of water and water treatment process	1						3						2
94	BSC	25CE2212 - EE	CO2	Understand the concept of Water distribution system by using Equivalent pipe method	1						3						2
95	BSC	25CE2212 - EE	CO3	Understand the concept of Water distribution system by using Equivalent pipe method	2						3						2

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
96	BSC	25CE2212 - EE	CO4	To applied design concept in construction landfill and elaborate Solid Waste Management methods and Noise pollution effects	2						3						2
97	BSC	25CE2212 - EE	CO5	Evaluate the charecteristic of water & wastewater	2						3						2
98	BSC	25MT1001 - LCE	CO1	Apply matrix algebra to the real-world applications in engineering, physical and biological sciences, computer science, finance, economics and solving the system of equations.													
99	BSC	25MT1001 - LCE	CO2	Apply multivariate differential calculus to find maxima & minima of functions and understand the concepts of second order differential equations and its applications.													
100	BSC	25MT1001 - LCE	CO3	Apply beta and gamma functions to evaluate improper integrals. Evaluate double and triple integrals techniques over a region in two dimensional and three-dimensional geometry.													
101	BSC	25MT1001 - LCE	CO4	Interpret the physical meaning of different operators such as gradient, curl and compute the line integrals of vector functions and learn their applications.													
102	BSC	25MT2003 - MNMM	CO1	Apply difference equations to model and solve real life problems.	3		3									3	
103	BSC	25MT2003 - MNMM	CO2	Apply method of least squares for the best fitting linear and nonlinear models.	3		3									3	
104	BSC	25MT2003 - MNMM	CO3	Apply simulation modeling to Interpret real life problems.	3		3									3	
105	BSC	25MT2003 - MNMM	CO4	Apply mathematical modelling through differential equations	3		3										3

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
106	BSC	25MT2003 - MNMM	CO5	Verify the solution of the equations using MATLAB				3									3
107	BSC	25MT2019 - PNS	CO1	Apply the importance of probabilistic concepts in a wide spectrum of problems arising in engineering applied science.													
108	BSC	25MT2019 - PNS	CO2	Assess the relationship between variables using correlation and regression techniques													
109	BSC	25MT2019 - PNS	CO3	Apply the role of Statistical tests of significance in solving real world engineering problems													
110	BSC	25MT2019 - PNS	CO4	Formulate Stochastic process in terms of Markov chains and solve problems in queueing systems, and network													
111	ESC	25CE2102 - FMH	CO1	Application of Properties of Fluid	2		2		2							1	
112	ESC	25CE2102 - FMH	CO2	Determination of losses through pipe flow	2		2		2							1	
113	ESC	25CE2102 - FMH	CO3	Analysis of flow in open channel	2		2		2							1	
114	ESC	25CE2102 - FMH	CO4	Analysis of specific energy curve in open channel flow	2		2		2							1	
115	ESC	25CE2102 - FMH	CO5	Illustrate the experimental procedure and interpretation of results obtained	2		2		2							1	
116	ESC	25CE3214 - CEM	CO1	Understand about the features, phases, stakeholders, and basic planning techniques (Bar Charts, CPM, PERT) used in construction projects.	1	2										1	
117	ESC	25CE3214 - CEM	CO2	Understand the basic construction methods, equipment types, and their productivity for different construction activities	1	2										1	

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
118	ESC	25CE3214 - CEM	CO3	Summarize the process of site planning, resource scheduling, project monitoring, and use of modern management tools like BIM and Lean Construction.	1	2										1	
119	ESC	25CE3214 - CEM	CO4	Understand the components of construction costs, types of contracts, quality requirements, and safety measures at construction sites.	1	2										1	
120	ESC	25EC1101 - BEEC	CO1	Understand the basic concepts of AC and DC circuits and apply them to solve electric circuit problems.	1	2										1	
121	ESC	25EC1101 - BEEC	CO2	Apply different circuit analysis techniques to find voltage, current, impedance and power in electrical circuits.	1	2										1	
122	ESC	25EC1101 - BEEC	CO3	Comprehend the behavior of basic electronic components, such as diodes and transistor, and their applications.	1	2										1	
123	ESC	25EC1101 - BEEC	CO4	Understand the basic functional principles of different analog ICs, such as IC 741 Op Amp, IC 555 Timer and IC Voltage Regulators.	1	2										1	
124	ESC	25EC1101 - BEEC	CO5	Utilize measurement tools and equipment for validating theoretical concepts of different electrical and electronic circuits and develop problem solving capabilities through hands on experimentation.	1	2											
125	ESC	25ME1001 - EM	CO1	Apply the concept of forces, governing static equations, and analyze the planar system of forces.	1	2	2									1	
126	ESC	25ME1001 - EM	CO2	Use analytical techniques for analyzing forces in statically determinate structures	1	2	2									1	

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
127	ESC	25ME1001 - EM	CO3	Apply the concepts of planar and non-planar system of parallel forces and estimate the moment of inertia for lamina and material bodies.	1	2	2									1	
128	ESC	25ME1001 - EM	CO4	Apply fundamental concepts of kinematics and kinetics of particles to solve simple practical problems of rigid bodies and particles.	1	2	2									1	
129	ESC	25ME1002 - EG	CO1	Apply the principles of orthographic and pictorial projections to visualize, sketch, and interpret engineering objects.	2		2									1	
130	ESC	25ME1002 - EG	CO2	Develop 3D part models, assemblies, and tolerance drawings using Autodesk CAD & Fusion 360.	2		2									1	
131	ESC	25ME1103 - DTW	CO1	Demonstrate proficiency in typing sentence , paragraph , report , presentations along spread sheets using office tools, LaTeX tools and PowerBI	2	2			2							1	
132	ESC	25ME1103 - DTW	CO2	Build a static website and blog with using html along with Special features of HTML5, CSS and Javascript	2	2			2							1	
133	ESC	25ME1103 - DTW	CO3	Develop a virtual environment with cospace and construct a marker based Augmented Reality	2	2			2							1	
134	ESC	25ME1103 - DTW	CO4	Utilising the softwares of Autodesk Fusion 360 and the same can be printed in 3D printer as physical prototype	2	2			2							1	
135	ESC	25SC1101 - PSTC	CO1	Develop Basic and Complex Building Blocks for real world problems using structured programming paradigm	2	2		1		1						1	
136	ESC	25SC1101 - PSTC	CO2	Develop logical building blocks using conditional statements to solve real world problems	2	2		1		1						1	

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
137	ESC	25SC1101 - PSTC	CO3	Develop logical solutions using the concepts of arrays and functions	2	2		1		1						1	
138	ESC	25SC1101 - PSTC	CO4	Develop solutions by applying various operations on user defined data types such as structures and unions	2	2		1		1						1	
139	ESC	25SC1101 - PSTC	CO5	Apply the structured programming paradigm with logic building skills on Basic and Linear Data Structures for solving real world problems	2	2		1		1						1	
140	ESC	25SC1101 - PSTC	CO6	Skill the students in such a way that students will be able to develop logic that help them to create programs as well as applications in C	2	2		1		1						1	
141	ESC	25SC1203 - DST	CO1	Understand various sorting algorithms and analyze the efficiency of the algorithms	2	2						2				1	
142	ESC	25SC1203 - DST	CO2	Implement and evaluate Linear Data Structures and Demonstrate their applications	2	2						2				1	
143	ESC	25SC1203 - DST	CO3	Implement and evaluate tree data structures and understand hashing techniques	2	2						2				1	
144	ESC	25SC1203 - DST	CO4	Understand graph data structures and apply graphs to solve problems	2	2						2				1	
145	ESC	25SC1203 - DST	CO5	Design, Develop and evaluate common practical applications for linear and nonlinear data structures	2	2						2				1	
146	ESC	25SC1203 - DST	CO6	Skill the students in such a way that students will be able to develop and create programs as well as applications in DS	2	2						2				1	
147	ESC	25SC2007 - PP	CO1	Apply the concepts of Basic Data types, Operators, Decision and Looping Control Statements, String	2	2		2									1

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
148	ESC	25SC2007 - PP	CO2	Apply the concepts of Lists, Tuples, Dictionaries. Functions, Modules, Class, Object, OOPS principles.	2	2		2									1
149	ESC	25SC2007 - PP	CO3	Apply the concept of OOP principles, Classes and Objects, Call by value vs call by reference, recursion and nested classes	2	2		2									1
150	ESC	25SC2007 - PP	CO4	Apply the concept of files, interfaces, packages, threads	2	2		2									1
151	ESC	25SC2007 - PP	CO5	Design, implement and evaluate python program using basic datatypes, variables, expressions, conditional statements, loops, functions, built-in data structures, object oriented concepts, python libraries and modules, debugging techniques and file I/O to solve programming problems	2	2		2									1
152	PCC	25CE2103 - SUR	CO1	Introduction to surveying	3				3							3	
153	PCC	25CE2103 - SUR	CO2	Leveling and Contouring	3				3							3	
154	PCC	25CE2103 - SUR	CO3	Theodolite	3				3								3
155	PCC	25CE2103 - SUR	CO4	Tachometric Surveying											3	3	
156	PCC	25CE2103 - SUR	CO5	Accessories with description											3	3	
157	PCC	25CE2103 - SUR	CO6	Summary of total stations characteristics	3	3											3
158	PCC	25CE2104 - BMPD	CO1	Identify and classify building materials based on their properties and suitability for construction.	1		3									3	
159	PCC	25CE2104 - BMPD	CO2	Explain manufacturing process, testing methods, and applications of various building materials.	1		3									3	

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
160	PCC	25CE2104 - BMPD	CO3	Apply IS codes to determine quality parameters and select appropriate building materials for a given project.	1		3									3	
161	PCC	25CE2104 - BMPD	CO4	Illustrate basic building planning principles, orientation, and byelaws.	1		3									3	
162	PCC	25CE2104 - BMPD	CO5	Prepare line plans, elevation and sectional drawings for residential buildings using conventional symbols.	1		3									3	
163	PCC	25CE2104 - BMPD	CO6	Develop submission drawings, working drawings, and schedule of openings according to IS 962.	1		3									3	
164	PCC	25CE2104 - BMPD	CO7	Analyze functional requirements and space standards for public and residential buildings. Create complete plan, elevation, section, and schedule of openings for a small residential building using CAD software.	1		3									3	
165	PCC	25CE2105 - SM	CO1	This outcome enables students to grasp the basic principles of equilibrium, internal forces, and material behavior. Learners will be able to determine stresses and strains in structural and machine components subjected to axial, shear, torsional, and bending loads. The understanding developed here forms the foundation for analyzing real-world engineering problems related to strength, stability, and safety of materials.			2										
166	PCC	25CE2105 - SM	CO2	This outcome highlights the application-oriented part of solid mechanics, where students not only understand but also use the principles in solving practical problems of shafts, beams, and structural members.			2										

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
167	PCC	25CE2105 - SM	CO3	This outcome ensures students can interpret load effects, visualize internal force variations, and apply them in structural member design.			2										
168	PCC	25CE2105 - SM	CO4	This emphasizes evaluation and problem-solving skills, moving beyond just diagrams to actual quantification of stresses and deformations.			2										
169	PCC	25CE2105 - SM	CO5	Apply principles of solid mechanics to real-world engineering problems and select appropriate failure theories for safe and efficient design of structural and machine components.		3										2	
170	PCC	25CE2105 - SM	CO6	Demonstrate the ability to use modern tools and simulation techniques to model, analyze, and interpret the behavior of structural and machine components under different loading conditions.													
171	PCC	25CE2206 - SA	CO1	Determine the deflection of Determinate beams by various methods	1				2							3	
172	PCC	25CE2206 - SA	CO2	Analyze of Indeterminate Propped cantilever and fixed beams	1				2							3	
173	PCC	25CE2206 - SA	CO3	Analyze Indeterminate continuous beams and portal frames by slope deflection method	1				2							3	
174	PCC	25CE2206 - SA	CO4	Analyze continuous beams and portal frames by moment distribution method and Kanis method	1				2							3	
175	PCC	25CE2207 - CT	CO1	Understand about the constituent and properties of cement	2												
176	PCC	25CE2207 - CT	CO2	Understand about the fresh, hardened and durability of concrete.	2												
177	PCC	25CE2207 - CT	CO3	Understand about special concretes and concreting techniques.				2									

S#	Cat	Course	CO	CO Description	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
178	PCC	25CE2207 - CT	CO4	To apply concrete mix design in the field.			3									2	
179	PCC	25CE2207 - CT	CO5	Demonstrate and apply knowledge experiments in the project-based laboratory						2							
180	PCC	25CE2207 - CT	CO6	Understand the production and placement of concrete													
181	PCC	25CE2207 - CT	CO7	Develop solutions for enhancing concrete performance													
182	PCC	25CE2208 - GTE	CO1	Apply and demonstrate ability various types of soils and its properties, formulates and solve engineering problems.	1				3	2						1	
183	PCC	25CE2208 - GTE	CO2	Apply and show the basic understanding of flow through soil medium and its impact of engineering solution.	1				3	2						1	
184	PCC	25CE2208 - GTE	CO3	Apply and understand the basic concept of stress distribution in loaded soil medium and soil settlement due to consolidation.	1				3	2						1	
185	PCC	25CE2208 - GTE	CO4	Apply and understand of shear strength of soils and its impact of engineering solutions to the loaded soil medium and also will be aware of contemporary issue on shear strength of soils.	1				3	2						1	
186	PCC	25CE2208 - GTE	CO5	Demonstrate an ability to design shallow and deep foundations, its component or process as per the needs and specifications.	1				3	2						1	
187	PCC	25CE2208 - GTE	CO6	Analyze and solve geotechnical problems through soil testing and apply theoretical methods for stress, consolidation, and foundation design	1				3	2						1	
188	PCC	25CE2209 - TPE	CO1	Understand the Current road projects including highway project preparation	2		2									3	3

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189	PCC	25CE2209 - TPE	CO2	Design highway cross section elements	2		2									3	3
190	PCC	25CE2209 - TPE	CO3	Design flexible and rigid pavement	2		2									3	3
191	PCC	25CE2209 - TPE	CO4	Analyse the components of traffic stream parameters	2		2									3	3
192	PCC	25CE2209 - TPE	CO5	Identify the suitable road construction materials following IRC codes	2		2									3	3
193	PCC	25CE3110 - DRCS	CO1	Recognize various design philosophies of reinforced concrete structures & model designing.	1				2							1	
194	PCC	25CE3110 - DRCS	CO2	Design of Singly Reinforced Beams, Doubly Reinforced Beams, and Flanged Beams.	1				2							1	
195	PCC	25CE3110 - DRCS	CO3	Design of One-way, two-way slabs and Design of columns.	1				2							1	
196	PCC	25CE3110 - DRCS	CO4	Foundation Design and Staircase Design.	1				2							1	
197	PCC	25CE3110 - DRCS	CO5	Design and detailing of RC Structural Elements.	1				2							1	
198	PCC	25CE3111 - WRE	CO1	Analyze components of hydrological cycle, hydrograph, and its application	2		2				2					2	
199	PCC	25CE3111 - WRE	CO2	Analyze of groundwater, groundwater movement and well hydraulics	2		2				2					2	
200	PCC	25CE3111 - WRE	CO3	Analyze and design of canal irrigation methods	2		2				2					2	
201	PCC	25CE3111 - WRE	CO4	Analyze and design of dams and reservoirs	2		2				2					2	
202	PCC	25CE3213 - DSS	CO1	Fundamental Concepts: The book starts with an overview of fundamental concepts in structural engineering, including the behavior of steel materials, loadings, and design criteria.	1		3		2							1	

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203	PCC	25CE3213 - DSS	CO2	Design Methods: It covers the latest design methods and techniques for various types of steel structures, including beams, columns, connections, and trusses.	1		3		2							1	
204	PCC	25CE3213 - DSS	CO3	Code Compliance: Detailed explanations of relevant design codes and standards, such as the American Institute of Steel Construction (AISC) and Eurocode, ensure compliance with industry regulations.	1		3		2							1	
205	PCC	25CE3213 - DSS	CO4	Practical Examples: Numerous worked examples and case studies illustrate the application of design principles in real-world scenarios, enhancing understanding and problem-solving skills.	1		3		2							1	
206	PCC	25CE3213 - DSS	CO5	Design Software: Discussions on the use of structural analysis and design software tools, such as SAP2000 and STAAD.Pro, provide insights into modern design practices.	1		3		2							1	
207	PCC	25CE3213 - DSS	CO6	Design Considerations: Special topics like seismic design, fire protection, and sustainability considerations in steel construction are addressed to provide a holistic understanding of steel structure design.	1		3		2							1	
208	PRI	25IE2040 - SIP	CO1	Remember the fundamentals of the science of water cycle along with powerful tools that students can use to diagnose the health of the local water cycle as well as develop targeted action plans to restore the local natural water cycle and bring water	1			2			2		2		2	1	2

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209	PRI	25IE2040 - SIP	CO2	Remember the water sustainability and water resilience of village, city, residential facilities and households using multi-level water scorecards	1			2			2		2		2	1	2
210	PRI	25IE2040 - SIP	CO3	Apply the design thinking positive action plan for a village, campus, residential	1			2			2		2		2	1	2
211	PRI	25IE2040 - SIP	CO4	Apply the water positive solutions within an urban watershed, a rural watershed	1			2			2		2		2	1	2
212	PRI	25IE3041 - TIP	CO1	Ability to demonstrate the impact of academic skills and logical thinking	2				2			2	2		1	3	2
213	PRI	25IE3041 - TIP	CO2	Ability to integrate existing and new technical knowledge for industrial application	2				2			2	2		1	3	2
214	PRI	25IE3041 - TIP	CO3	Ability to demonstrate the impact of the internship on their learning and professional development	2				2			2	2		1	3	2
215	PRI	25IE3041 - TIP	CO4	Demonstrate the ability to harness resources by analyzing challenges	2				2			2	2		1	3	2
216	PRI	25IE4042 - INT	CO5	INTERNSHIP	2	2						2	2		2	3	2
217	PRI	25IE4048 - EPJ	CO1	Develop skills to conduct comprehensive searches, critically assess the credibility of sources, and apply research findings to support their academic or professional work.	3												
218	PRI	25IE4048 - EPJ	CO2	Analyze situations critically, identify underlying causes, and articulate clear problem statements that guide effective problem-solving strategies.		3										3	

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219	PRI	25IE4048 - EPJ	CO3	Develop the ability to dissect research findings, identify strengths and weaknesses, and draw informed conclusions that contribute to their own academic or professional endeavors.						3							
220	PRI	25IE4048 - EPJ	CO4	Gain the skills to judge the validity, reliability, and impact of research, enabling them to make informed decisions and provide constructive feedback in academic or professional contexts.									3				3
221	PRI	25IE4051 - INT-1	CO5	INTERNSHIP	3	3											
222	PRI	25IE4052 - INT-2	CO5	INTERNSHIP	3	3											
223	PRI	25IE4053 - ECP-1	CO1	Exercise to acquire knowledge within the chosen area of technology for project development.	2												
224	PRI	25IE4053 - ECP-1	CO2	Identify, discuss and justify the technical aspects of the chosen area for problem analysis		3											
225	PRI	25IE4053 - ECP-1	CO3	Reproduce, improve and refine technical aspects for chosen problem						2							
226	PRI	25IE4053 - ECP-1	CO4	Communicate and report effectively project related activities and findings.									3				
227	PRI	25IE4054 - ECP-2	CO1	Develop skills to conduct comprehensive searches, critically assess the credibility of sources, and apply research findings to support their academic or professional work.	3												
228	PRI	25IE4054 - ECP-2	CO2	Analyze situations critically, identify underlying causes, and articulate problem statements that guide effective problem-solving strategies.		3											

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229	PRI	25IE4054 - ECP-2	CO3	Develop the ability to dissect research findings, identify strengths and weaknesses, and draw informed conclusions that contribute to their own academic or professional endeavors.						3							
230	PRI	25IE4054 - ECP-2	CO4	Gain the skills to judge the validity, reliability, and impact of research, enabling them to make informed decisions and provide constructive feedback in academic or professional contexts.									3				
231	PRI	25IE4055 - IP-1	CO1	Understand the fundamental principles and processes of innovation			2	2	2								
232	PRI	25IE4055 - IP-1	CO2	Develop skills to identify and evaluate opportunities for innovation			3	3	3								
233	PRI	25IE4055 - IP-1	CO3	Apply research methodologies to gather and analyze data for innovative solutions.				3	3				3				
234	PRI	25IE4055 - IP-1	CO4	Enhance team collaboration and project management skills in an innovation context.				3	3				3				
235	PRI	25IE4056 - IP-2	CO1	Develop advanced project management skills for innovation projects.			2	2	2								
236	PRI	25IE4056 - IP-2	CO2	Apply advanced analytical tools to refine innovative ideas.			3	3	3								
237	PRI	25IE4056 - IP-2	CO3	Create detailed business plans for innovative solutions.				3	3	3							
238	PRI	25IE4056 - IP-2	CO4	Present and defend innovation projects effectively to stakeholders.				3	3	3							
239	PRI	25IE4057 - RP-1	CO1	Demonstrate the basic principles of research methodology.			2	2	2								
240	PRI	25IE4057 - RP-1	CO2	Conduct a literature review and identify simple research problems.			3	3	3								

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241	PRI	25IE4057 - RP-1	CO3	Formulate basic research questions and hypotheses.				3	3	3							
242	PRI	25IE4057 - RP-1	CO4	Develop a straightforward research proposal including methodology and expected outcomes				3	3	3							
243	PRI	25IE4058 - RP-2	CO1	Implement advanced research methodologies for data collection and analysis.			2	2	2								
244	PRI	25IE4058 - RP-2	CO2	Interpret complex research findings and discuss their implications.			3	3	3								
245	PRI	25IE4058 - RP-2	CO3	Develop advanced skills in academic writing and publication.			3	3					3				
246	PRI	25IE4058 - RP-2	CO4	Present research findings effectively to an academic and professional audience.			3	3					3				
					1.7	2.3	2.5	2.3	2.3	2	2.4	2.4	2.4	2.8	2.2	1.7	2.2

Our Campuses



Green Fields, Vaddeswaram.
Guntur District, A.P., India, Pincode : 522 302.



Aziznagar, Moinabad Road,
Near TS Police Academy, Hyderabad, Telangana,
India, Pincode : 500 075



Bowrampet, ALEAP Industrial Area,
Gajularamaram, Hyderabad, Telangana,
India, Pincode : 500 043



Plot No: 52 & 53, Jubilee Gardens Road No. 2,
Kothaguda, Kondapur, Hyderabad Telangana,
India, Pincode : 500 084



KLEF Deemed to be University

Admin. Office, 29-36-38, Museum Road, Governorpet, Vijayawada. A.P., India. Pincode: 520 002.