CHANDIGARH UNIVERSITY
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Program Schemes for [B.E. in Mechanical Engineering – LEET (ME202)]

Cluster: Engineering & Technology Institute: UIE Department: **Mechanical Engineering**
Type of Program: UG

First Year				Second Year			
	Course Name	**Course Category**	**Credits**		**Course Name**	**Course Category**	**Credits**
Semester-1	Not Applicable (N/A) – As LEET students are Exempted from Semester I & II			**Semester-3**	Engineering Mathematics	Minor core (BS)	4
					Strength of Materials	Major core	5
					Engineering Thermodynamics	Major core	4
					Theory of Machines	Major core	5
					Social Internship (Community Engagement and Social Responsibility)	Internship or Training	2
					Aptitude-1	Ability Enhancement	1
					Entrepreneurship Mindset	Ability Enhancement	1
					Critical Enquiry and Research Methodology	Ability Enhancement	1
					General Proficiency-2	Ability Enhancement	1
Semester -2	Not Applicable (N/A) – As LEET students are Exempted from Semester I & II			**Semester-4**	Program Elective-1	Minor Elective	3
					Applied Mathematics-III	Minor Core (BS)	4
					Applied Thermodynamics	Major Core	4
					Manufacturing Processes and Techniques	Major core	5

			General Proficiency - 3	Skill Enhancement	1
			Universal Human Values, Ethics and Life Skills–2	Value Education	2
			Mid-Grade Project-I [MGP-1]	Project	1
			Aptitude-2	Ability Enhancement	1
			Soft Skills-2	Skill Enhancement	1
			Marketing & Management Essentials	Ability Enhancement	1
			AI Automation & Sustainability	Skill Enhancement	1
			Academic Writing	Ability Enhancement	1
			Research Ethics & Intellectual Property Rights	Skill Enhancement	1

Third Year				Fourth Year			
	Course Name	**Course Category**	**Credits**		**Course Name**	**Course Category**	**Credits**
Semester -5	Program Elective - II	Minor Elective	3	**Semester-7**	Program Elective – V	Minor Elective	3
	Numerical Analysis	Minor Core (BS)	4		Open Elective-II	Open Electives	3
	Refrigeration and Air Conditioning	Major Core	4		Automotive Technology	Major Core	3
	Fluid Mechanics and Hydraulics Machines	Major Core	5		Capstone Project-1 / Dissertation (Part - I)	PROJECT	4
	Advanced CAD Modelling	Minor Core	1		Industry Internship	Internship / Training	1

	Technical/ Domain Internship	Summer Internship	1		Professional Ethics	Ability Enhancement	1
	Gender Equity and Empowerment	Value Education	1		General Proficiency-4	Skill Enhancement	1
	Environment Science & Management	Value Education (BS)	2				
	Aptitude-3	Ability Enhancement	1				
	Soft Skills-3	Skill Enhancement	1				
	Business Strategies & Operations	Ability Enhancement	1				
	Finance & Economics Fundamentals	Skill Enhancement	1				
	Statistical Data Analysis	Ability Enhancement	1				
	Emerging Research Tools and Technologies	Skill Enhancement	1				
Semester-6	Open Elective-I	Open Electives	3	**Semester-8**	Open Elective-III	Open Electives	3
	Program Elective-III	Minor Elective	3		Program Elective – VI	Minor Elective	3
	Program Elective – IV	Minor Elective	3		Capstone Project-2 / Dissertation (Part -II)	PROJECT	8
	Heat Transfer	Major Core	5		End Semester Internship	Internship / Training	14
	Design of Machine Elements	Major Core	4				

	Mid-Grade Project-II [MGP-2]	Project	1				
	Introduction to SDGs	Value Education	1				
	Aptitude-4	Ability Enhancement	1				
	Soft Skills-4	Skill Enhancement	1				
	Customer Engagement & Organic Growth	Ability Enhancement	1				
	Business Planning & Legal Basics	Skill Enhancement	1				
	AI & Data-Driven Research	Ability Enhancement	1				
	Domain Specific Term Paper	Skill Enhancement	1				

I. Elective Basket (Thermal)			
Semester	**Course Name**	**Course Category**	**Credits**
4	Power Plant Engineering	Minor Elective	3
5	Internal Combustion (I.C.) Engines and Alternative Fuels	Minor Elective	3
6	Applied Computational Fluid Dynamics (CFD) and Simulation	Minor Elective	3
6	Gas Turbine and Jet Propulsion Systems	Minor Elective	3
7	Renewable and Hybrid Energy Systems	Minor Elective	3
8	Energy Management	Minor Elective	3

II. Elective Basket (Design)			
Semester	**Course Name**	**Course Category**	**Credits**
4	Advanced Mechanics of Solids	Minor Elective	3
5	Industrial Automation & Robotics	Minor Elective	3
6	Computer Aided Engineering	Minor Elective	3
6	Industry 4.0 and Digital Twin	Minor Elective	3
7	Mechanical Vibrations	Minor Elective	3

8	Tribology	Minor Elective	3

III. Elective Basket (Production)			
Semester	**Course Name**	**Course Category**	**Credits**
4	Material Science	Minor Elective	3
5	Operations Research for Industrial Decision-Making	Minor Elective	3
6	Computer Integrated and Manufacturing systems	Minor Elective	3
6	Non Traditional Machining	Minor Elective	3
7	Industrial Engineering	Minor Elective	3
8	Total Quality Management	Minor Elective	3