

Samrat Ashok Technological Institute (Engineering College), Vidisha

Department of Mechanical Engineering

(Minor degree in Mechanical Engineering)

BOS meeting (27.05.2025)

LIST OF SWAYAM SUBJECTS FOR MINOR DEGREE

S.N	NPTEL URL	Course Name	Credit/ Duration (week)	Semester	Concern Faculty
Basic subjects					
1	https://nptel.ac.in/courses/112104526	Basics of Mechanical Engineering - 1	4/12	Jul. – Dec.	Prof. Janakranjan Ramkumar
2	https://nptel.ac.in/courses/112104616	Basics of Mechanical Engineering - 2	4/12	Jan. – Apr.	Prof. Janakranjan Ramkumar
3	https://nptel.ac.in/courses/112106180	Engineering Mechanics - Statics and Dynamics	3/8	Jan. – Apr.	Prof. Anubhab Roy
	OR				
	https://nptel.ac.in/courses/112106286	Engineering Mechanics	4/12	Jul. – Dec.	Prof. K. Ramesh, Prof. Tarkes Dora Pallicity
4	https://nptel.ac.in/courses/112102304	Engineering Graphics and Design	4/12	Jul. – Dec.	Prof. Naresh Datla, Prof. S.R. Kale
5	https://nptel.ac.in/courses/112104203	Nature and Properties of Materials	3/8	Jan. – Apr.	Prof. Bishakh Bhattacharya
Production & Manufacturing					
6	https://nptel.ac.in/courses/112104188	Manufacturing Systems Technology I & II	4/12	Jul. – Dec.	Prof. Shantanu Bhattacharya
	OR				
	https://nptel.ac.in/courses/112107219	Fundamentals of Manufacturing Processes	4/12	Jul. – Dec.	Prof. D. K. Dwivedi
	OR				
	https://nptel.ac.in/courses/112107239	Theory of Production Processes	4/12	Jul. – Dec.	Prof. P. K. Jha
	OR				
	https://nptel.ac.in/courses/112104304	Production Technology: Theory and Practice	4/12	Jul. – Dec.	Prof. Sounak Kumar Choudhury
	OR				
7	https://nptel.ac.in/courses/112103528	Materials Processing (Casting, Forming and Welding)	4/12	Jul. – Dec.	Prof. Swarup Bag
	OR				
	https://nptel.ac.in/courses/112104195	Manufacturing Process Technology I & II	4/12	Jan. – Apr.	Prof. Shantanu Bhattacharya
8	https://nptel.ac.in/courses/112103293	Rapid Manufacturing	4/12	Jul. – Dec.	Prof. J. Ramkumar
9	https://nptel.ac.in/courses/112103293	Automation in Manufacturing	4/12	Jul. – Dec.	Prof. Shrikrishna N. Joshi
9	https://nptel.ac.in/courses/112107259	Inspection And Quality Control In Manufacturing	2/4	Jan. – Apr.	Prof. Kaushik Pal

AM Q A de off B S on dia Hef. # Jhr

10	https://nptel.ac.in/courses/112103245	Introduction to Machining and Machining Fluids	3/8	Jan. – Apr.	Prof.Mamilla Ravi Sankar
	OR				
	https://nptel.ac.in/courses/112104290	Machining Science	2/4	Jan. – Apr.	Prof.Sounak Kumar Choudhury
	OR				
11	https://nptel.ac.in/courses/112103248	Mechanics Of Machining	3/8	Jan. – Apr.	Prof.Uday S. Dixit
12	https://nptel.ac.in/courses/112105233	Metal Cutting And Machine Tools	2/4	Jan. – Apr.	Prof.Asimava Roy Choudhury
13	https://nptel.ac.in/courses/112103263	Fundamental Of Welding Science And Technology	3/8	Jan. – Apr.	Prof. Pankaj Biswas
14	https://nptel.ac.in/courses/112103250	Introduction to Abrasive Machining and Finishing Processes	3/8	Jan. – Apr.	Prof.Mamilla Ravi Sankar
15	https://nptel.ac.in/courses/112107258	Manufacturing Guidelines For Product Design	3/8	Jan. – Apr.	Prof.Inderdeep Singh
16	https://nptel.ac.in/courses/112103420	Mechanics of Sheet Metal Forming	3/8	Jan. – Apr.	Prof. R Ganesh Narayanan
	OR				
	https://nptel.ac.in/courses/112107250	Principles of Metal Forming Technology	3/8	Jul. – Dec.	Prof. P. K. Jha
17	https://nptel.ac.in/courses/112107767	Material Processing (Metallurgical Aspects): Fundamental, and Practical	4/12	Jul. – Dec.	Prof.Dheerendra Kumar Dwivedi
18	https://nptel.ac.in/courses/112107213	Joining Technologies for Metals	4/12	Jul. – Dec.	Prof. D. K. Dwivedi
	Thermal Engineering, Heat transfer and Fluid mechanics				
19	https://nptel.ac.in/courses/112102255	Thermodynamics	4/12	Jan. – Apr.	Prof.Pushparaj Mani Pathak
	OR				
	https://nptel.ac.in/courses/112103275	Applied Thermodynamics for Engineers	4/12	Jul. – Dec.	Prof.Dipankar N. Basu
	OR				
	https://nptel.ac.in/courses/112103307	Applied Thermodynamics	4/12	Jul. – Dec.	Prof.NiranjanSahoo
	OR				
	https://nptel.ac.in/courses/112106419	Applied Thermodynamics	4/12	Jan. – Apr.	Prof. V. Raghavan
20	https://nptel.ac.in/courses/112103316	Thermal Engineering: Basic and Applied	4/12	Jan. – Apr.	Prof.Pranab K. Mondal
	https://nptel.ac.in/courses/112107291	Power Plant Engineering	3/8	Jul. – Dec.	Prof. Ravi Kumar
	OR				
	https://nptel.ac.in/courses/112103421	Power Plant System Engineering	4/12	Jan. – Apr.	Prof.NiranjanSahoo

21	https://nptel.ac.in/courses/112103276	Fundamentals of Conduction and Radiation	4/12	Jul. – Dec.	Prof.AmareshDalal
	OR				
	https://nptel.ac.in/courses/112103297	Fundamentals of Convective Heat Transfer	4/12	Jul. – Dec.	Prof.AmareshDalal
	OR				
	https://nptel.ac.in/courses/112105271	Conduction And Convection Heat Transfer	4/12	Jan. – Apr.	Prof.Suman Chakraborty
	OR				
	https://nptel.ac.in/courses/112107211	Convective Heat Transfer	2/4	Jan. – Apr.	Prof. Arup Kumar Das
22	https://nptel.ac.in/courses/112103262	IC Engines And Gas Turbines	4/12	Jan. – Apr.	Prof.Pranab K. Mondal,
23	https://nptel.ac.in/courses/112105269	Introduction to Fluid Mechanics	4/12	Jan. – Apr.	Prof.Suman Chakraborty
24	https://nptel.ac.in/courses/112103249	Principle of Hydraulic Machines and System Design	4/12	Jul. – Dec.	Prof.Pranab K. Mondal

Design Engineering					
25	https://nptel.ac.in/courses/112107217	Product Design And Development	4/12	Jul. – Dec.	Prof.Inderdeep Singh
	OR				
	https://nptel.ac.in/courses/112104228	Design Practice	3/8	Jan. – Apr.	Prof. Shantanu Bhattacharya
	OR				
	https://nptel.ac.in/courses/112104230	Product Design and Manufacturing	4/12	Jan. – Apr.	Prof.J.Ramkumar
	OR				
	https://nptel.ac.in/courses/112105316	Product Engineering and Design Thinking	3/8	Jan. – Apr.	Prof.Pranab K Dan
26	https://nptel.ac.in/courses/112105268	Kinematics of Mechanisms and Machines	3/8	Jan. – Apr.	Prof.AnirvanDasgupta
Industrial Engineering & Automation					
27	https://nptel.ac.in/courses/112107292	Principles Of Industrial Engineering	4/12	Jan. – Apr.	Prof. D. K. Dwivedi
28	https://nptel.ac.in/courses/112103261	Principles Of Mechanical Measurement	4/12	Jan. – Apr.	Prof.Dipankar N. Basu
29	https://nptel.ac.in/courses/112107298	Mechatronics	3/8	Jan. – Apr.	Prof.Pushparaj Mani Pathak
30	https://nptel.ac.in/courses/112107238	Operations Management	4/12	Jan. – Apr.	Prof.Inderdeep Singh