

Dr. Ambedkar Institute of Technology
Department of Mechanical Engineering

The documents enclosed are verified and approved.



HOD

Dept. of Mechanical Engineering

Department of Mechanical Engineering
Dr. Ambedkar Institute of Technology
Bengaluru - 560 056.

Dr.Ambedkar Institute of Engineering
Department of Mechanical Engineering
M.Tech in Machine Design

SL. NO	USN	STUDENT NAME	NPTEL COURSES	DURATION
1	1DA20MMD01	ABHILASH D	Material Science	January-april 2022
2	1DA20MMD02	CHIDANANDA V R	Material Science	January-april 2022
3	1DA20MMD03	KISHAN G BIJOOR	Material Science	January-april 2022
4	1DA20MMD04	MAMATHA J	Mechanics Of Fiber Reinforced Polymer Composite Structure	January-april 2022
5	1DA20MMD05	PRAVEEN K	Engineering Graphics and Design	January-april 2022
6	1DA20MMD06	SHIVU G M	Material Science	January-april 2022
7	1DA20MMD07	THARA H N	Material Science	January-april 2022
8	1DA20MMD08	VINAYKUMAR N	Material Science	January-april 2022
9	1DA20MMD09	YASHAS S	Material Science	January-april 2022
10	1DA20MMD10	KEERTHI KUMAR K	Material Science	January-april 2022

COURSE TYPE

Core

COURSE LEVEL

Undergraduate

COURSE LAYOUT

Module 1: Mechanical properties and their determination (4 weeks),
Module 2: Alloys (Ferrous and Non- Ferrous) (4 weeks),
Module 3: Ceramics, Refractory and Abrasive Materials (2 weeks),
Module 4: Smart Materials (2 weeks),
Module 5: Plastics, reinforced plastics and adhesives (3 weeks),
Module 6: Different criteria for design with fracture mechanics (3 weeks),
Module 7: Tribology, Surface treatment and coatings (2 weeks)

BOOKS AND REFERENCES

Material Science and Engineering: William Calister

Material Science and Metallurgy: U C Jindal
Engineering Materials: Michael F Ashby

CERTIFICATE



Instructor bio



Dr. Shashank Srivastava

Indira Gandhi National Open University
Shashank Srivastava is a bachelor in mechanical engineering with masters in Aerospace and doctorate in biomedical structural health monitoring from IIT Kanpur and IIT Delhi respectively. He has cumulative experience of 13 years in industry, DRDO and teaching. He has previously worked for the health monitoring of vapour compression and vapour absorption refrigeration systems in the industry and thereafter conducted research for developing life support systems for fighter pilots at DRDO. He is currently working as assistant professor at school of engineering and technology, IGNOU where he is involved in developing online courses and delivering lectures on Gyan Darshan and Gyan Vani channels. His areas of interest and application of smart materials for health monitoring of biomedical specimens, aerospace and mechanical structures



Course layout

Module 1: Mechanical properties and their determination (4 weeks),

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Module 3: Ceramics, Refractory and Abrasive Materials (2 weeks),

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Module 5: Plastics, reinforced plastics and adhesives (3 weeks),

Module 6: Different criteria for design with fracture mechanics (3 weeks),

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Books and references

Material Science and Engineering: William Calister

Material Science and Metallurgy: U C Jindal

Engineering Materials: Michael F Ashby

Instructor bio



Course Credit: 3

Summary

Course Status :	Ongoing
Course Type :	Core
Duration :	16 weeks
Start Date :	01 Feb 2022
End Date :	
Exam Date :	
Enrollment Ends :	15 Mar 2022
Category :	◦ Mechanical Engineering
Credit Points :	3
Level :	Undergraduate






Page Visits

2914



Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) January 2022 Semester
Score Card for Final Proctored Exam

Roll Number	2232380446	Application Number	90637623	
Candidate's Name	ABHILASH.D	Date of Birth	03-07-1994	
Gender	Male	Nationality	Indian	
Person With Disability (PwD)	No	Category	SC	
SCORE DETAILS				
Course Code	nou22-me05	-	-	-
Course Name	Material Science	-	-	-
Mode of Exam	CBT	-	-	-
Date of Exam	29-08-2022	-	-	-
Maximum Marks	100	-	-	-
Marks Obtained	038	-	-	-
Marks Obtained (words)	Thirty Eight Only	-	-	-
Date of Declaration of Result:	19-10-2022	-	-	-



Senior Director (Exam), NTA



Note

1. Particulars of the candidate have been indicated as mentioned by him/her in the online application form , which are subject to verification later.
2. Candidate, if found submitting incorrect information or tampering with the Score Card, will be considered as using unfair means and his/her candidature will be cancelled.
3. Candidates must preserve this Score Card till the result process is complete.
4. Final scores & certificates will be given by respective National Coordinator

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Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) January 2022 Semester
Score Card for Final Proctored Exam

Roll Number	2232380310	Application Number	25608244	
Candidate's Name	YASHAS S	Date of Birth	01-09-1998	
Gender	Male	Nationality	Indian	
Person With Disability (PwD)	No	Category	General	
SCORE DETAILS				
Course Code	nou22-me05	-	-	-
Course Name	Material Science	-	-	-
Mode of Exam	CBT	-	-	-
Date of Exam	29-08-2022	-	-	-
Maximum Marks	100	-	-	-
Marks Obtained	046	-	-	-
Marks Obtained (words)	Fourty Six Only	-	-	-
Date of Declaration of Result:	19-10-2022	-	-	-



Senior Director (Exam), NTA



Note

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Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) January 2022 Semester
Score Card for Final Proctored Exam

Roll Number	2232380361	Application Number	47333681	
Candidate's Name	KISHAN G BIJOUR	Date of Birth	12-04-1997	
Gender	Male	Nationality	Indian	
Person With Disability (PwD)	No	Category	General	
SCORE DETAILS				
Course Code	nou22-me05	-	-	-
Course Name	Material Science	-	-	-
Mode of Exam	CBT	-	-	-
Date of Exam	29-08-2022	-	-	-
Maximum Marks	100	-	-	-
Marks Obtained	050	-	-	-
Marks Obtained (words)	Fifty Only	-	-	-
Date of Declaration of Result:	19-10-2022	-	-	-





Senior Director (Exam), NTA

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Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) January 2022 Semester
Score Card for Final Proctored Exam

Roll Number	2232380308	Application Number	25064121	
Candidate's Name	CHIDANANDA V R	Date of Birth	08-04-1997	
Gender	Male	Nationality	Indian	
Person With Disability (PwD)	No	Category	General	
SCORE DETAILS				
Course Code	nou22-me05	-	-	-
Course Name	Material Science	-	-	-
Mode of Exam	CBT	-	-	-
Date of Exam	29-08-2022	-	-	-
Maximum Marks	100	-	-	-
Marks Obtained	040	-	-	-
Marks Obtained (words)	Fourty Only	-	-	-
Date of Declaration of Result:	19-10-2022	-	-	-



Senior Director (Exam), NTA



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Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) January 2022 Semester
Score Card for Final Proctored Exam

Roll Number	2232380285	Application Number	12162723	
Candidate's Name	VINAYKUMAR N	Date of Birth	23-12-1996	
Gender	Male	Nationality	Indian	
Person With Disability (PwD)	No	Category	General	
SCORE DETAILS				
Course Code	nou22-me05	-	-	-
Course Name	Material Science	-	-	-
Mode of Exam	CBT	-	-	-
Date of Exam	29-08-2022	-	-	-
Maximum Marks	100	-	-	-
Marks Obtained	054	-	-	-
Marks Obtained (words)	Fifty Four Only	-	-	-
Date of Declaration of Result:	19-10-2022	-	-	-



Senior Director (Exam), NTA

Note

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2. Candidate, if found submitting incorrect information or tampering with the Score Card, will be considered as using unfair means and his/her candidature will be cancelled.
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View Another

Engineering Graphics and Design

All engineering activities (design/ manufacturing/ operation/ servicing) for any product from any discipline involve a team of people who communicate graphically. Hence, every engineer must have exposure and some competence in presenting ideas as pictures, and be able to unambiguously interpret drawing from others. This course will help develop basic visualization competency as well as ability to representing ideas on both paper and computer.

INTENDED AUDIENCE :All undergraduate students and other students interested in graphics design and visualization.

PRE-REQUISITES : No prerequisite

INDUSTRY SUPPORT : All companies across all disciplines work with drawings, hence this course is relevant to all industries of all sizes.

Prof. Naresh Varma Datla

Dr. Naresh V Datla is a faculty member in the Department of Mechanical Engineering at Indian Institute of Technology Delhi since 2014. He received his Ph.D. from University of Toronto, Canada, M.E. from Indian Institute of Science Bangalore, and B.Tech. from National Institute of Technology Warangal all in Mechanical Engineering. Prior to starting his Ph.D., he worked for about two years at Indian Space Research Organisation in Bangalore. Before joining as a faculty at IIT Delhi, he worked as a postdoctoral fellow at Temple University, USA. His teaching and research interests are in mechanical design, mechanics of materials, and failure analysis

Prof. S. R. Kale

IIT Delhi

Professor Sunil R. Kale has been with the Department of Mechanical Engineering since 1989. He has developed and taught UG courses (thermodynamics, energy conversion, heat and mass transfer, power plant technologies, engineering drawing, and mechanical core laboratory), and PG courses (experimental methods for thermal engineering, multiphase flows). His research, academic and industry-related, is in the fields of heat transfer, fluid mechanics, fire dynamics, combustion, and energy conversion.

COURSE TYPE

Core

COURSE LAYOUT

Week 1:Introduction

Week 2:Graphical Representation

Week 3:Projection Basics

Week 4:Orthographics Projections

Week 5:Auxiliary And Sectional Projections

Week 6:Isometric Projections

Week 7:Working Drawings

Week 8:Introduction To CAD

Week 9:Part Modelling 1

Week 10:Part Modelling 2

Week 11:Assembly

Week 12:Design Project

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22ME68S13190853

To
PRAVEEN K
DOOR NO 108 B CMC LAYOUT
4TH CROSS KANAKANAGARA SATHNOOR ROAD
CHANNAPTNA
KARNATAKA - 562160
PH. NO :8073926328



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

PRAVEEN K

for successfully completing the course

Engineering Graphics and Design

with a consolidated score of **58** %

Online Assignments	17.13/25	Proctored Exam	41.25/75
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Total number of candidates certified in this course: **85**

Devendra Jalihal

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2022
(12 week course)

Prof. Andrew Thangaraj

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



Indian Institute of Technology Madras



Mechanics of Fiber Reinforced Polymer Composite Structures

This is introductory course on Mechanics of Fiber Reinforced Composite Structures. One course is basically aimed at introducing the students of mechanical/civil engineering streams to the basics of design and analysis of structural components made of FRP composites. The contents of the course is so designed that it requires the first course on Strength of Materials/ Solid Mechanics as a prerequisite which is anyway a core course for mechanical/civil undergraduates. It introduces the students first to the basic mechanics (stress strain and load deformation relations) of fiber composites, possible failure modes and corresponding failure theories proposed. Next, the course introduces the design and analysis using those concepts along with the design of some components made of such materials. At the end a few topics of slightly advanced nature (for UG students) are kept for brief introduction only.

INTENDED AUDIENCE : Undergraduate and postgraduate students of Mechanical/ Civil/ Aerospace Engineering and similar branches; Faculty members associated with Mechanical/ Civil/ Aerospace Engineering; Practicing engineers associated with design of composite structures.

PRE REQUISITE : No specific pre-requisite. Fundamental knowledge of Strength of Materials / Solid Mechanics.

INDUSTRY SUPPORT : DRDO, ISRO, NAL

COURSE LAYOUT

Week 1: Introduction to FRP Composites

Week 2: Review of Elasticity

Week 3: Macromechanics of Lamina - I

Week 4: Macromechanics of Lamina - II

Week 5: Micromechanics of Lamina - I

Week 6: Micromechanics of Lamina - II

Week 7: Elastic Behaviour of Laminates - I

Week 8: Elastic Behaviour of Laminates - II

Week 9: Failure Analysis of Laminates

Week 10: Design Examples

Week 11: Interlaminar Stresses

Week 12: Transverse Deflection, Buckling and Free vibration of Laminated Plates

BOOKS AND REFERENCES

1. Robert M Jones, Mechanics Of Composite Materials, 2nd Edition, CRC Press
2. Autar Kaw, Mechanics of Composite Materials, 2nd Edition, Taylor and Francis
3. I M Daniel and O Ishai, Engineering Mechanics of Composite Materials, 2nd Edition Oxford University Press



**Prof. Debabrata
Chakraborty**

Dr. Debabrata Chakraborty is currently a Professor in the Department of Mechanical Engineering of the Indian Institute of Technology Guwahati. He did his BE(Hons) in Mech Engg from Gauhati University in 1987 and MTech and PhD in Mechanical Engineering from IIT Kharagpur in 1993 and 1999 respectively. His research area is stress analysis of FRP composite structures with specific interest in design optimization of laminated structures and analysis of laminated composites with internal flaws. Dr Chakraborty has more than 25 years of experience in teaching and research. He has been a faculty member of Mechanical Engineering Department at IIT Guwahati since 1999 and guided nine PhD students and more than 50 Masters students in the broad area of design and analysis of FRP composite structures and taught the course on Composite Materials to both UG and PG students several times.

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22ME40S33190957

To
MAMATHA J
C/O AMMAYAMMA, SOPPINANJAMMA BHEEDI
HARIGE, VIDYANAGARA (P)
SHIMOGA
KARNATAKA - 577203
PH. NO :9483440991



Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

MAMATHA J

for successfully completing the course

Mechanics of Fiber Reinforced Polymer Composite Structures

with a consolidated score of **61** %

Online Assignments	11.53/25	Proctored Exam	49.5/75
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Total number of candidates certified in this course: **35**

Jan-Apr 2022
(12 week course)

Prof. Hemant B Kaushik
Head, Center for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No:NPTEL22ME40S33190957

To validate and check scores: <https://nptel.ac.in/noc>