



**OFFICE OF THE DEAN ACADEMIC AFFAIRS  
NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR**


---

No. NIT/DAA/2021/ 517

Dated: 06/10/2021

**Head,  
Department of Mechanical Engineering**

Please find attached the M. Tech schemes, which are to be followed from Batch 2021. The Schemes stand approved by the 28<sup>th</sup> Senate.

  
6/10/2021

**(Najeed-ud-din)  
Dean Academic Affairs**

**Copy to:**

1. Associate Dean Examination.
2. e - Governance.



**NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR**  
*(An autonomous Institute of National Importance under the aegis of Ministry of HRD, Govt. of India)*  
 हजरतबल , ऀाणणणणणण , ऀाणणणणणण-णणणणणण, 190006, भारत  
**Hazratbal, Srinagar Jammu and Kashmir, 190006, INDIA**

**Department of Mechanical Engineering**

A. The following scheme revision is proposed in academic curriculum for M.Tech. in Mechanical System Design (MSDM):

**FIRST SEMESTER**

S. No.	Subject	C	L	T	P
MSDM 101	Design Against Fracture, Fatigue& Creep	3	3	0	0
MSDM 102	Continuum Mechanics	3	3	0	0
MSDM 103	Design Optimization	3	3	0	0
MSDM104	Advanced Solid Mechanics	3	3	0	0
MSDM 105	Elective-I	3	3	0	0
MSDM 106	Elective-II	3	3	0	0
<b>Total Credits</b>		<b>18</b>	<b>18</b>	<b>00</b>	<b>00</b>

**SECOND SEMESTER**

S. No.	Subject	C	L	T	P
MSDM 201	Finite Element Method	3	3	0	0
MSDM 202	Viscous flow theory	3	3	0	0
MSDM 203	Applied Elasticity	3	3	0	0
MSDM 204	Elective-III	3	3	0	0
MSDM 205	Elective-IV	3	3	0	0
MSDM 206	Seminar	1	0	0	2
<b>Total Credits</b>		<b>16</b>	<b>15</b>	<b>00</b>	<b>02</b>
<b>ELECTIVE I</b>		<b>ELECTIVE II</b>		<b>ELECTIVE III</b>	
MSDM 105# Vibrations of Structures	MSDM 106# Dynamics and Control of Mechanical System	MSDM 204* Wave Motion	MSDM 205* Computational Fluid Dynamics		
MSDM 105# Advanced Mechanism Design	MSDM 106# Robotic Control	MSDM 204* Operation Management	MSDM 205* Advanced Thermodynamics		
MSDM 105# Theory of Composite	MSDM 106# Acoustics	MSDM 204* Cryogenic Systems	MSDM 205* HVAC		
MSDM 105# Robot Mechanics	MSDM 106# Product Design and Development	MSDM 204*Xergy . Analysis	MSDM 205*MEMS and Microsystems Technology		
MSDM 105# Conduction and Radiation	MSDM 106#Advanced Manufacturing systems	MSDM 204*Design of Energy Systems	MSDM 205*Design and Analysis of Experiments		





**NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR**  
(An autonomous Institute of National Importance under the aegis of Ministry of HRD, Govt. of India)

हजरतबल , ऀऀऀऀऀऀ , ऀऀऀऀऀ-ऀऀऀऀऀऀ, 190006, भारत  
**Hazratbal, Srinagar Jammu and Kashmir, 190006, INDIA**

ऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀऀ

**Department of Mechanical Engineering**

**THIRD SEMESTER**

S. No.	Subject	Credits	L	T	P
MSDM 301	Systematic Design Approach	3	3	0	0
MSDM 302	Advanced Engine Design	3	3	0	0
MSDM 303	Simulation Technique & MSDM Laboratory	2	0	0	6
MSDM 304	Dissertation-I	6	0	0	12
<b>Total Credits</b>		<b>14</b>	<b>06</b>	<b>00</b>	<b>18</b>

**FOURTH SEMESTER**

S. No.	Subject	Credits	L	T	P
MSDM 401	Dissertation-II	12	0	0	24
<b>Total Credits</b>		<b>12</b>	<b>0</b>	<b>0</b>	<b>24</b>

Total Credits: 60

B. The following scheme revision is proposed in academic curriculum for  
M.Tech. in Industrial Tribology and Maintenance Management (ITMMM):

**FIRST SEMESTER**

Course No.	Subject	C	L	T	P
TMMM-101	Fundamentals of Tribology	3	3	0	0
TMMM-102	Tribological Materials	3	3	0	0
MSDM-103	Design Optimization	3	3	0	0
TMMM-103	Reliability, Availability, Maintainability and Safety	3	3	0	0
TMMM-104	Elective-I	3	3	0	0
TMMM-105	Tribology Laboratory I	1	0	0	2
<b>Total Credits</b>		<b>16</b>	<b>15</b>	<b>0</b>	<b>4</b>

**SECOND SEMESTER**

Course No.	Subject	C	L	T	P
TMMM-201	Diagnostic Maintenance and Condition Monitoring	3	3	0	0
TMMM-202	Design and Analysis of Experiments	3	3	0	0
TMMM-203	Lubricant selection and applications	3	3	0	0
TMMM-204	Wear Analysis & Control	3	3	0	0
TMMM-205	Elective-II	3	3	0	0
TMMM-206	Seminar	1	0	0	2
<b>Total Credits</b>		<b>16</b>	<b>15</b>	<b>0</b>	<b>2</b>



राष्ट्रीय प्रौद्योगिकी संस्थान श्रीनगर  
**NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR**  
(An autonomous Institute of National Importance under the aegis of Ministry of HRD, Govt. of India)

हजरतबल , श्रीनगर , जम्मू-कश्मीर , 190006, भारत  
**Hazratbal, Srinagar Jammu and Kashmir, 190006, INDIA**

Department of Mechanical Engineering

**THIRD SEMESTER**

CourseNo.	Subject	Credits	L	T	P
TMMM-301	Design of Tribological Components	3	3	0	0
TMMM-302	Design for Maintenance	3	3	0	0
TMMM-303	Tribology Laboratory II	1	0	0	2
TMMM-305	Elective-III	3	3	0	0
TMMM-304	Dissertation-I	6	0	0	12
<b>Total Credits</b>		<b>16</b>	<b>06</b>	<b>00</b>	<b>14</b>

ELECTIVE-I	ELECTIVE-II	ELECTIVE-III
TMMM 104* Bearing Design	TMMM 205# Surface Engineering	TMMM 305* Finite Element Methods
TMMM 104* Value Engineering	TMMM 205# Corrosion and Corrosion Protection	TMMM 305* Modelling and Simulation of Dynamical System
TMMM 104* Automation and Control	TMMM 205# Operation Research	TMMM 305# Computer Applications in Maintenance
TMMM 104* Tribology in Machine Design	TMMM 205# Composite Materials	TMMM 305# Advanced Manufacturing Systems

**FOURTH SEMESTER**

Course No.	Subject	Credits	L	T	P
TMMM-401	Dissertation-II	12	0	0	24
<b>Total Credits</b>		<b>12</b>	<b>0</b>	<b>0</b>	<b>24</b>

**TOTAL CREDITS: 60**

DPGC Convener  
Mechanical Engg. Deptt.,  
NIT, Srinagar (J & K)

Professor & Head  
Mechanical Engg. Deptt.,  
NIT, Srinagar (J & K)

**Copy to the following:**

1. The Director, NIT, Srinagar (J & K) for information, please.
2. Chairman, SPGC for information and consideration, please.
3. Dean Academics for information and consideration, please.
4. Circulation File, Mechanical Engineering Department for record.
5. DGPC File for record.