

12.05.18

**M.Tech (MSE) Programme Structure w.e.f. 2018-19 Batch****FIRST SEMESTER**

Sl. No.	Course		Contact Hours				Cr
	Code	Title	L	T	P	Tot	
1.	18M11PH111	Processing of Engineering Materials	3	-	-	3	3
2.	18M11PH112	Nanoscience and Engineering	3	-	-	3	3
3.		Elective-1	3	-	-	3	3
4.		Elective-2	3	-	-	3	3
5.		Elective-3	3			3	3
6.	18M11GE111	Research Methodology and Intellectual Property Rights	2			2	2
7.	18M15PH111	MSE Laboratory-1	-	-	6	6	3
		<b>TOTAL</b>				<b>23</b>	<b>20</b>

**Electives:**

1.	Numerical Methods and Computer Programming
2.	Semiconductor Devices and IC Technology
3.	Properties of Engineering Materials
4.	Optoelectronic Materials and Devices
5.	Thin Film Technology and Applications

**SECOND SEMESTER**

Sl. No.	Course		Contact Hours				Cr
	Code	Title	L	T	P	Total	
1.	18M11PH113	Thermodynamics and Kinetics of Materials	3	-	-	3	3
2.	18M11PH114	Structure and Characterization of Materials	3	-	-	3	3
3.		Elective-4	3	-	-	3	3
4.		Elective-5	3	-	-	3	3
5.		Audit-1	2	-	-	2	Qualifying
6.	18M15PH113	Project based learning-I				4	2
7.	18M15PH112	MSE Lab – 2	-	-	6	6	3
		<b>TOTAL</b>				<b>24</b>	<b>17</b>

**Electives:**

1.	Nanotechnology
2.	Advanced Materials and Applications
3.	Engineering Ceramics and Composites
4.	Modeling and Simulation of Materials

### THIRD SEMESTER

Sl. No.	Course		Contact Hours				Cr
	Code	Title	L	T	P	Tot	
		Open Electives	3			3	3
1	18M17PH211	Seminar & Term Paper <b>OR</b> earn credits by transfer e.g. MOOCs, course work at another institute,				4	4
2	18M17PH212	supervised study					
3	18M15PH211	Project based learning-II				8	4
4	18M17PH213/18M17PH214/18M17PH215	Dissertation/ Industrial Project/ Entrepreneurial project				8	4
		Audit-2	2			2	Qualifying
		<b>TOTAL</b>				<b>25</b>	<b>15</b>

#### Open Electives

1. Photovoltaic Techniques and Processes

### FOURTH SEMESTER

Sl. No.	Course		Contact Hours				Cr
	Code	Title	L	T	P	Total	
1.	Can't be assigned due to clash of code with 3 <sup>rd</sup> sem	Dissertation/ Industrial project/ Entrepreneurial project	-	-		32	16
		<b>TOTAL</b>				<b>32</b>	<b>16</b>

**Total Credits: 68**

#### Notes:-

1. Dissertation in Fourth Semester may be allowed to be pursued in Industry.
2. Dissertation work at the end of Third Semester shall be evaluated by a panel consisting of a) Nominee of Dean, A&R b) HoD or his nominee c) Supervisor(s).
3. Dissertation to be submitted by the students at the end of Fourth Semester shall be consolidated report of work done in Third and Fourth Semesters.
4. Dissertation at the end of Fourth Semester shall be evaluated by a panel consisting of a) HoD or his nominee b) An external expert c) Supervisor(s). The Grades may be awarded based on guidelines issued by Dean A&R from time to time.

#### Courses for Audit-I and II:

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through life enlightenment skills

#### Subjects for Open Electives:

1. Business Analytics
2. Industrial Safety
3. Operations Research
4. Cost Management of Engineering Projects
5. Composite Materials
6. Waste to Energy