

Course Scheme  
Examination Scheme  
& Syllabus

Of

First, Second, Third & Fourth Semester  
Choice Base Credit System (CBCS)

Of

Master of Technology (M.Tech)

In

DEFENCE TECHNOLOGY

Priyadarshini College of Engineering, Nagpur

**Faculty of Engineering & Technology**  
**Course and Examination Scheme for Master of Technology**  
**in**  
**Defence Technology**  
**Choice Base Credit System (CBCS)**

**Semester Pattern**  
**I Semester M.Tech. Defence Technology**

Course Code	Course	Teaching Scheme			Examination Scheme				
		Hours per Week		Credits	ESE Exam Duration	Continues Assessment	End Sem Exam	Total	Minimum Passing Marks
		L	P						
23PDT 101T	Systems and warfare Platforms	4	-	4	3	40	60	100	50
23PDT 101P	Systems and warfare Platforms Lab	-	2	2	-	50	50	100	50
23PDT 102T	Warfare Simulations & Strategies	4	-	4	3	40	60	100	50
23PDT 102P	Warfare Simulations & Strategies Lab	-	2	2	-	50	50	100	50
23PDT 103T	Advanced Engineering Mathematics	4	-	4	3	40	60	100	50
23PDT 11XT	Elective -I	3	-	3	3	40	60	100	50
23PDT 12XT	Elective – II	3	-	3	3	40	60	100	50
<b>Total</b>		<b>18</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Semester Total</b>		<b>22</b>		<b>22</b>				<b>700</b>	<b>350</b>

**List of Elective 1 - Selected for Semester -1**

Course Code	Elective I
23PDT 111T	Rockets & Missiles Fundamentals
23PDT 112T	Advance Thermal Engineering
23PDT 113T	Advance Mechanical Engineering

**List of Elective 2- Selected for Semester -1**

Course Code	Elective II
23PDT 121T	Optimization theory & Application
23PDT 122T	Military Electronics System Engineering
23PDT 123T	System Engineering & Analysis

**NOTE:** Students are expected to select the Elective-I & II course of their choice, provided that at Least a group of 7 students should opt for the similar elective course.

**Semester – 2 : Main Stream Defence Technology with following two specializations**

<b>S.No.</b>	<b>Main Stream Defence Technology</b>
1	Combat Vehicle Engineering
2	Aerospace Technology

**II Semester M.Tech in Defence Technology  
Specializations in Combat Vehicle Engineering**

Course Code	Course	Teaching Scheme			Examination Scheme				
		Hours per Week		Credits	ESE Exam Duration	Continues Assessment	End Sem Exam	Total	Minimum Passing Marks
		L	P						
23PDTCV201T	Combat Vehicle Dynamics	4	-	4	3	40	60	100	50
23PDTCV201P	Combat Vehicle Dynamics Lab	-	2	2	-	50	50	100	50
23PDTCV202T	Combat System Engineering	4	-	4	3	40	60	100	50
23PDTCV202P	Combat System Engineering Lab	-	2	2	-	50	50	100	50
23PDTCV203T	Test & Evaluation of Weapon System	4	-	4	3	40	60	100	50
23PDT CV23XT	Elective —III	3	-	3	3	40	60	100	50
23PDTCV 24XT	Elective —IV	3	-	3	3	40	60	100	50
<b>Total</b>		<b>18</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Semester Total</b>		<b>22</b>		<b>22</b>				<b>700</b>	<b>350</b>

**List of Elective III - Selected for Semester -2**

Course Code	Elective III
23PDT CV231T	Robotics (MSS,MCC)
23PDT CV232T	Safety, Health & Hazard Management
23PDT CV233T	Fundamentals of Telemetry , Telecom and Transponder

**List of Elective IV - Selected for Semester -2**

Course Code	Elective IV
23PDTCV 241T	Computational Aerodynamics
23PDTCV 242T	Acquisition , Tracking & Pointing Technology
23PDTCV 243T	Advance digital modulation Technologies & standards

**NOTE :** Students are expected to select the Elective-III & IV course of their choice, provided that at least a group of 7 students should opt for the similar elective course.

**II Semester M.Tech in Defence Technology  
Specializations in Aerospace Technology**

Course Code	Course	Teaching Scheme			Examination Scheme				
		Hours per Week		Credits	ESE Exam Duration	Continues Assessment	End Sem Exam	Total	Minimum Passing Marks
		L	P						
23PDTAT201T	Aerospace System Configuration, Design & Simulation	4	-	4	3	40	60	100	50
23PDTAT201P	Aerospace System Configuration, Design & Simulation Lab	-	2	2	-	50	50	100	50
23PDTAT202T	Guidance & control	4	-	4	3	40	60	100	50
23PDTAT202P	Guidance & control Lab	-	2	2	-	50	50	100	50
23PDTAT203T	Aerospace Propulsion	4	-	4	3	40	60	100	50
23PDTAT 23XT	Elective —III	3	-	3	3	40	60	100	50
23PDTAT 24XT	Elective —IV	3	-	3	3	40	60	100	50
<b>Total</b>		<b>18</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Semester Total</b>		<b>22</b>		<b>22</b>				<b>700</b>	<b>350</b>

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**NOTE :** Students are expected to select the Elective-III & IV course of their choice, provided that at least a group of 7 students should opt for the similar elective course.

### III Semester M.Tech in Defence Technology

Course Code	Course	Teaching Scheme			Examination Scheme				
		Hours per Week		No. of Credits	ESE Exam Duration	Continues Assessment	End Sem Exam	Total	Minimum Passing Marks
		L	P						
23PDT301P	Project Phase 1	-	4	8	-	100	100	200	100
23PDT302P	Seminar/ Industrial training	-	3	4	-	200		200	100
<b>Total</b>		-	<b>7</b>	<b>12</b>	-	-	-	-	-
<b>Semester Total</b>		<b>7</b>		<b>12</b>				<b>400</b>	<b>200</b>

### IV Semester M.Tech in Defence Technology

Course Code	Course	Teaching Scheme			Examination Scheme				
		Hours per Week		No. of Credits	Marks				
		L	P		ESE Exam Duration	Continues Assessment	End Sem Exam	Total	Minimum Passing Marks
23PDT401P	Project Phase 2	-	8	16	-	200	200	400	200
<b>Total</b>		-	<b>8</b>	<b>16</b>	-	-	-	-	-
<b>Semester Total</b>		<b>8</b>		<b>16</b>				<b>400</b>	<b>200</b>

## **NOTE**

The Syllabi for M.Tech in Defence Technology & Guidelines 2021 – 22 is provided by Directorate of Futuristic Technology Management (DFTM) Government of India, Ministry of Defence Research & Development Organisation (DRDO) New Delhi in Collaboration with All India Council for Technical Education (AICTE), New Delhi



