

# Chhattisgarh Swami Vivekananda Technical University, Bhilai (C.G.)

## Scheme of teaching and examination M.Tech. (Nanotechnology) in the Department E&TC

### 1<sup>st</sup> Semester

S. No	Board of Study	Subject Code	Subject	Period s per Week			Scheme of Examination			Total Marks	Credit L+(T+P) / 2
				L	T	P	Theory / Practical				
							ESE	CT	TA		
1	E&TC	547111 (28)	Basics of Nanotechnology	3	1	-	100	20	20	140	4
2	E&TC	547112 (28)	Structure, Bonding & Quantum mechanics of Electronics	3	1	-	100	20	20	140	4
3	E&TC	547113 (28)	Nanotechnology for Energy Systems	3	1	-	100	20	20	140	4
4	E&TC	547114 (28)	Science and Technology of Thin Films	3	1	-	100	20	20	140	4
5	<b>Refer Table - I</b>		<b>Elective -I</b>	3	1	-	100	20	20	140	4
6	E&TC	547121 (28)	Nanotechnology for Energy System - Lab	-	-	3	75	-	75	150	2
7	E&TC	547122 (28)	Simulation Lab	-	-	3	75	-	75	150	2
<b>Total</b>				<b>15</b>	<b>5</b>	<b>6</b>	<b>650</b>	<b>100</b>	<b>250</b>	<b>1000</b>	<b>24</b>

**L- Lecture    T- Tutorial    P- Practical    ESE- End Semester Exam    CT- Class Test**

**TA- Teacher's Assessment**

<b>TABLE -I</b>			
<b>ELECTIVE -I</b>			
S. No	Board of Study	Subject Code	Subject
1	E & TC	547131 (28)	Mathematical Modelling and Simulation
2	E & TC	547132 (28)	Opto Electronics
3	E & TC	547133 (28)	Lithography Techniques

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**IInd Semester**

S. No	Board of Study	Subject Code	Subject	Period s per Week			Scheme of Examination			Total Marks	Credit L+(T+P) / 2
				L	T	P	Theory / Practical				
							ESE	CT	TA		
1	E&TC	547211 (28)	Chemistry of Nanomaterials & Fabrication	3	1	-	100	20	20	140	4
2	E&TC	547212 (28)	Synthesis of Nanomaterials	3	1	-	100	20	20	140	4
3	E&TC	547213 (28)	Material Characterisation Techniques	3	1	-	100	20	20	140	4
4	E&TC	547214 (28)	Electronics & Photonics	3	1	-	100	20	20	140	4
5	Refer Table-II		Elective - II	3	1	-	100	20	20	140	4
6	E&TC	547221 (28)	Synthesis Nanomaterials Lab-II	-	-	3	75	-	75	150	2
7	E&TC	547222 (28)	Characterisation of Nanomaterials	-	-	3	75	-	75	150	2
<b>Total</b>				<b>15</b>	<b>5</b>	<b>6</b>	<b>650</b>	<b>100</b>	<b>250</b>	<b>1000</b>	<b>24</b>

**L- Lecture    T- Tutorial    P- Practical    ESE- End Semester Exam    CT- Class Test**  
**TA- Teacher's Assessment**

<b>TABLE -II</b>			
<b>ELECTIVE -II</b>			
S. No	Board of Study	Subject Code	Subject
1	E & TC	547231 (28)	Carbon Nanotubes & its Functionalization
2	E & TC	547232 (28)	Laser Technology
3	E & TC	547233 (28)	Nanosensors : Principle, Design and Applications

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## Scheme of teaching and examination

**M.Tech. (Nanotechnology) in the Department E&TC**

### **3<sup>rd</sup> Semester**

S. No	Board of Study	Subject Code	Subject	Period s per Week			Scheme of Examination			Total Marks	Credit L+(T+P) / 2
				L	T	P	Theory / Practical				
							ESE	CT	TA		
1	E & TC	547311 (28)	Supramolecur & Surface Chemistry	3	1	-	100	20	20	140	4
2	Refer Table – III		Elective – III	3	1	-	100	20	20	140	4
3	E & TC	547321 (28)	Project Work	-	-	28	100	-	100	200	14
4	E & TC	547322 (28)	Seminar on Industrial training & Dissertation	-	-	3	-	-	20	20	2
<b>Total</b>				<b>6</b>	<b>2</b>	<b>31</b>	<b>300</b>	<b>40</b>	<b>160</b>	<b>500</b>	<b>24</b>

**L- Lecture    T- Tutorial    P- Practical    ESE- End Semester Exam    CT- Class Test    TA- Teacher's Assessment**

<b>TABLE -III</b>			
<b>ELECTIVE -III</b>			
S. No	Board of Study	Subject Code	Subject
1	E & TC	<b>547331 (28)</b>	Nano-Biotechnology
2	E & TC	<b>547332 (28)</b>	MEMS & MEMS
3	E & TC	<b>547333 (28)</b>	Nanocomposites :- Structure Properties & Performance
4	E & TC	<b>547334 (28)</b>	Nanocomputing

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**Scheme of teaching and examination**

**M.Tech. (Nanotechnology) in the Department E&TC**

**4<sup>th</sup> Semester**

S.N.	Board of Study	Subject Code	Subject	Periods per Week			Scheme of Examination			Total Marks	Credit L+(T+P)/2
				L	T	P	Theory /Practical				
							ESE	CT	TA		
1	E & TC	547421 (28)	Project + Seminar	6	-	34	300	-	200	500	23
<b>Total</b>				<b>6</b>	<b>-</b>	<b>34</b>	<b>300</b>	<b>-</b>	<b>200</b>	<b>500</b>	<b>23</b>

L-Lecture, T- Tutorial, P- Practical, ESE- End Semester Examination, CT- Class Test, TA- Teacher's Assessment