

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI										
Scheme of Teaching and Examination – 2018-19										
M.Tech., Nanotechnology (INT)										
Choice Based Credit System (CBCS)										
I SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination				Credits
				Theory	Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	PCC	18INT11	Applied Mathematics	04	--	03	40	60	100	4
2	PCC	18INT12	Quantum Mechanics for Nanostructures	04	--	03	40	60	100	4
3	PCC	18INT13	Nanomaterials and Properties	04	--	03	40	60	100	4
4	PCC	18INT14	Synthesis and Processing Techniques	04	--	03	40	60	100	4
5	PEC	18INT15X	Professional Elective -1	04	--	03	40	60	100	4
6	PCC	18INTL16	Synthesis and Characterization Lab	-	04	03	40	60	100	2
7	PCC	18RMI17	Research Methodology and IPR	02	--	03	40	60	100	2
<b>TOTAL</b>				<b>22</b>	<b>04</b>	<b>21</b>	<b>280</b>	<b>420</b>	<b>700</b>	<b>24</b>
<b>Note: PCC: Professional core, PEC: Professional Elective.</b>										
<b>Professional Elective 1</b>										
<b>Course Code under 18INT15X</b>		<b>Course title</b>								
18INT151		Nanotechnology and Environment								
18INT152		Nanocomposites and its applications								
18INT153		Nanobiotechnology								
<b>Internship:</b> All the students shall have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination will be conducted during III semester and prescribed credit shall be included in the III semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements.										

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II SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination				Credits
				Theory	Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	PCC	18INT21	Design and Fabrication Techniques	04	--	03	40	60	100	4
2	PCC	18INT22	Characterization Techniques	04	--	03	40	60	100	4
3	PCC	18INT23	Advanced & Smart Materials	04	--	03	40	60	100	4
4	PEC	18INT24X	Professional elective 2	04	--	03	40	60	100	4
5	PEC	18INT25X	Professional elective 3	04	--	03	40	60	100	4
6	PCC	18INTL26	Device Fabrication and Characterization Lab	--	04	03	40	60	100	2
7	PCC	18INT27	Technical Seminar	--	02	--	100	--	100	2
<b>TOTAL</b>				<b>20</b>	<b>06</b>	<b>18</b>	<b>340</b>	<b>360</b>	<b>700</b>	<b>24</b>
<b>Note: PCC: Professional core, PEC: Professional Elective, Aud: Audit Course</b>										
<b>Professional Elective 2</b>					<b>Professional Elective 3</b>					
<b>Course Code under 18INT24X</b>		<b>Course title</b>			<b>Course Code under 18INT24X</b>		<b>Course title</b>			
18INT241		Nanoelectronics			18INT251		Surface Engineering of Nanomaterials			
18INT242		MEMS and NEMS			18INT252		Nanotechnology and Drug Delivery			
18INT243		Industrial Applications of Nanotechnology			18INT253		Micro and Nanofluidics			
<b>Note:</b>										
<b>1. Technical Seminar:</b> CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide in any and a senior faculty of the department. Participation in seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory. The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session in the ratio 50:25:25.										
<b>2. Internship:</b> All the students shall have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination will be conducted during III semester and prescribed credit shall be included in the III semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements.										

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III SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination				Credits
				Theory	Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	PCC	18INT31	Carbon Based Nanostructures	04	--	03	40	60	100	4
2	PCC	18INT32	Nanomaterials and Energy Systems	04	--	03	40	60	100	4
3	PEC	18INT33X	Professional elective4	04	--	03	40	60	100	4
4	Project	18INT34	Evaluation of Project phase -1	--	02	--	100	--	100	2
5	Internship	18INTI35	Internship	(Completed during the intervening vacation of I and II semesters and /or II and III semesters.)		03	40	60	100	6
<b>TOTAL</b>				<b>12</b>	<b>02</b>	<b>12</b>	<b>260</b>	<b>240</b>	<b>500</b>	<b>20</b>
<b>Note: PCC: Professional core, PEC: Professional Elective, OEC: Open Elective, Proj: Project, INT: Internship, Aud: Audit Course</b>										
<b>Professional elective 4</b>										
<b>Course Code under 18INT32X</b>		<b>Course title</b>								
18INT331		Nanobioelectronics and Applications								
18INT332		Micro-Nano Packaging								
18INT333		Advances in Nanodevices								
<b>Open Elective 2</b>										
<b>Note:</b>										
<p><b>1. Project Phase-1:</b> Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prepare relevant introductory project document, and present a seminar.</p> <p>CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide and a senior faculty of the Department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session in the ratio 50:25:25.</p> <p>SEE (University examination) shall be as per the University norms.</p> <p><b>2. Internship:</b> Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent University examinations after satisfy the internship requirements.</p> <p>Internship SEE (University examination) shall be as per the University norms.</p>										

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IV SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination				Credits
				Theory	Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks Viva voce	Total Marks	
1	Project	18INT41	Project work phase -2	--	04	03	40	60	100	20
<b>TOTAL</b>				--	<b>04</b>	<b>03</b>	<b>40</b>	<b>60</b>	<b>100</b>	<b>20</b>
<b>Note:</b>										
<b>1. Project Phase-2:</b>										
CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide, if any and a Senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25.										
SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the University norms.										

