

**SHRI G.S. INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**

**DEPARTMENT OF BIOMEDICAL ENGINEERING**

**(An Autonomous Institute Established in 1952)**

23, Sir M. Visvesvaraya Marg, Indore-452003



**Scheme of Examination**

**Of**

**BACHELOR OF TECHNOLOGY**

**BIOMEDICAL ENGINEERING**

**Session : 2018 - 2019**

**Shri G.S. Institute of Technology & Science**  
**Scheme of Examination(Applicable form 2017-18)**  
**Bachelor of Biomedical Engineering**

**Semester: III**

S. No.	Subject Code	Subject Name	Hours /Week			Maximum Marks allotted				Credits		Total Credits
			L	T	P	Theory		Practical		T	P	
						Th.	CW	SW	Pr.			
1	MA-29024	Mathematics III	3	1	-	70	30	-	-	4		4
2	EE-29011	Network Analysis	3	-	2	70	30	40	60	3	1	4
3	EI-29017	Basic Electronics	3	-	2	70	30	40	60	3	1	4
4	BM-29007	Bioelectricity & Transducers	3	-	2	70	30	40	60	3	1	4
5	BM-29003	Human Anatomy & Physiology	3	-	2	70	30	40	60	3	1	4
6	EE-29498	Electrical workshop	-	-	2	-	-	40	60	-	1	1
7	HU-29499	Skill Development, Innovations &	-	1	2	-	-	-	50	1	1	2
		<b>Total</b>	<b>15</b>	<b>2</b>	<b>12</b>	<b>350</b>	<b>150</b>	<b>200</b>	<b>350</b>	<b>17</b>	<b>6</b>	<b>23</b>
<b>Optional Subject</b>												
8	OC-I	Health Care Technology	-	-	-	-	-	-	-	-	-	-
<b>Grand Total</b>			<b>15</b>	<b>2</b>	<b>12</b>	<b>350</b>	<b>150</b>	<b>200</b>	<b>350</b>	<b>17</b>	<b>6</b>	<b>23</b>

**Semester: IV**

S. No.	Subject Code	Subject Name	Hours /Week			Maximum Marks allotted				Credits		Total Credits
			L	T	P	Theory		Practical		T	P	
						Th.	CW	SW	Pr.			
1	MA-29501	Mathematics IV	3	1	-	70	30	-	-	4	-	4
2	EC-29562	Digital Electronics	3	1	2	70	30	40	60	4	1	5
3	BM-29551	Analog Electronics	3	-	2	70	30	40	60	3	1	4
4	EI-29572	Fundamentals of Measurement	3	-	2	70	30	40	60	3	1	4
5	EI-29998	Electronic Workshop	-	-	4	-	-	40	60	-	2	2
6	HU-29515	Humanities, Environment & Engg.	3	-	-	70	30	-	-	3	-	3
		<b>Total</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>350</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>17</b>	<b>5</b>	<b>22</b>
<b>Optional Subject</b>												
7	OC-II	Yoga for Fitness	-	-	-	-	-	-	-	-	-	-
<b>Grand Total</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>350</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>17</b>	<b>5</b>	<b>22</b>

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**Semester: V**

S. No.	Subject Code	Subject Name	Hours /Week			Maximum Marks allotted				Credits		Total Credits
			L	T	P	Theory		Practical		T	P	
						Th.	CW	SW	Pr.			
1	IP-39201	Industrial Engineering & Management	3	1	-	70	30	-	-	4	-	4
2	BM-39004	Programming Tools & Techniques	3	-	2	70	30	40	60	3	1	4
3	BM-39005	System Designing with Microcontroller	3	1	2	70	30	40	60	4	1	5
4	BM-39001	Signal and Systems	3	-	2	70	30	40	60	3	1	4
5	BM-39003	Biomedical Instrumentation I	3	-	2	70	30	40	60	3	1	4
6	BM-39451	Seminar I	-	-	2	-	-	40	60	-	1	1
		<b>Total</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>350</b>	<b>150</b>	<b>200</b>	<b>300</b>	<b>17</b>	<b>5</b>	<b>22</b>
<b>Optional Subject</b>												
7	OC-III	Hospital Engineering(Audit Only)	3	-	2	70	30	50	-	3	1	4
<b>Grand Total</b>			<b>18</b>	<b>2</b>	<b>12</b>	<b>420</b>	<b>180</b>	<b>250</b>	<b>300</b>	<b>20</b>	<b>6</b>	<b>26</b>

**Semester:VI**

S. No.	Subject Code	Subject Name	Hours /Week			Maximum Marks allotted				Credits		Total Credits
			L	T	P	Theory		Practical		T	P	
						Th.	CW	SW	Pr.			
1	EE -39508	Control Systems	3	1	2	70	30	40	60	4	1	5
2	BM-39503	Biomedical Statistical Signal Processing	3	1	-	70	30	-	-	4	-	4
3	BM-39501	Biomedical Signal Processing	3	-	2	70	30	40	60	3	1	4
4	BM-39504	Biomedical Instrumentation II	3	-	2	70	30	40	60	3	1	4
5	EC-39502	Analog and Digital	3	-	-	70	30	-	-	3	-	3
6	BM-39951	Minor Project-I	-	-	4	-	-	40	60	-	2	2
		<b>Total</b>	<b>15</b>	<b>2</b>	<b>10</b>	<b>350</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>17</b>	<b>5</b>	<b>22</b>
<b>Optional Subject</b>												
7	OC-IV	Biomaterials (Audit Only)	-	-	-	-	-	-	-	-	-	-
<b>Grand Total</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>350</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>17</b>	<b>5</b>	<b>22</b>

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**Semester-VII**

S. No.	Subject Code	Subject Name	Lecture /Week			Maximum Marks allotted				Credits		Total
			L	T	P	Theory		Practical		T	P	
						Th.	CW	SW	Pr.			
1	BM- 49002	Biomechanics	4	1	2	70	30	40	60	4	1	5
2	BM-49006	Modeling & Simulation of Physiological Systems	4	-	2	70	30	40	60	3	1	4
3	BM- 49025	Embedded Systems	4	-	2	70	30	40	60	3	1	4
4	BM-49XXX	Elective-I	4	-	-	70	30	-	-	3	-	3
5	BM-49XXX	Elective-II	4	-	-	70	30	-	-	3	-	3
6	BM	Major Project-I(AB Group)	-	-	6	-	-	40	60	-	3	3
7	BM	Major Project-II (BA Group)	-	-	10	-	-	40	60	-	5	5
<b>Total(AB Group)</b>			<b>20</b>	<b>1</b>	<b>12</b>	<b>350</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>16</b>	<b>6</b>	<b>22</b>
<b>Total(BA Group)</b>			<b>20</b>	<b>1</b>	<b>12</b>	<b>350</b>	<b>150</b>	<b>160</b>	<b>240</b>	<b>16</b>	<b>8</b>	<b>24</b>
<b>Optional Subject</b>			-	-	-	-	-	-	-	-	-	-
8	OC-V	Computer Vision and Machine learning	-	-	-	-	-	-	-	-	-	-
<b>Grand Total</b>			<b>40</b>	<b>2</b>	<b>24</b>	<b>700</b>	<b>300</b>	<b>320</b>	<b>480</b>	<b>32</b>	<b>14</b>	<b>46</b>

<b>Elective-I</b>	1. Rehabilitation Engineering(BM-49222) 2. Hospital Technology Systems	<b>Elective-II</b>	1. Medical Imaging Systems (BM-49305) 2. Bioinformatics
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**Semester- VIII**

S. No.	Subject Code	Subject Name	Lecture /Week			Maximum Marks allotted				Credits		Total
			L	T	P	Theory		Practical		T	P	
						Th.	CW	SW	Pr.			
1	BM - 49XXX	Elective-III	4	-	2	70	30	60	40	3	1	4
2	BM - 49XXX	Elective-IV	4	1	-	70	30	-	-	4	-	4
3	BM - 49XXX	Industrial Training/Internship/Seminar	-	-	-	-	-	100	-	-	6	6
4	BM -	Major Project-II (AB Group)	-	-	10	-	-	40	60	-	5	5
5	BM -	Major Project-I (BA Group)	-	-	6	-	-	40	60	-	3	3
<b>Total(AB GROUP)</b>			<b>8</b>	<b>1</b>	<b>12</b>	<b>140</b>	<b>60</b>	<b>200</b>	<b>100</b>	<b>7</b>	<b>12</b>	<b>19</b>
<b>Total(BA GROUP)</b>			<b>8</b>	<b>1</b>	<b>8</b>	<b>140</b>	<b>60</b>	<b>200</b>	<b>100</b>	<b>7</b>	<b>10</b>	<b>17</b>

<b>Elective-III</b>	1. Artificial Neural Network * 2. Medical Image Processing * 3. Hospital Management and Information Systems *
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<b>Elective-IV</b>	1. Biomaterials 2. Telemedicine *
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