

Shri G.S. Institute of Technology & Science
Scheme of Examination 24-25
II YEAR B.Tech. (Biomedical Engineering)
Applicable to Students Admitted in session 2023-24

Semester - III

Semester - III														
S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks					Total Credits
				L	T	P	Th	Pr	Theory		Practical		Total	
									Th.	CW	SW	Pr.		
1	BSC	MA-29204	Mathematics - III	3	1	0	4	-	70	30	0	0	100	4
2	ESC	EE-29021	Network Analysis	3	-	-	3	-	70	30	0	0	100	3
3	PCC	BM-29031	Analog Electronics	3	-	-	3	-	70	30	0	0	100	3
4	PCC	BM-29027	Bioelectricity & Transducers	3	-	-	3	-	70	30	0	0	100	3
5	PCC	BM-29013	Human Anatomy & Physiology	3	-	-	3	-	70	30	0	0	100	3
6	LC (PCC)	BM-29402	Bioelectricity Transducers Lab	-	-	2	-	1			40	60	100	1
7	LC (PCC)	BM-29401	Human Anatomy & Physiology Lab	-		2	-	1			40	60	100	1
8	LC (ESC)	BM-29404	Analog Electronics Lab	-	-	2	-	1			40	60	100	1
9	LC (ESC)	EE-29403	Electrical Networks Lab	-	-	2	-	1			40	60	100	1
10	LC	EE 29498	Electrical workshop	-	-	2	-	1			40	60	100	1
11	HSMC	HU-29481	Values, Humanities and	-	2	-	2	-	-	100	-	-	100	2
12	MC	HUM2001	Constitution Of India (Audit	1	-	-	-	-	-	50	-	-	50	-
TOTAL				16	3	10	18	5	350	300	200	300	1150	23

Semester - IV

Semester - IV														
S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				Total Credits	
				L	T	P	Th	Pr	Theory		Practical			Total
									Th.	CW	SW	Pr.		
1	BSC	MA-29501	Mathematics IV	3	1	-	4	-	70	30	0	0	100	4
2	ESC	EC-29519	Digital Electronics	3	-	-	3	-	70	30	0	0	100	3
3	PCC	BM-29512	Programming Tools and Techniques	3	-	-	3	-	70	30	0	0	100	3
4	ESC	EI-29522	Fundamentals of Measurement	3	-	-	3	-	70	30	0	0	100	3
5	HSMC	HU-29507	Economics for Engineers	3	-	-	3	-	70	30	0	0	100	3
6	LC(EI)	EI-29998	Electronic Workshop	-	-	4	-	2	-	-	40	60	100	2
7	LC(EC)	EC-29802	Digital Electronics Lab	-	-	2	-	1	-	-	40	60	100	1
8	LC (BM)	BM-29801	Programming Tools and Techniques Lab	-	-	2	-	1	-	-	40	60	100	1
9	LC (EI)	EI-29803	Fundamentals of Measurement	-	-	2	-	1	-	-	40	60	100	1
10	MC	BMM2053	Environmental Science (Audit Only)	1	-	-	-	-	-	50	-	-	50	-
TOTAL				16	1	10	16	5	350	200	160	240	950	21

Diploma in Biomedical Engineering shall be awarded after acquiring additional 10 credits out of which 6 credits as 3 Months industrial training within five years

Diploma in Biomedical Engineering Additional Credit Requirement

Diploma in Biomedical Engineering Additional Credit Requirement														
S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks					Total
				L	T	P	Th	Pr	Theory		Practical		Total	
									Th.	CW	SW	Pr.		
1	BSC	BM-XXXXXX	Networking Fundamentals	-	-	4	-	2	-	-	40	60	100	2
2	PCC	BM-XXXXXX	Medical equipment functioning a	2	-	-	2	-	70	30	-	-	100	2
3	S/I/I	BM-XXXXXX	Seminar/Hospital	-	-	12	-	6	-	-	40	60	100	6
			Total	2	0	16	2	8	70	30	80	120	300	10

Shri G.S. Institute of Technology & Science
Scheme of Examination 24-25
III YEAR B.Tech. (BioMedical Engineering)
Applicable to Students Admitted in Session 2022-23

Semester - V

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks					Total Credit
				L	T	P	Th	Pr	Theory		Practical		Total	
									Th.	CW	SW	Pr.		
1	HSMC	IP-39021	Industrial Engineering & Management	3	1	-	4	-	70	30	-	-	100	4
2	PCC	BM-39011	Signals and Systems	3	1	2	4	1	70	30	40	60	200	5
3	PCC	BM-39013	Biomedical Instrumentation I	3	1	2	4	1	70	30	40	60	200	5
4	PEC		Elective-I	3	-	2	3	1	70	30	40	60	200	4
5	S/I/I	BM-39481	Seminar/Hospital Training/Internship	-	-	4	-	2	-	-	100	-	100	2
TOTAL				12	3	10	15	5	280	120	220	180	800	20

Elective-I: (1) BM-39255 -AI and ML for Medical Applications
(2) BM-xxxx-Microprocessor & Microcontroller

Semester - VI

Semester - VI														
S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks					Total Credit
				L	T	P	Th	Pr	Theory		Practical		Total	
									Th.	CW	SW	Pr.		
1	PCC	EE-39508	Control Systems	3	1	2	4	1	70	30	40	60	200	5
2	PCC	BM-39501	Biomedical Signal	3	1	2	4	1	70	30	40	60	200	5
3	PCC	BM-39512	Biomedical Instrumentation II	3	1	2	4	1	70	30	40	60	200	5
4	PEC		Elective-II	3	-	-	3	-	70	30	-	-	100	3
5	PROJEC	BM-39952	Minor Project-I	-	-	8	-	4	-	-	40	60	100	4
6	XXXXXX	MC	Essence of Indian	1	-	-	-	-	-	50	-	-	50	-
TOTAL				13	3	14	15	7	280	170	160	240	850	22

Elective-II : (1) BM-39603-Biomedical Statistical Signal Processing
(2) EC-39602 Analog & Digital Communication
(3) BM-xxxx Embedded Systems

Shri G.S. Institute of Technology & Science
Scheme of Examination 24-25
IV YEAR B.Tech. (BioMedical Engineering)
Applicable to Students Admitted in session 2021

Semester-VII													
S. No.	Subject Code	Category	Subject Name	Periods /Week			Maximum Marks allotted				Credits		Total
							Theory		Practical				
				L	T	P	Th.	CW	SW	Pr.	T	P	
1	BM- 49004	PCC	Biomechanics	3	1	2	70	30	40	60	3	1	4
2	BM-49003	PCC	Medical Imaging Systems	4	1	-	70	30	-	-	4	-	4
3	BM- 49005	PCC	Biological Control Systems	4	-	2	70	30	40	60	3	1	4
4	BM-	PEC	Elective-III	3	-	2	70	30	40	60	2	1	3
5	BM-49498	PROJECT	Major Project-I(AB Group)	-	-	8	-	-	40	60	-	4	4
6	BM-49998	PROJECT	Major Project-II (BA Group)	-	-	8	-	-	40	60	-	4	4
7	BM-49482	S/I/I	Summer Industrial Training/Internship/Seminar	-	-	4	-	-	40	60	-	2	2
			Total(AB Group)	14	2	18	280	120	200	300	12	9	21
			Total(BA Group)	14	2	18	280	120	200	300	12	9	21

Elective-III	1. BM-xxxxx : Artificial Intelligence and Machine Learning for Medical Applications 2. BM-xxxxx :Power Electronics 3. BM-49261 : Hospital Management and Information Systems 4. BM-49204 : Internet of Things for Medical Applications
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*PEC --> Can be replaced by NPTEL/Moocs/Swayam Course in consultation with mentor

Semester- VIII													
S. No.	Subject Code	Category	Subject Name	Periods /Week			Maximum Marks allotted				Credits		Total
							Theory		Practical				
				L	T	P	Th.	CW	SW	Pr.	T	P	
1	BM-	PEC	Elective-IV	4	-	-	70	30	-	-	3	-	3
2	BM-	PEC	Elective-V	4	1	-	70	30	-	-	4	-	4
3	BM-49883	S/I/I	Industrial Training/Internship/Seminar	-	-	10	-	-	40	60	-	5	5
4	BM-49998	PROJECT	Major Project-II (AB Group)	-	-	8	-	-	40	60	-	4	4
5	BM-49498	PROJECT	Major Project-I (BA Group)	-	-	8	-	-	40	60	-	4	4
			Total(AB GROUP)	8	1	18	140	60	80	120	7	9	16
			Total(BA GROUP)	8	1	18	140	60	80	120	7	9	16

Elective-IV	1. BM-49612 :Rehabilitation Engineering 2. BM-49611 :Hospital Technology Systems 3. BM-xxxxx : Medical Image Processing 4. BM-xxxxx :Design and manufacturing of medical devices
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Elective-V	1. BM-49701: Biomaterials 2. BM-49702: Telemedicine 3. BM-XXXX: Nanosensors
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