

**Shri G.S. Institute of Technology & Science, Indore**  
**Electronics & Instrumentation Engineering Department**  
**B.Tech (Applicable to 2023-24 Enrolled Students)**

**Batch 2023-2027(NEP-20)**  
**Acadmic Year :2024-25**

**II Year / Semester-III**

S.No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks			
				L	T	P	Th	Pr	Theory		Practical	
									Th.	CW	SW	Pr.
1	BSC	MA-27xxx	Mathematics-III	3	1	-	4	-	70	30	-	-
2	PCC	EI-27xxx	Circuit Analysis & Synthesis	3	-	-	3	-	70	30	-	-
3	PCC	EI-27xxx	Digital Electronics	3	-	-	3	-	70	30	-	-
4	PCC	EI-27xxx	Electronics Devices & Circuits	3	-	-	3	-	70	30	-	-
5	ESC	EI-27xxx	Fundamentals of Measurement	3	-	-	3	-	70	30	-	-
6	LC(EI)	EI-27xxx	Circuit Analysis & Synthesis	-	-	2	-	1	-	-	40	60
7	LC(EI)	EI-27xxx	Digital Electronics	-	-	2	-	1	-	-	40	60
8	LC(EI)	EI-27xxx	Electronics Devices & Circuits	-	-	2	-	1	-	-	40	60
9	LC(EI)	EI-27xxx	Fundamentals of Measurement	-	-	2	-	1	-	-	40	60
10	LC(EI)	EI-27xxx	Electronics Workshop Lab	-	-	2	-	1	-	-	40	60
11	MC	CHM-27xxx	Environmental Science*	2	-	-	-	-	-	50		
<b>Total</b>				<b>17</b>	<b>1</b>	<b>10</b>	<b>16</b>	<b>5</b>	<b>350</b>	<b>200</b>	<b>200</b>	<b>300</b>

\*Non-credit mandatory subject

**II Year / Semester-IV**

	Subject	Subject	Hours per Week	Credits	Maximum Marks
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S.No.	Subject Category	Subject Code	Subject Name	L	T	P	Th	Pr	Theory		Practical	
									Th.	CW	SW	Pr.
1	HSMC	HU-27xxx	Economics for Engineers	3	-	-	3	-	70	30	-	-
2	PCC	EI-27xxx	Analog Electronics	3	-	-	3	-	70	30	-	-
3	PCC	EI-27xxx	Sensors & Transducers	3	-	-	3	-	70	30	-	-
4	BSC	MA-27xxx	Mathematics – IV	3	1	-	4	-	70	30	-	-
5	PCC	EI-27xxx	Digital Circuit Design using HDLs	3	-	-	3	-	70	30	-	-
6	LC (EI)	EI-27xxx	Analog Electronics (Lab)	-	-	2	-	1	-	-	40	60
7	LC (EI)	EI-27xxx	Sensors & Transducers (Lab)	-	-	2	-	1	-	-	40	60
8	LC (EI)	EI-27xxx	Digital Circuit Design using HDLs (Lab)	-	-	2	-	1	-	-	40	60
9	LC (EI)	EI-27xxx	Software workshop	-	-	2	-	1	-	-	40	60
10	MC	HU-27xxx	Values, Humanity and Professional Ethics	2	-	-	2	-	-	100	-	-
12	PROJ	Internship-1		4-6 weeks-during vacation. Evaluation & Credit in V Semester								
<b>TOTAL</b>				<b>17</b>	<b>1</b>	<b>8</b>	<b>18</b>	<b>4</b>	<b>350</b>	<b>250</b>	<b>160</b>	<b>240</b>

\*Non-credit mandatory subject

Diploma in Electronics & Instrumentation Engg. will be awarded after acquiring additional 10 credits out of which 6 credits as 3 months industrial training within 5 year

**Shri G.S. Institute of Technology & Science, Indore**  
**Electronics & Instrumentation Engineering Department**  
**B.Tech (Applicable to 2022-23 Enrolled Students)**

**Batch : 2022-2026**

III Year/ V Sem

Academic Year 2024-25

S.no.	Category	Subject Code	Subject Name	Period/Week			Maximum Marks				Credits	
				L	T	P	Theory		Practical		T	P
							End Sem	CW	End Sem	SW		
1	DC-8	IT37005	Data Structure	3		2	70	30	60	40	3	1
2	DC-9	EI37006	Microprocessor Systems	3		2	70	30	60	40	3	1
3	DC-9	EI37xxx	CMOS VLSI Design	3		2	70	30	60	40	3	1
4	OEC-I		Open Elective-I	3			70	30			3	
5	PEC-1		Program Elective -I	3			70	30			3	
6	DLC-3	EI37481	Test & Calibration			4			60	40		2
7	MC-3	HU	Constitution of India	2				50				
8	DLC-4	EI37482	Internship-1 (Evaluation)							50		2
<b>Total</b>				<b>17</b>	<b>0</b>	<b>10</b>	<b>350</b>	<b>200</b>	<b>240</b>	<b>210</b>	<b>15</b>	<b>7</b>

III Year/ VI Sem

S.no.	Category	Subject Code	Subject Name	Period/Week			Maximum Marks				Credits	
				L	T	P	Theory		Practical		T	P
							End Sem	CW	End Sem	SW		
1	DC-10	EI37511	Filter Design & Simulation	3		2	70	30	60	40	3	1
2	DC-11	EI37xxx	Microcontroller & Embedded	3		2	70	30	60	40	3	1
3	DC-12	EExxx	Control System	3		2	70	30	60	40	3	1
4	OEC-II		Open Elective-II	3			70	30			3	
5	PEC-II		Program Elective-II	3			70	30			3	
6	DLC-5	EI37991	Mini Project			4			60	40		2
<b>Total</b>				<b>15</b>	<b>0</b>	<b>10</b>	<b>350</b>	<b>150</b>	<b>240</b>	<b>160</b>	<b>15</b>	<b>5</b>

Internship-II To be completed any time during V/VI semester. Its evaluation/credits to be added in Semester VII( Minimum 4 Weeks Duration)

**List of Electives for 5th & 6th Semester**

Program Elective-I		
1	ECxxx	Analog & Digital Communication
2	EIxxx	Smart Sensors
3	EIxxx	Peripherals & Interfacing

Program Elective-II		
1	EI37xxx	High Frequency Engineering
2	EI37xxx	Analog Integrated Circuits
3	EI37xxx	Analytical Instrumentation

Open Elective-I		
1	IP37251	Industrial Engineering & Management
2	CO37253/2 A & 2B	NPTEL NPTEL Courses: 2A. Fundamentals of Artificial Intelligence

Open Elective-II		
1	IT 37xxx	Web Engineering
2	EC 37xxx	Mobile Communication
3	EC37xxx	Digital Signal Processing

**Shri G.S. Institute of Technology & Science, Indore**  
**Electronics & Instrumentation Engineering Department**  
**B.Tech (Applicable to 2021-22 Enrolled Students)**

Batch : 2021-2025  
Academic Year 2024-

IV Year/ VII Sem

S.no.	Category	Subject Code	Subject Name	Period/Week			Maximum Marks				Credits	
				L	T	P	Theory		Practical		T	P
							End Sem	CW	End Sem	SW		
1	DC-15	EI47053	Process Instrumentation	3	1	2	70	30	60	40	4	1
2	DC-16	EE47002	Power Electronics	3		2	70	30	60	40	3	1
3	DC-17	EI47055	VLSI Design	3		2	70	30	60	40	3	1
4	PEC		Elective -III	3			70	30			3	
5	PEC		Elective -IV	3			70	30			3	
6	Internship		Internship-II (Evaluation)			4		50				2
7	DLC-7	EI47499	Major Project-I(AB Group)			6			60	40		3
	DLC-8	EI47999	Major Project-II(BA Group)			10			60	40		5

<b>Total (With AB Group)</b>	<b>15</b>	<b>1</b>	<b>16</b>	<b>350</b>	<b>200</b>	<b>240</b>	<b>160</b>	<b>16</b>	<b>8</b>
<b>Total (With BA Group)</b>	<b>15</b>	<b>1</b>	<b>20</b>	<b>350</b>	<b>200</b>	<b>240</b>	<b>160</b>	<b>16</b>	<b>10</b>

#### IV Year/ VIII Sem

S.no.	Category	Subject Code	Subject Name	Period/Week			Maximum Marks				Credits	
				L	T	P	Theory		Practical		T	P
							End Sem	CW	End Sem	SW		
1	DC-18		Elective-V	3			70	30			3	
2	DC-19		Elective -VI	3			70	30			3	
3	Internship	EI47881	Industrial Training/ Internship (min 6 week/seminar with report							100		8
4	DLC-8	EI47999	Major Project-II(AB Group)			10			60	40		5
5	DLC-7	EI47499	Major Project-I(BA Group)			6			60	40		3
<b>Total (With AB Group)</b>				<b>6</b>	<b>0</b>	<b>10</b>	<b>140</b>	<b>60</b>	<b>60</b>	<b>140</b>	<b>6</b>	<b>13</b>
<b>Total (With BA Group)</b>				<b>6</b>	<b>0</b>	<b>6</b>	<b>140</b>	<b>60</b>	<b>60</b>	<b>140</b>	<b>6</b>	<b>11</b>

Semester VII		
Elective-III		
1	EI47257	Fiber Optics and Photonics
2	XX47201	Data structure
Elective-IV		
1	EI47322	VLSI Technology

Semester VIII		
Elective-V		
1	BM47613	Medical Instrumentation
2	BM47614	Biomedical Signal Processing (NPTEL)
3	EI47611	Digital Image Processing
4	EI47612	Computer Network

2	EI47301	Intelligent Instrumentation
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<b>Elective-VI</b>		
1	EI47776	Automation in Instrumentation
2	EI47702	Industrial Automation & Control (NPTEL)
2	EI47701	Data Acquisition Systems

<b>Total</b>
100
100
100
100
100
100
100
100
100
100
100
50
<b>1050</b>



<b>Total</b>
100
100
100
100
100
100
100
100
100
100
100
<b>1000</b>

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Total	Total Marks
4	200
4	200
4	200
3	100
3	100
2	100
	50
2	50
<b>22</b>	<b>1000</b>

Total	Total Marks
4	200
4	200
4	200
3	100
3	100
2	100
<b>20</b>	<b>900</b>



-25

Total	Total Marks
5	200
4	200
4	200
3	100
3	100
	50
3	100
5	100

24	950
26	950

Total	Total Marks
3	100
3	100
8	100
5	100
3	100
<b>19</b>	<b>400</b>
<b>17</b>	<b>400</b>