

**An Autonomous Programme Structure of  
M. Tech. Instrumentation and Control Engineering  
Specialization: Biomedical Instrumentation  
(With Effect From Academic Year: 2017-2018 )**

**SEMESTER I**

Course Code	Course Title	Teaching Scheme Hours/Week			Examination Scheme				Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral	Practical		
INBI 1101	Advanced Mathematics	3	1	0	50	50	0	0	100	4
INBI 1102	Transducer Design	3	0	0	50	50	0	0	100	3
INBI 1103	Anatomy and Physiology	3	0	0	50	50	0	0	100	3
INBI 1104	Research Methodology	3	1	0	50	50	0	0	100	4
PEINBI 1101	Elective I	3	0	0	50	50	0	0	100	3
INBI 1105	Transducer Design Lab	0	0	2	25	0	0	0	25	1
INBI 1106	Anatomy and Physiology Lab	0	0	2	0	0	25	0	25	1
INBI 1107	Elective I Lab	0	0	2	0	0	0	25	25	1
<b>Total</b>		15	2	6	275	250	25	25	575	20
<b>Grand Total</b>		<b>23</b>			<b>575</b>				<b>575</b>	<b>20</b>

**Elective I:**

1. Bio-signal Processing
2. Fibre Optics and Laser Technology
3. Control Systems

## SEMESTER II

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme				Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral	Practical		
INBI 1201	Advanced Electronic Instrumentation	3	0	0	50	50	0	0	100	3
INBI 1202	Advanced Embedded Systems	3	0	0	50	50	0	0	100	3
INBI 1203	Engineering in Medicine	3	0	0	50	50	0	0	100	3
INBI 1204	Medical Imaging and Image Processing	3	0	0	50	50	0	0	100	3
PEINBI 1202	Elective II	3	0	0	50	50	0	0	100	3
INBI 1205	Advanced Embedded Systems Lab	0	0	2	0	0	0	25	25	1
INBI 1206	Engineering in Medicine Lab	0	0	2	0	0	25	0	25	1
INBI 1207	Elective II Lab	0	0	2	25	0	0	0	25	1
INBI 1208	Seminar I	0	2	0	0	0	50	0	50	2
AC 1201	Audit Course*	0	0	2	0	0	0	0	0	0
<b>Total</b>		15	2	8	275	250	75	25	625	20
<b>Grand Total</b>		<b>25</b>			<b>625</b>				<b>625</b>	<b>20</b>

### Elective II:

1. Bio-MEMS
2. Advanced Digital Signal Processing
3. Physiological Modelling

AC 1201: \*Audit Courses – Soft Skills and Business Communication / Entrepreneurship Development

### SEMESTER III

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme			Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral		
HSEL 2101	Elective III	3	1	0	50	50	0	100	4
OE 2101	Elective IV	3	0	0	50	50	0	100	3
INBI 2102	Project Stage I	0	0	18	125	0	100	225	9
<b>Total</b>		6	1	18	225	100	100	425	16
<b>Grand Total</b>		<b>25</b>			<b>425</b>			<b>425</b>	<b>16</b>

#### Elective III:

1. Environmental Studies
2. Pollution Control
3. Fundamentals of Disaster Management
4. Constitution of India

#### Elective IV:

1. Clinical Engineering
2. Rehabilitation Engineering
3. Bioinformatics

### SEMESTER IV

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme			Marks	Credit
		Lecture	Tutorial	Practical	In Semester	Endsemester	Oral		
INBI 2201	Project Stage II	0	0	28	200	0	150	350	14
<b>Total</b>		0	0	28	200	0	150	350	14
<b>Grand Total</b>		<b>28</b>			<b>350</b>			<b>350</b>	<b>14</b>