

**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
Total		15	2	6	275	250	25	25	575	20
Grand Total		23			575				575	20

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
Total		15	2	8	275	250	75	25	625	20
Grand Total		25			625				625	20

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
Total		6	1	18	225	100	100	425	16
Grand Total		25			425			425	16

Elective III:

1. Environmental Studies
2. Economics for Engineers
3. Fundamentals of Disaster Management

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	End semester	Oral		
INBI 2201	Project Stage II	0	0	28	200	0	150	350	14
Total		0	0	28	200	0	150	350	14
Grand Total		28			350			350	14