



**National Institute of Technology Raipur**  
**Department of Biomedical Engineering**  
**Semester: V**

S No.	Subject Type	Subject code	Subject Name	Period /Week			Examination Scheme						Total Marks	Credits
				L	T	P	TA		MSE		ESE			
							Max	Min	Max	Min	Max	Min		
1	Program Core	BM105101BM	Microcontrollers	3	1	0	20	0	30	0	50	0	100	4
2	Program Core	BM105102BM	Medical Imaging	3	1	0	20	0	30	0	50	0	100	4
3	Program Core	BM105103BM	Biomedical Equipments	3	1	0	20	0	30	0	50	0	100	4
4	Program Elective	BM10520XBM	Program Elective I	3	0	0	20	0	30	0	50	0	100	3
5	Open Elective	BM10530XBM	Open Elective I	3	0	0	20	0	30	0	50	0	100	3
6	Lab	BM105401BM	Microprocessor & Microcontroller Lab	0	0	2	40	0	20	0	40	0	100	1
7	Lab	BM105402BM	Biomedical Equipments Lab	0	0	2	40	0	20	0	40	0	100	1
8	Lab	BM105701BM	Summer Internship I	0	0	0	50	0	0	0	50	0	100	1
<b>Total Credits</b>													<b>21</b>	

**List of Subjects for Program Elective-1 (V Semester)**

S. No.	Sub. Code	Subject Name
1	BM105201BM	Physiological Systems & Modelling
2	BM105202BM	Artificial Intelligence

**List of Subjects for Open Elective-1 (V Semester)**

S. No.	Sub. Code	Subject Name
1	BM105301BM	Analytical & Diagnostic Medical Equipment
2	BM105302BM	Computational Biomechanics



**National Institute of Technology Raipur**  
**Department of Biomedical Engineering**  
**Semester: VI**

S No.	Subject Type	Subject code	Subject Name	Period /Week			Examination Scheme						Total Marks	Credits
				L	T	P	TA		MSE		ESE			
							Max	Min	Max	Min	Max	Min		
1	Program Core	BM106101BM	Biomaterials	3	1	0	20	0	30	0	50	0	100	4
2	Program Core	BM106102BM	Microelectronic and Integrated Circuits	3	1	0	20	0	30	0	50	0	100	4
3	Program Core	BM106103BM	Telemedicine	3	1	0	20	0	30	0	50	0	100	4
4	Program Elective	BM10620XBM	Program Elective II	3	0	0	20	0	30	0	50	0	100	3
5	Program Elective	BM10620XBM	Program Elective III	3	0	0	20	0	30	0	50	0	100	3
6	Open Elective	BM10630XBM	Open Elective II	3	0	0	20	0	30	0	50	0	100	3
7	Lab	BM106401BM	Biomaterials Lab	0	0	2	40	0	20	0	40	0	100	1
8	Lab	BM106402BM	Microelectronic and Integrated Circuits Lab	0	0	2	40	0	20	0	40	0	100	1
<b>Total Credits</b>													<b>23</b>	

**List of Subjects for Program Elective-II (VI Semester)**

S. No.	Sub. Code	Subject Name
1	BM106201BM	Sports Biomechanics
2	BM106202BM	Biomicrfluidics

**List of Subjects for Program Elective-III (VI Semester)**

S. No.	Sub. Code	Subject Name
1	BM106203BM	Data Base Management System
2	BM106204BM	Principle of Communication

**List of Subjects for Open Elective-II (VI Semester)**

S. No.	Sub. Code	Subject Name
1	BM106301BM	Advanced Biosignal Processing
2	BM106302BM	Machine Learning & Deep Learning in Healthcare & Lifescience



**National Institute of Technology Raipur**  
**Department of Biomedical Engineering**  
**Semester: VII**

S No.	Subject Type	Subject code	Subject Name	Period /Week			Examination Scheme						Total Marks	Credits
				L	T	P	TA		MSE		ESE			
							Max	Min	Max	Min	Max	Min		
1	Program Core	BM107101BM	Tissue Engineering	3	1	0	20	0	30	0	50	0	100	4
2	Program Core	BM107102BM	Biophotonics	3	1	0	20	0	30	0	50	0	100	4
4	Program Elective	BM10720XBM	Program Elective III	3	0	0	20	0	30	0	50	0	100	3
5	Program Elective	BM10720XBM	Program Elective IV	3	0	0	20	0	30	0	50	0	100	3
6	Open Elective	BM10730XBM	Open Elective III	3	0	0	20	0	30	0	50	0	100	3
7	Lab	BM107401BM	Tissue Engineering Lab	0	0	2	40	0	20	0	40	0	100	1
8	Project	BM107501BM	Project I	0	0	6	40	0	20	0	40	0	100	3
9	Lab	BM107701BM	Summer Internship II	0	0	2	50	0	0	0	50	0	100	2
<b>Total Credits</b>													<b>23</b>	

**List of Subjects for Program Elective-III (VII Semester)**

S. No.	Sub. Code	Subject Name
1	BM107201BM	Rehabilitation Engineering
2	BM107202BM	Medical Image Processing

**List of Subjects for Program Elective-IV (VII Semester)**

S. No.	Sub. Code	Subject Name
1	BM107203BM	Biochemistry
2	BM107221BM	Basic Clinical Sciences

**List of Subjects for Open Elective-III (VII Semester)**

S. No.	Sub. Code	Subject Name
1	BM107301BM	Lab on Chip Devices
2	BM107302BM	Biostatistics



**National Institute of Technology Raipur**  
**Department of Biomedical Engineering**  
**Semester: VIII A**

S No.	Subject Type	Subject code	Subject Name	Period /Week			Examination Scheme						Total Marks	Credits
				L	T	P	TA		MSE		ESE			
							Max	Min	Max	Min	Max	Min		
1	Open Elective	BM10830XBM	Open Elective IV	3	0	0	20	0	30	0	50	0	100	3
2	Open Elective	BM10830XBM	Open Elective V	3	0	0	20	0	30	0	50	0	100	3
3	Project	BM108501BM	Project II	0	0	8	40	0	20	0	40	0	100	4
<b>Total Credits</b>													<b>10</b>	

**List of Subjects for Open Elective-IV (VIII A Semester)**

S. No.	Sub. Code	Subject Name
1	BM108301BM	Biofluid Dynamics
2	BM108302BM	Drug Delivery Systems

**List of Subjects for Open Elective-V (VIII A Semester)**

S. No.	Sub. Code	Subject Name
1	BM108303BM	3D Printing Technology
2	BM108304BM	Healthcare Management

**Semester: VIII B**

**(for students who have Semester Long Internship offer from Campus Placement/Leading Academic or Research Organisation)**

S No.	Subject Type	Subject code	Subject Name	Period /Week			Examination Scheme						Total Marks	Credits
				L	T	P	TA		MSE		ESE			
							Max	Min	Max	Min	Max	Min		
1	Open Elective	BM10830XBM	Open Elective IV DAC Approved Online Course	3	0	0	20	0	30	0	50	0	100	3
2	Open Elective	BM10830XBM	Open Elective V DAC Approved Online Course	3	0	0	20	0	30	0	50	0	100	3
3	Lab	BM108701BM	Major Internship	0	0	8	50	0	0	0	50	0	100	4
<b>Total Credits</b>													<b>10</b>	

