

Semester-wise Scheme of Studies

Semester-wise scheme of studies for Bachelor of Biomedical Engineering Technology program spanning 4 years, spread over 8 semesters, and totaling 129 credit hours is presented below:

Semester I				
Suggested Course Codes	Course Title	Knowledge Area/Domain	Credit Hrs. (Th + Lab)	Contact Hrs. (Th + Lab)
BIN-111/ BIN-112	Basic Biology (for Pre-Engineering Students)/ Basic Mathematics (for Pre-Medical Students)	Natural Sciences	2+1 or 3+0	2+3 or 3+0
BIE-113	Functional English	Expository Writing	3+0	3+0
BIH-114	Islamic Studies	Humanities	2+0	2+0
BIN-115	Applied Physics	Natural Sciences	2+1	2+3
BIC-116	Information & Communication Technology	Computing	2+1	2+3
BIT-117	Workshop Practices	Foundation	0+1	0+3
BIT-118	Technical Drawing	Foundation	0+1	0+3
Subtotal			11+5 = 16 or 12+4 = 16	11 +15 =26 or 12+12 = 24

SEMESTER-II				
BIQ-121	Calculus and Analytical Geometry	Quantitative Reasoning	3+0	3+0
BIT-122	Basic Electrical Technology	Foundation	2+1	2+3
BIT-123	Human Anatomy & Physiology	Foundation	3+1	3+3
BIC-124	Computer Programming	Computing	1+1	1+3
BIE-125	Expository Writing	Expository Writing	3+0	3+0
BIS-126	Social Sciences Elective I	Social Sciences	2+0	2+0
Subtotal		13+3 =16	14+3 =17	23

SEMESTER-III				
Course Codes	Course Title	Knowledge Area	Credit Hrs. (Th+Lab)	Contact Hrs. (Th+Lab)
BIT-211	Biochemistry	Forced Elective	2+1	2+3
BIQ-212	Linear Algebra & Differential Equations	Quantitative Reasoning	3+0	3+0
BIT-213	Electrical Circuit Analysis	Foundation	2+1	2+3
BIT-214	Digital Logic Design	Breadth	2+1	2+3
BIS-215	Ideology and Constitution of Pakistan	Social Sciences	2+0	2+0
BIH-216	Arts and Humanities Elective	Arts and Humanities	2+0	2+0
Subtotal			13+3=16	22

SEMESTER-IV				
BIT-221	Signals and Systems	Breadth	2+1	2+3
BIT-222	Electronic Devices and Circuits	Foundation	2+1	2+3
BIT-223	Microprocessors and Microcontrollers	Depth	2+1	2+3
BIT-224	Biomechanics	Breadth	2+1	2+3
BIS-225	Civic and Community Engagement	Social Sciences	2+0	2+0
BIM-226	Management Science Elective I	Management Sciences	2+0	2+0
Subtotal			12+4 =16	24

SEMESTER-V				
Course Codes	Course Title	Knowledge Area	Credit Hrs. (Th+Lab)	Contact Hrs. (Th+Lab)
BIT-311	Biomaterials	Breadth	2+1	2+3
BIT-312	Biomedical Instrumentation	Breadth	2+1	2+3
BIT-313	Biomedical Control Systems	Depth	2+1	2+3
BIT-314	Molecular Biology	Breadth	2+1	2+3
BIE-315	Technical Report Writing	Humanities	2+0	2+0
BIT-316	Project-I	Project	0+3	0+9
Subtotal			10+7 =17	31

SEMESTER-VI				
Course Codes	Course Title	Knowledge Area	Credit Hrs. (Th+Lab)	Contact Hrs. (Th+Lab)
BIT-321	Medical Imaging Devices	Depth	2+1	2+3
BIN-322	Probability and Statistics	Natural Sciences	2+0	2+0
BIT-323	Clinical Laboratory Equipment	Depth	2+1	2+3
BII-324	IDTE-I	IDTE	3+0	3+0
BII-325	IDTE-II	IDTE	2+1	2+3
BIT-326	Project-II	Project	0+3	0+9
Subtotal			11+6 =17	29

SEMESTER-VII				
Course Codes	Course Title	Knowledge Area	Credit Hrs. (Th+Lab)	Contact Hrs. (Th+Lab)
BIM- 411	Management Sciences Elective-III	Management Sciences	2+0	2+0
BIT-412	Depth Elective-I	Depth	2+1	2+3
BIT-413	Depth Elective-II	Depth	2+1	2+3
BIT-414	Depth Elective-III	Depth	2+1	2+3
BIT-415	Troubleshooting of Medical Devices	Depth	0+1	0+3
BIT-416	Depth Elective-IV	Depth	3+0	3+0
Subtotal			11+4=15	23

SEMESTER-VIII				
BIT-421	Supervised Industrial Training (Compulsory)	Biomedical Engineering Technology Domain Industrial Training	16	40 (per Week)
	Subtotal		0+16= 16	0+40= 40
Total Credit Hours & Contact Hours in Four Years (When optional courses conducted instead of SIT in 7th Semester)			82+48= 130 Or 83+47= 130	75+162=237