Bachler in Biomedical Sciences Study Plan - DMU

Year	Semester	Course Name	Total CH		
			CH	Theory	Practical
Year I	Semester 1	Introduction to Biomedical Sciences	3	3	0
		Human Anatomy and Physiology I	4	3	1
		Cell Biology	3	2	1
		Ethics and Professionalism in Biomedical Sciences	3	3	0
		Biochemistry	3	2	1
		Semester Credit Hours	**16**	**13**	**3**
	Semester 2	Human Anatomy and Physiology II	4	2	2
		Histology and Tissue Biology	3	2	1
		Clinical Biochemistry	3	2	1
		Microbiology	3	2	1
		Elective I: (2 offered: Environmental Health Sciences OR Global Disease Surveillance Systems)	3	3	0
		Semester Credit Hours	**16**	**11**	**5**
Year II	Semester 1	Medical Microbiology	3	2	1
		Molecular Biology	3	2	1
		Introduction to Genetics	3	2	1
		Introduction to Bioinformatics	3	1	2
		Scientific Communication and Writing	3	3	0
		Elective II: (2 offered: Biotechnology in Health Sciences OR Stem Cell Biology)	3	2	1
		Semester Credit Hours	**18**	**12**	**6**
	Semester 2	Principles of Epidemiology	3	1	2
		Immunology	3	2	1
		Fundamentals of Pathophysiology	3	2	1
		Introduction to Pharmacology	3	2	1
		Research Methods in Biomedical Sciences	3	3	0
		Elective III: (2 offered: Advanced Bioinformatics and Computational Biology OR Digital Health and Artificial Intelligence in Medicine)	3	1	2
		Semester Credit Hours	**18**	**11**	**7**

Year III	**Semester 1**	Immunopathology	3	2	1
		Emerging Technologies in Biomedical Sciences	3	1	2
		Biomedical Instrumentation	3	1	2
		Biostatistics for Biomedical Sciences	3	1	2
		Elective IV: (2 offered CRISPR and Gene Editing Technologies OR Pharmacogenomics and Personalized Medicine)	3	1	2
		Semester Credit Hours	**15**	**6**	**9**
	Semester 2	Introduction to Biophysics	3	2	1
		Cancer Biology	3	2	1
		Molecular Diagnostics	3	2	1
		Neuroscience and Behavioral Biology	3	2	1
		Elective V: (2 offered: Advanced Epidemiology OR Clinical Trials and Drug Development)	3	2	1
		Semester Credit Hours	**15**	**10**	**5**
Year IV	**Semester 1**	Work Placement (Laboratory Rotations and Clinical Observations)	6	0	6
		Capstone Project I	3	0	3
		Elective VI: (2 offered: Advanced Genomics and Transcriptomics and Drug Development OR Tissue Engineering and Regenerative Medicine)	3	2	1
		Semester Credit Hours	**12**	**2**	**10**
	Semester 2	Work Placement (Internship in Biomedical Sciences)	9	0	9
		Capstone Project II	3	0	3
		Elective VII: (2 offered: Proteomics and Metabolomics OR Industrial Biotechnology)	3	2	1
		Semester Credit Hours	**15**	**2**	**10**
		TOTAL CH	**125**		