

Struktur Mata Kuliah

Program Studi Bioteknologi

No.	SMT	Mata Kuliah	sks	Profil Lulusan					
				Medical Biotechnology		Biotechnology Informatics		Biotechnology Industry	
				PL-01	PL-02	PL-01	PL-02	PL-01	PL-02
1	Smt. 1	Pembangunan Karakter : Pancasila/ Character Building: Pancasila	2	√	√	√	√	√	√
2		Pembangunan Karakter : Agama/ Character Building: Religion	2	√	√	√	√	√	√
3		Kewirausahaan/ Entrepreneurship I	2	√	√	√	√	√	√
4		Artificial Intelligence Fundamentals	2	√	√	√	√	√	√
5		Biologi/ Fundamentals of Biology	4	√	√	√	√	√	√
6		Matematika/ Fundamentals of Biomathematics	2	√	√	√	√	√	√
7		Natural Science I (Physics and Chemistry)	4	√	√	√	√	√	√
8		Natural Science Lab	2	√	√	√	√	√	√
		Total SKS Smt.1	20						

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1	Smt. 2	Biokimia	6	√	√	√	√	√	√
2		Biotech Fundamentals and Biosafety	4	√	√	√	√	√	√
3		Mikrobiologi Dasar/ Fundamentals of Microbiology	2	√	√	√	√	√	√
4		Teknik Bioteknologi/ Techniques in Biotechnology (M)	2	√	√				
5		Calculus (B)	2			√	√		
6		Calculus (I)	2					√	√
7		Biotech Lab I	2					√	√
8		Pembangunan Karakter : Kewarganegaraan/ Character Building: Kewarganegaraan	2	√	√	√	√	√	√
9		Bahasa Indonesia/ Indonesian Language	2	√	√	√	√	√	√
		Total SKS Smt.2	20						
1	Smt. 3	Genetics	4	√	√	√	√	√	√
2		Biostatistika/ Biostatistics	2	√	√	√	√	√	√
3		Biologi Sel dan Molekuler/Cell and Molecular Biology	4	√	√	√	√	√	√

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4		Imunologi Dasar/ Basic Immunology (M)	2	√	√				
5		Computational Thinking (B)	2			√	√		
6		Biotech industry unit process (I)	2					√	√
7		Bioteknologi Industri/ Essentials of Industrial Biotechnology	2	√	√	√	√	√	√
8		Biotech Lab 2	2	√	√	√	√	√	√
9		Kewirausahaan/ Entrepreneurship II	2	√	√	√	√	√	√
		Total SKS Smt.3	20						
1	Smt. 4	Elektif 1 - Internal	2	√	√	√	√	√	√
		Cell and Tissue Engineering (Teknologi DNA Rekombinan/ Recombinant DNA Technology)	4	√	√	√	√	√	√
		Elektif 2 - Eksternal	4	√	√	√	√	√	√
		Biomaterial dan Nanoteknologi/ Biomaterials and Nanotechnology (M)	2	√	√				

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		Biologi Dasar Stem Cell/ Basic Biology of Stem Cells (M)	4	√	√				
		Biologi Kanker/ Cancer Biology (M)	4	√	√				
		Analisis dan Visualisasi Data (B)	2			√	√		
2		Bioinformatics I: System Basis Data Bioinformatics (B)	4			√	√		
3		Algoritma dan Dasar Pemrograman (B)	4			√	√		
4		Industrial aseptic operations (I)	2					√	√
5		Biotech industry facilities and utilities (I)	4					√	√
6		Bioactive separation and purification (I)	2					√	√
7		Bioprocess Engineering (I)	2					√	√
		Total SKS Smt.4	19						
1	Smt. 5	Scientific Writing and Publication (Metodologi Riset dan Desain Eksperimental/ Research Methodology and Experimental Design)	2	√	√	√	√	√	√
2		Imunologi Lanjutan/ Advance Immunology (M)	4	√	√				

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3		Biopharmaceutical	4	√	√				
4		Phytomedicine and Natural Products	2						
5		Clinical Trials and Regulatory Affairs	4	√	√				
6		Diagnostik Molecular	4	√	√				
7		Bioinformatics II: Pemodelan Data Bioinformatics (B)	4			√	√		
8		Machine Learning (B)	4			√	√		
9		Neural Network and Deep Learning (B)	6			√	√		
10		Artificial Intelligence in Bioimaging and Biosensor (B)	4			√	√		
11		Bioreactor basic (I)	4					√	√
		Intro to Biotech Industry Project Management and Economic Evaluation (I)	4					√	√
		Good Manufacturing Practice in Biotech Industry (I)	6					√	√
		Occupational Safety and Industrial Environment (I)	4					√	√
		Total SKS Smt.5	20						

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1	Smt. 6	Enrichment Program I	20	√	√	√	√	√	√
1	Smt. 7	Enrichment Program II	20	√	√	√	√	√	√
1	Smt 8	Seminar Proposal/ Research Project I: Seminar Proposal	2	√	√	√	√	√	√
2		Skripsi/ Thesis	4	√	√	√	√	√	√
		Total SKS Smt.8	6						
		TOTAL SKS : 145							