Program Learning Outcomes Assessment Matrix Assessment Method

		Knowledge								Skills		Competencies				
Course Name	Course No	K _P 1	K_P2	K _P 3	K_P4	K _P 5	K _P 6	S _P 1	S _P 2	S _P 3	S_P4	S _P 5	C _P 1	C _P 2	C _P 3	C _P 4
General Biology (1)	0216151	Essay & Objective Assessment		Essay & Objective Assessment									Research review & applied assignment			
General Chemistry (1)	0216141															
General Biology (1) Lab	0240106															
General Biology (2)	0240107															
General Biology (2) Lab	0240108															
Microbiology	0240216	Individual presentation		Individual presentation		Individual presentation					Individual presentation		Group presentation			
Microbiology Lab	0240217	Quiz / Homework / Objective Questions	Quiz / Homework / Objective Questions			Quiz / Homework / Objective Questions		Writing a report & Practical task			Writing a report	Practical task	Homework	Writing a report	Discussion of results	
Genetics	0240231				Written exam				Written exam				Written exam			
Genetics Lab	0240232	Quiz / Homework / Objective Questions	Quiz / Homework / Objective Questions	Quiz / Homework / Objective Questions	Quiz / Homework / Objective Questions			Writing a report & Practical task			Writing a report	Practical task	Homework	Writing a report	Discussion of results	
Cell Biology	0240233															
Analytical Chemistry	0212241															
Analytical Chemistry Lab	0212242															
Organic Chemistry	0212243															
Introduction to Biotechnology	0240282		Essay & Objective Assessment	Essay & Objective Assessment		Applied assignment / Objective questions										
Plant Biotechnology	0240326															
Plant Tissue Culture Lab	0240323															
Molecular Genetics and Human Genome	0240333						Written exam		Written exam				Written exam			
Cytogenetics	0240335								Essay & Objective Assessment		Case study / Presentation / Individual Assignment					
Cytogenetics Lab	0240336													Applied assignment / Essay assessment / Individual assignment		
Immunology	240339	Objective assessment		Objective Assessment			Essay assessment		Essay assessment						Essay & Objective Assessment	
Immunology Lab	0240338															
Biochemistry (1)	0240343	Essay & Objective Assessment													Research review / Individual assessment	
Biochemistry (1) Lab	0240344															

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				Know	ledge	Assessment Method Skills						Competencies				
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Environmental Biotechnology	0240355	Objective essay	Objective essay			Objective essay			Essay assessment							
Environmental Biotechnology Lab	0240356							Essay & practical assessment		Essay & practical assessment		Essay & practical assessment		Essay & practical assessment		Essay & practical assessment
Human Cell Technology	0240370	Essay assessment / Individual assignment	Objective assessment								Presentation					
Molecular Biology	0240386			Essay & Objective Assessment												
Molecular Biology Lab	0240387															
Lab Management and Entrepreneurship in Biotechnology	0240390															
Seminar and Scientific Writing	0240394															
Microbial Biotechnology	0240418	Objective assessment	Objective assessment			Objective assessment			Essay assessment						Essay & Objective Assessment	
Microbial Biotechnology Lab	0240419									Essay & practical assessment		Essay & practical assessment		Essay & practical assessment		Essay & practical assessment
Pharmaceutical Biotechnology	0240442	Objective assessment	Objective assessment				Objective assessment								Essay & Objective Assessment	Essay & Objective Assessment
Protein Biotechnology	0240447		Essay & Objective Assessment				Individual assignment / Objective assessment				Research review & indiviual assignment				Research review & applied assignment	
Bioinformatics Lab	0240464						Written & oral exams		Written & oral exams		Written & oral exams		Written & oral exams			
Animal Biotechnology	0240470	Objective assessment	Objective assessment												Essay & Objective Assessment	Essay assessment
Animal Tissue Culture	0240472						Applied assignment / Individual assignment			Applied assignment / Essay assessment						
Applied Molecular Biology	0240482		Objective assessment / Individual assignment	Essay & Objective Assessment		Essay assessment					Presentation					
Applied Molecular Biology Lab	0240485															
Ethics in Biotechnology	0240491														Research Project	Research Project
Field Training	0240494															
Medical Microbiology	0240316	Objective assessment	Objective assessment	Objective assessment			Objective assessment	Objective assessment		Objective assessment	Objective assessment		Objective assessment			

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Hematology	0240433	Objective assessment	Objective assessment		Objective assessment			Essay assessment			Essay assessment		Essay assessment			
Hematology Lab	0240434							Essay & practical assessment		Essay & practical assessment		Essay & practical assessment				
Biosafety and Biosecurity	0240392															
Clinical Biochemistry	0510514															
Biotechnology in Molecular Forensics	0240456	Objective assessment	Objective assessment	Objective assessment			Objective assessment	Essay assessment		Objective assessment	Objective assessment	Presentation	Objective assessment			
Molecular Diagonestics	0240487	Objective assessment	Objective assessment	Objective assessment			Objective assessment	Essay assessment		Objective assessment	Objective assessment	Presentation	Objective assessment			
Special Topics	0240488															
Research Projec	0240499												Extracting and criticizing scientific papers	Write a detailed review paper and an applied assignment"	Presentation	