



MAHATMA GANDHI UNIVERSITY, KERALA

Abstract

Bachelor of Science (Honours) Biochemistry - Fourth Semester - Modifications to the Course Outcomes and Course Content - Approved - Orders Issued.

ACA 16

No. 10985/ACA 16/2025/MGU

Priyadarsini Hills, Dated: 21.11.2025

Read:- 1. U.O.No.5797/AC A16/2024/MGU, dated.27.06.2024.

2. Minutes of the meeting of the Expert Committee on Biochemistry (UG).
3. Item No: 11/69916/AC A16-1/2025 of the minutes of the meeting of the Standing Committee of the Academic Council held on 11.11.2025,
4. Orders of the Vice Chancellor under Section 10 (17), Chapter III of the Mahatma Gandhi University Act 1985, dated 15.11.2025..

ORDER

The syllabi of various Honours Under Graduate Programmes coming under The MGU-UGP (Honours) Regulations, 2024, have been approved vide paper read as (1) above and published on the website of the University.

The Expert Committee on Biochemistry (UG), deliberated on modifying the **Course Outcomes** and **Course Content of MG4DSCBCH202: Metabolism of Carbohydrates, Proteins and Lipids, MG4SECBCH200: Biochemical Test in Disease Diagnosis, MG4VACBCH200: Narcotics and Psychotropic Substances**, and to rectify the typographical error in the syllabus index for the course title of **MG4VACBCH200: Narcotics and Psychotropic Substances**, in the **Fourth Semester of Bachelor of Science (Honours) Biochemistry** programme and has submitted recommendations, vide paper read as (2) above. **(Recommendations are attached as Annexure).**

These recommendations were placed before the Standing Committee of the Academic Council, which endorsed the same for approval, vide paper read as (3) above.

Considering the urgency of the matter, sanction has been accorded by the Vice Chancellor, in exercise of the powers of the Academic Council vested upon him under Section 10(17), Chapter III of the Mahatma Gandhi University Act 1985, vide paper read as (4) above, to approve the

aforementioned recommendations.

Hence, the **Course Outcomes and Course Content** of the said courses in the **Fourth Semester syllabus of Bachelor of Science (Honours) Biochemistry** programme stands modified to this extent.

Orders are issued accordingly.

SUDHA MENON J

ASSISTANT REGISTRAR III
(ACADEMIC)
For REGISTRAR

Copy To

1. PS to VC
2. PA to Registrar/CE
3. Convenor, Expert Committee, Biochemistry (UG)
4. JR 2 (Admin)/DR 2, AR 3 (Academic)
5. Tabulation/Academic Sections concerned
6. JR/DR/AR (Exam)
7. AC C1/AC C2 Sections
8. IT Cell 3/OQPM1Sections
9. PRO/IQAC/Records Sections
10. ACTION TAKEN REPORT
10. Stock File/File Copy

File No. 69916/AC A16-1/2025/AC A16

Forwarded / By Order

Section Officer

ANNEXURE

SEMESTER IV

Syllabus Index

Course Code	Title of the Course	Page No.
MG4VACBCH200	Narcotics and Psychotropic Substances (Typographical error correction)	13

Course Name :Metabolism of Carbohydrates, Proteins and Lipids

Course Code :MG4DSCBCH202

Course Outcomes

CO.No	Expected Course Outcome (Modified)	Learning Domains (Modified)	PO.No. (Modified)	Page No.
4	Compare the catabolic and anabolic pathways of lipids, and analyze the oxidation of palmitic acid to calculate its energy yield.	No Change	No Change	69
5	Develop practical skills to quantify cabohydrates, lipids and amino acids in biological samples	U, An, S	1,2,3,4,9	
6	Removed			

Course Content

(Content for classroom transaction (units))

Module	Units (Modified)		Course Description (Modified)	Hours (Modified)	CO.No (Modified)	Page No.
1	1.4		Overview of Electron Transport Chain and Oxidative Phosphorylation (without structure)	3	No Change	70-71
	1.5		No Change		No Change	
	1.6		Removed			
	Existing	Modified	No Change			
	1.7	1.6				
2	2.5		Inborn errors of Protein metabolism – albinism, Alkaptonuria, Phenylketonuria (Enzyme deficiency, Symptoms and effects)	No Change	No Change	
3	Existing	Modified	No Change	No Change	4	
	3.2	3.3				

	(Second One)					
4	4.1	No Change	5	5		
	4.2					
	4.3					
	4.4					
	4.5					
	4.6					
	4.7	Visit any Research institute/ Industry/ Laboratory/ Field or Attending Seminar/ Workshops and submission of report	5			

Course Name : Biochemical Tests in Disease Diagnosis

Course Code : MG4SECBCH200

Course Outcomes

CO.No	Expected Course Outcome (Modified)	Learning Domains (Modified)	PO.No. (Modified)	Page No.
1	Demonstrate an understanding of the fundamental principles and ethical practices of biochemical testing in disease diagnosis, and discuss appropriate methods for the accurate and patient-centered collection and analysis of blood, urine, and cerebrospinal fluid.	No Change	1,2,3,4,8	72
2	Develop a comprehensive understanding of various tests used in diagnosing and monitoring diabetes and identifying the biomarkers in liver function tests	K, U, An	1,2,3,6	
3	Attain proficiency in accurately interpreting results of thyroid function tests and diagnosing and monitoring kidney diseases by renal function test.	U, An, E	1,2,3,10	
4	Enhance the ability to present and communicate observations obtained from experiments, laboratory visits, as well as share insights on emerging techniques.	No Change	1,2,4,10	
5	Removed			
6				
7				
8				

Course Content
(Content for classroom transaction (units))

Module	Units	Course Description (Modified)	Hours (Modified)	CO.No (Modified)	Page No.
1	1.2	No Change	No Change	1	74
	1.3				
	1.4				
2	2.1			2	
	2.2				
	2.3			3	
	2.4				
	2.5				
	2.6		Removed		
3- Emerging technologies, Case study and Laboratory visit	3.1	Emerging technologies in Biochemical Testing	6		
	3.2	Interpretation of a clinical Laboratory report	4		
	3.3	Laboratory Visit and Report Submission	5		

Course Name : Narcotics and Psychotropic Substances
Course Code : MG4VACBCH200

Course Outcomes

CO.No	Expected Course Outcome (Modified)	Learning Domains (Modified)	PO.No. (Modified)	Page No.
3	Analyse the physiological and psychological mechanisms behind drug addiction and formulate effective strategies for prevention, intervention, and management.	K,U, An	No Change	76
4	Assess the legal and ethical implications surrounding the use of narcotics and psychotropic substances and effectively communicate and educate diverse communities, both orally and in writing, about their consequences and responsible use.	K, U, E	1,2,3,8	
5	Removed			
6				

Course Content
(Content for classroom transaction (units))

Module	Units	Course Description (Modified)	Hours (Modified)	CO.No (Modified)	Page No.
1	1.3	No Change	No Change	2	77
2	2.1			3	
	2.2			3	
	2.3			4	
3- Consequences of substance abuse and awareness programmes	3.1	Consequences of substance abuse- (health, social, economic)	5	4	
	3.2	Need for awareness programmes in preventing substance abuse			
	3.3	Deaddiction centre visit and submission of report			