



## MAHATMA GANDHI UNIVERSITY, KERALA

### Abstract

Bachelor of Science (Honours) Zoology and Industrial Microbiology (Double Major) - Fourth Semester - Modifications to the Course Outcomes, Course Content and pattern for End Semester Evaluation - Approved - Orders Issued.

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### ACA 16

No. 327/ACA 16/2026/MGU

Priyadarsini Hills, Dated: 12.01.2026

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

2. Minutes of the meeting of the Expert Committee on Zoology (UG)

4. Orders of the Vice Chancellor under Section 10 (17), Chapter III of the Mahatma Gandhi University Act 1985, dated 09.01.2026.

### 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 Zoology (UG), deliberated on modifying the **Course Outcomes, Course Content and the pattern for End Semester Evaluation** of the **DSC, DSE, SEC** and **VAC** type courses in the **Fourth Semester syllabus** of **Bachelor of Science (Honours) Zoology and Industrial Microbiology (Double Major)** programme and has submitted recommendations, vide paper read as (2) above.

**(Recommendations are attached as Annexure).**

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 (3) above, to approve the aforementioned recommendations.

Hence, the **Course Outcomes, Course Content and the pattern for End Semester Evaluation of the said courses** in the **Fourth Semester** of **Bachelor of Science (Honours) Zoology and Industrial Microbiology (Double Major)** 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, Zoology (UG)
4. JR 2 (Admin)/DR 2, AR 3 (Academic)
5. JR/DR/AR (Exam)
6. Tabulation/Academic Sections concerned
7. AC C1/AC C2 Sections
8. IT Cell 3/OQPM1Sections
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File No. 86410/AC A16-1/2025/AC A16

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Section Officer

**ANNEXURE**  
**SEMESTER IV**

**Course Name : Animal Diversity - Chordata- I**

**Course Code : MG4DSCZIM200**

**Course Outcomes**

CO.No	Expected Course Outcome (Modified)	Learning Domains (Modified)	PO.No.	Page No.
1	Describe general characters and classification of Chordata up to Class Reptilia	U	No Change	73
2	Explain different organ systems of frog	U		
3	Discuss the general topics in Superclass Pisces and Class Reptilia	U,A		
4	Demonstrate expertise in the laboratory in mounting scales & and other practicals.	U,A		
5	Removed			

**Course Content**

**Content for Classroom transaction (Units)**

Module	Units	Course Description	Hours	CO.No (Modified)	Page No.
1	1.1	No change	No change	1	74,75,76
	1.2				
	1.3				
	1.4				
	1.5				

2	2.1	No Change	No Change	1	
	2.2				
	2.3				
3	3.1			1	
	3.2			2	
	3.3			1	
	3.4			3	
	3.5			4	
4	Practicals				

### Mode of Assessment

Assessment Type	B. End Semester Examination (Modified)			Page No.
	Theory			76
	Total Marks = 50		Duration- 1.5 hrs	
	Type of Questions	No. of Questions to be Answered	Total Marks	
	Short Essays	4 out of 6	4 x 5= 20	
	Short Answer Questions	6 out of 8	6 x 3 = 18	
	Multiple Choice Questions	12 out of 12	12 x 1 = 12	
Practical				
Total Marks = 35		Duration - 2 hrs		
Dissection – 10 marks (Identify- 1, sketch- 5 and label (any eight parts) – 4 marks)				
OR				
Identification of Labelled parts (any five) and mention its function -10 marks				
Mounting -5 marks				
Scientific drawing/section – 5 marks				
Spotter identification/				
Osteology/Taxonomic identification – 5 marks				

**Course Name : General Toxicology**  
**Course Code : MG4DSEZIM200**

### Course Outcomes

CO.No	Expected Course Outcome	Learning Domains (Modified)	PO.No	Page No.
1	No change	U	No change	78
5		U,A		

### Course Content

#### Content for Classroom transaction (Units)

Module	Units	Course Description	Hours	CO.No. (Modified)	Page No.
2	2.3	No Change	No Change	3	79,80
3	3.4			4	
	3.5				

### Mode of Assessment

Assessment Type	B. End Semester Examination (Modified)			Page No.
	Theory			80
	Total Marks = 70		Duration- 2 hrs	
	Type of Questions	No. of Questions to be Answered	Total Marks	
	Short Essay	6 out of 8	6 x 5 = 30	
	Short Answer Questions	10 out of 12	10 x 3 = 30	
	Multiple Choice Questions	10 out of 10	10 x 1 = 10	

**Course Name : Industrial Microbiology and Fermentation Technology**

**Course Code : MG4DSCZIM201**

**Course Content**

**Content for Classroom transaction (Units)**

Module	Units (Modified)	Course Description	Hours	CO.No.	Page No.
2	2.1	No Change	No Change	No Change	82
	2.2				
	2.3 (Unit No. added)				

**Course Name : Medical Microbiology**

**Course Code : MG4DSEZIM201**

**Course Content**

**Content for Classroom transaction (Units)**

Module	Units	Course Description	Hours (Modified)	CO.No.	Page No.
4	4.6	No Change	15	No Change	87

**Course Name : Emergency Life Support and First Aid**

**Course Code : MG4SECZIM200**

**Course Outcomes**

CO.No	Expected Course Outcome	Learning Domains (Modified)	PO.No	Page No.
1	No Change	U,S	No Change	93

## Course Content

### Content For Classroom Transaction (Units)

Module	Units	Course Description	Hours	CO.No. (Modified)	Page No.
3	3.4		No Change	5	94
		Activity		1,2	

### Mode of Assessment

Assessment Type	B. End Semester Examination (Modified)			Page No.
	Theory			95
	Total Marks = 50		Duration - 1.5 hrs	
	Type of Questions	No. of Questions to be Answered	Total Marks	
	Short Essays	4 out of 6	4 x 5 = 20	
	Short Answer Questions	6 out of 8	6 x 3 = 18	
	Multiple Choice Questions	12 out of 12	12 x 1 = 12	

**Course Name : Nutrition and Lifestyle Diseases**  
**Course Code : MG4VACZIM200**

### Course Outcomes

CO.No	Expected Course Outcome	Learning Domains (Modified)	PO.No (Modified)	Page No.
6	No Change	A	1,2,10	97

**Course Content**  
**Content for Classroom transaction (Units)**

<b>Module</b>	<b>Units</b>	<b>Course Description</b>	<b>Hours (Modified)</b>	<b>CO.No.</b>	<b>Page No.</b>
3	3.2	No Change	5	No Change	98