MAHATMA GANDHI UNIVERSITY, KERALA

Abstract

Bachelor of Science (Honours) Statistics - Fifth Semester - Modification to the Syllabus Index, Course Outcomes, Course Content, Mode of Assessment and Substitution of Courses and approval of the syllabus for the same - Approved - Orders issued.

ACA 16

No. 6019/ACA 16/2026/MGU Priyadarsini Hills,Dated: 13.06.2026

Read:-1. U.O. No. 5797/ACA16/2024/MGU, dated. 27.06.2024.

2. Minutes of the meeting of the Expert Committee on Statistics (U.G).

4. Orders of the Vice Chancellor under Section 10(17), Chapter III of the Mahatma Gandhi University Act 1985, dated. 11.06.2026.

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 Statistics (UG), discussed the need to modify Syllabus Index, the Course Outcomes, Course Content, Mode of Assessment of DSC / DSE type courses. Also recommended to interchange the course codes of MG5DSCSTA302: Introduction to Multivariate Analysis, and MG5DSESTA300: Analytical Tools for Statistics-I, and to substitute MG5SECSTA300: Data Reduction using Statistical Techniques, with MG5SECSTA300: Applied Statistics and Data Mining, (**Syllabus link - *https://cap.mgu.ac.in/mguugp/syllabus.jsp***) in the Fifth Semester syllabus of Bachelor of Science (Honours) Statistics 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 Syllabus Index, Course Code, Course Outcomes, Course Content, Mode of Assessment of the said courses in the in the Fifth Semester syllabus of Bachelor of Science (Honours) Statistics programme, stands modified to this extent.

Orders are issued accordingly.

SIJI ANNA KURIEN

ASSISTANT REGISTRAR III
(ACADEMIC)
For REGISTRAR

Copy To

1. PS to VC
2. PA to Registrar/CE
3. Convenor, Expert Committee, Statistics (UG)
4. JR 2 (Admin)/ DR 2, AR 3 (Academic)
5. JR/DR/AR (Exam)
6. Tabulation/Academic Sections concerned
7. IT Cell 3 / OQPM - 1 Sections
8. AC C 1/ AC C 2 Sections
9. P.R.O. /IQAC /Records Sections.
10. Stock File/File Copy

File No: 36620/ACA16-2/2026/ACA 16

Forwarded / By Order

Section Officer

ANNEXURE

SEMESTER V

Syllabus Index (Modified)

Course Code	Title of the Course	Type of the Course DSC, MDC, SEC etc.	Credit	Hours /Week	Hour Distribution / Week				Page No.
					L	T	P	O	
No Change			No Change						12
MG5DSCSTA302	Analytical Tools for Statistics-I	DSC A							
No Change									
MG5DSESTA300	Introduction to Multivariate Analysis	DSE							
No Change									
MG5SECSTA300	Applied Statistics and Data Mining	SEC							

Course Name : Applied Regression Analysis

Course Code : MG5DSCSTA300

Course Level	300-399 **(Modified)**	**Page No. 142**

COURSE OUTCOMES

CO No.	Expected Course Outcome	Learning Domains (Modified)	PO No.	Page No.
1	No Change	An	No Change	142, 143
2		E		
3		An		
4		An		
5		E		

MODE OF ASSESSMENT

A. CONTINUOUS COMPREHENSIVE ASSESSMENT (CCA) (Modified) **Formative Assessment** Quiz, Assignments, Seminar. **Theory : 10 marks** **Summative Assessment** Written test **Theory : 20 marks**	**Page No. 145**
B. END SEMESTER EVALUATION (ESE) **Total: 70 marks** **Duration : 2 Hrs (Included)**	

Course Name : Sampling Techniques

Course Code : MG5DSCSTA301

Course Level	300-399 **(Modified)**	**Page No. 146**

COURSE OUTCOMES

CO No.	**Expected Course Outcome (Modified)**	**Learning Domains (Modified)**	**PO No.**	**Page No.**
1	Understand the principles of sample surveys.	An	No Change	146, 147
2	Design sample surveys under simple random sampling and analyse the properties of the estimators.	E		
3	Perform sample surveys under stratified random sampling and analyse the properties of the estimators.	E		
4	Conduct sample surveys under systematic sampling and analyse the properties of the estimators.	E		
5	Organize sample surveys under cluster sampling and multistage sampling analyse the properties of the estimators.	E		
6	**Removed**			
7				
8				

COURSE CONTENT

Content for Classroom Transaction (Units)

<table>
<tr><th>Module</th><th>Units</th><th>Course Description</th><th>Hrs.</th><th>CO No. (Modified)</th><th>Page No.</th></tr>
<tr><td>1</td><td colspan="3">No Change</td><td></td><td rowspan="15">147</td></tr>
<tr><td rowspan="4"></td><td>1.1</td><td colspan="2">No Change</td><td></td></tr>
<tr><td>1.2</td><td rowspan="3">No Change</td><td rowspan="14">No Change</td><td>1</td></tr>
<tr><td>1.3</td><td>2</td></tr>
<tr><td>1.4</td><td>2</td></tr>
<tr><td>2</td><td colspan="2">No Change</td><td></td></tr>
<tr><td rowspan="4"></td><td>2.1</td><td rowspan="4">No Change</td><td>3</td></tr>
<tr><td>2.2</td><td>3</td></tr>
<tr><td>2.3</td><td>4</td></tr>
<tr><td>2.4</td><td>4</td></tr>
<tr><td>3</td><td colspan="2">No Change</td><td></td></tr>
<tr><td rowspan="2"></td><td>3.1</td><td rowspan="2">No Change</td><td>5</td></tr>
<tr><td>3.2</td><td>5</td></tr>
<tr><td>4</td><td colspan="2">No Change</td><td></td></tr>
<tr><td></td><td>4.1</td><td>No Change</td><td>1,2,3,4,5</td></tr>
<tr><td>5</td><td colspan="4">Teacher Specific Content</td></tr>
</table>

MODE OF ASSESSMENT

A. CONTINUOUS COMPREHENSIVE ASSESSMENT (CCA) (Modified) **Formative assessment** Quiz, Assignments, Seminar. **Theory : 10 marks** **Summative assessment** Written tests **Theory : 20 marks**	**Page No. 148**
B. END SEMESTER EVALUATION (ESE) **Total: 70 marks** **Duration : 2 Hrs (Included)**	

Course Name : Basic Statistical Skills for Economics- I

Course Code : MG5DSCSTA303

Programme	BSc (Hons) Statistics **(Included)**	**Page No. 154**

Course Level	300-399 **(Modified)**	**Page No. 154**

COURSE OUTCOMES

CO No. (Modified)	Expected Course Outcome	Learning Domains	PO No.	Page No.
1	No Change	No Change	No Change	**154, 155**
2				
3				
4				
5	**Removed**			

MODE OF ASSESSMENT

B. END SEMESTER EVALUATION (ESE) **Total: 70 marks** **Duration : 2 Hrs (Included)**	**Page No. 157**

Course Name : Statistical Reliability Analysis

Course Code : MG5DSESTA301

Course Level	300-399 **(Modified)**	**Page No. 164**

MODE OF ASSESSMENT

B. END SEMESTER EVALUATION (ESE) **Theory : 50 marks ,Duration: 1.5 Hrs (Included)** **Practical: 35 marks**	**Page No. 166,167**

Course Name : Statistical Computing using Python

Course Code : MG5DSESTA302

Course Level	300-399 **(Modified)**	**Page No. 168**

COURSE OUTCOMES

CO No. (Modified)	Expected Course Outcome (Modified)	Learning Domains (Modified)	PO No. (Modified)	Page No.
1	Understand the features and syntax of Python Programming.	U	1	**168, 169**
2	Implement Python in creating graphical representations and getting descriptive measures of datasets.	E	No Change	
3	Create statistical models for studying the relationship between variables, using Python.	E	2	
4	Formulate statistical hypothesis for research problems and check the validity of the hypothesis from sample data using statistical hypothesis testing procedures in Python	E	2	
5	Implement Machine learning	E	No Change	
6	**Removed**			
7				

COURSE CONTENT

Content for Classroom Transaction(Units)

Module	Units	Course Description (Modified)	Hrs.	CO No. (Modified)	Page No.
1	No Change		No Change		**169, 170**
	1.1	No Change		1	
	1.2				
	1.3				
	1.4				
2	No Change				

	2.1	No Change	No Change	2	**169, 170**
	2.2				
	2.3				
	2.4				
3	No Change				
	3.1	No Change		2	
	3.2				
	3.3	Advanced Plotting using seaborn-lmplot, stripplot, swarmplot,violinplot, boxenplot , etc.: Faceting and hue.Plotly-Line Plots, Scatter plots, Bar Charts, Pie Charts, Box Plots, Histograms, Heatmaps			
4	No Change				
	4.1	No Change		3	
	4.2	Defining new distributions. Tests for sphericity, Tests for proportion, etc. Introduction to machine learning using Scikit Learn-Principal Component Analysis, Multidimensional Scaling, Factor Analysis		4	
	4.3	Supervised learning- Linear and logistic regression, Classification-Fisher's Discriminant, Decision Tree-Classification Tree and Regression Tree		5	
	4.4	Unsupervised Learning- Clustering-K Means and Hierarchical		5	
5	**Teacher Specific Content**				

MODE OF ASSESSMENT

A. CONTINUOUS COMPREHENSIVE ASSESSMENT (CCA) (Modified) **Theory : 25 marks** **Formative assessment :10 marks** Quiz, Assignments, Seminar. **Summative assessment : 15 marks** Written tests **Practical : 15 marks** **Formative assessment :15 marks** Lab involvement, Practical Record,Viva voce	**Page No. 171**
B. END SEMESTER EVALUATION (ESE) **Theory : 50 marks ,Duration: 1.5 Hrs (Included)** **Practical: 35 marks**	

Course Name : Lifetime Data Analysis

Course Code : MG5DSESTA303

Course Level	300-399 **(Modified)**	**Page No. 173**

COURSE OUTCOMES

CO No. (Modified)	Expected Course Outcome	Learning Domains (Modified)	PO No.	Page No.
1	No Change	No Change	No Change	**173**
2				

3	No Change	U	No Change	**173**
4		A		
5		No Change		
6	**Removed**			

COURSE CONTENT

Content for Classroom Transaction(Units)

Module	Units	Course Description	Hrs.	CO No. (Modified)	Page No.
1	No Change		No Change	No Change	174, 175
	1.1	No Change			
	1.2				
2	No Change		No Change	No Change	
	2.1	No Change			
	2.2				
	2.3				
	2.4				
3	No Change		No Change	No Change	
	3.1	No Change			
	3.2				
	3.3		No Change	No Change	
	3.4			5	
	3.5			No Change	

4	No Change		No Change	No Change	
	4.1	No Change			
5	**Teacher Specific Content**				

MODE OF ASSESSMENT

B. END SEMESTER EVALUATION (ESE) **Theory : 50 marks ,Duration: 1.5 Hrs (Included)** **Practical: 35 marks**	**Page No. 176**