



MAHATMA GANDHI UNIVERSITY, KERALA

Abstract

Bachelor of Science (Honours) Electronics with Computer Technology - Modifications to the Course Outcomes, Course Content , Mode of Assessment and Suggested Readings - Approved - Orders Issued.

ACA 16

No. 353/ACA 16/2025/MGU

Priyadarsini Hills, Dated: 15.01.2025

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

2. Minutes of the meeting of the Expert Committee on Electronics (UG), held on 16.12.2024.

3. Orders of the Vice Chancellor under Section 10(17), Chapter III of the Mahatma Gandhi University Act 1985, dated. 09.01.2025.

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 Electronics(UG), discussed the need to modify the Course Outcomes, Course Content, Mode of Assessment and Suggested Readings of DSC and MDC type courses in the **Second Semester** syllabus of **Bachelor of Science (Honours) Electronics with Computer Technology** programme and has submitted recommendations vide paper read as (2) above.

(Recommendations are attached as annexure)

Considering the emergency, 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 said recommendations.

Hence, the Course Outcomes, Course Content, Mode of Assessment and Suggested Readings of the said courses in the second semester syllabus of the Bachelor of Science (Honours) Electronics with Computer Technology programme stands modified to this extent.

Orders are issued accordingly.

SHAJI K G

ASSISTANT REGISTRAR III
(ACADEMIC)
For REGISTRAR

Copy To

1. PS TO VC
2. PA to Registrar/CE
3. Convenor, Expert Committee, Electronics (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/OQPM1 Sections
9. PRO/IQAC/Records Sections
10. Stock File/File Copy

File No. 1346 /AC A16-3 /2025/AC A16

Forwarded / By Order

Section Officer

Annexure

Semester- II

Course Name: Essential Concepts in Digital Electronics

Course Code : MG2DSCECT100

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome(Modified)	Learning Domains	PO No.	Page no.
3	Design combinational logic circuits	No change	No change	32

COURSE CONTENT

Content for Classroom Transaction (Units)

Module	Units	Course Description(Modified)	Hrs.	CO No	Page No.
1	1.3	Binary Arithmetic, Rules for binary addition, subtraction, multiplication, and division, 1's and 2's complements, Conversion techniques -Binary to Decimal, Decimal to Binary, Hexadecimal to Binary, Binary to Hexadecimal.	No Change		33
	1.4	Signed Numbers: Sign-Magnitude, 1's complement, and 2's complement forms, Signed arithmetic -Addition and Subtraction			
2	2.3	Boolean expressions and its simplification, Standard forms of Boolean Expressions: SOP and POS, K-Map Simplification (Three and Four variable only)			
4	4.1	Lab Experiment using Trainer Kit: (Any Seven) <ul style="list-style-type: none">● Familiarization of Logic Gates● SR Flip Flop● JK Flip-flops● D Flip-flops● Half Adder● Full adder● Multiplexer● Demultiplexer● Serial in Serial out Shift registers			

	<ul style="list-style-type: none"> • Serial in Parallel out Shift Registers • 2 bit synchronous counter •Familiarization with simulation tools (e.g., Tinker cad or any open source). •Introduction and setting up the simulation tool in computer. •Simulation tool familiarization •Building and verifying basic gates AND, OR,NOT gates using simulation tool •Binary-to-decimal converter using simulation tool(optional) 		
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MODE OF ASSESSMENT

B.End-Semester Evaluation (ESE)

2. Practical Examination

Max.marks -35	Duration – 2 Hrs (Modified)	Page No: 34
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Course Name: Data Communication

Course Code : MG2DSCECT101

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome(Modified)	Learning Domains	PO No.	Page No.
4	Develop practical skills in data communication	No Change		35

COURSE CONTENT

Content for Classroom Transaction (Units)

Module	Units	Course Description(Modified)	Hrs.	CO No	Page No.
		Experiments: 1. Plot and study Sine wave 2. Plot and Study Square wave			

4	4.1	3. Plot and study Triangular Wave 4. Simulate ADC 5. Simulate DAC 6. Study of sampling Theorem 7. Study of Quantization Optional: 8. Measure and compare the quality of the received signals, observing factors like attenuation and interference in different guided medias 9. Implement a simple delta modulation circuit.	No Change	36
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MODE OF ASSESSMENT

A. Continuous Comprehensive Assessment (CCA)

Practical-Exam(Modified)

Max.Marks- 15	Page No.
1. Practical Exam	37
2. Assignments/Observation of practical skills	
3. Viva	

B. End-Semester Evaluation (ESE)

Practical Exam(Modified)

Max. Marks - 35	Duration : 2 hours	Page No.
1. Viva - 7 Marks		37
2. Demonstration – 20 Marks		
3. Record - 8 Marks		

Course Name: IoT based Smart Farming
Course Code: MG2MDCECT100

MODE OF ASSESSMENT

B. End Semester Evaluation(ESE)

Written Test		
Max.marks :35	Duration :1hour (Modified)	Page No: 39

Suggested Readings:

Additions	Page No.
4. Durbha, Surya Srinivas, Jyoti Joglekar Internet of Things, Oxford University Press, 2021	40
5. Dr. Kamlesh Lakhwani, Dr. Hemant Kumar Gianey, Joseph Kofi Wireko, Kamal Kanthiran, Internet of Things, BPB Publications, 2020.	
6. Abdel-Basset, Mohamed, Hossam Hawash, Laila Abdel- Fatah, Artificial Intelligence and Internet of Things in Smart Farming, CRC Press, 2024	

Course Name: Python for Electronics
Course Code: MG2MDCECT101

COURSE CONTENT

Content for Classroom Transaction (Units)

Module	Units	Course Description(Modified)	Hrs.	CO No (Modified)	Page No.
2	2.3	No Change	No Change	3	42
	2.4			3	
3		Practical (any TEN)		4	

MODE OF ASSESSMENT

B. End Semester Evaluation(ESE)

Written Test		
Max.marks :35	Duration : 1 hour (Modified)	Page No: 43

Course Name: Office Enhancement Tools

Course Code : MG2MDCECT102

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome(Modified)	Learning Domains(Modified)	PO No.	Page no.
3	Develop engaging and impactful presentations	A	No Change	44
4	No Change	A		

COURSE CONTENT

Content for Classroom Transaction (Units)

Module	Units	Course Description(Modified)	Hrs. (Modified)	CO No	Page No.
1	1.1	No change	6		44
	1.2		4		
	1.3		3		
	1.4		3		
	2.3		4		45
	2.4		4		
		5. Track your monthly expenses in five categories (Rent, Food,Transport,Entertainment and Miscellaneous). i .Use a spreadsheet to calculate the total			45,46

3	<p>expenses.</p> <p>ii. Determine the percentage spent in each category.</p> <p>iii. Create a pie chart to visualize the expenses.</p> <p>6. "Design an Event Invitation" Create a professional invitation for a college event.</p> <p>Requirements:</p> <p>a. Include event name, date, time, venue, and a brief description.</p> <p>b. Format text with bold, italics, and a unique font style.</p> <p>c. Add a border or background design and insert an image or logo.</p>	30	No Change	
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MODE OF ASSESSMENT

B. End Semester Evaluation(ESE)

Written Test		
Max.marks : 35	Duration : 1 hour (Modified)	Page No: 46