



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(A Unit of Alva's Education Foundation)

Shobhavana Campus, Mijar-574225, Moodbidri, D.K

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Affiliated to VTU Belagavi and Approved by AICTE, New Delhi, Recognized by Govt. of Karnataka

ATTENDANCE BOOK

Academic Year : 2022 - 23

Semester : 5th Section A

Period of the Semester : From.. 10-10-2022 to... 27-01-2023....

Subject with Code :... Engineering.. Electromagnetics... Waves 18EC55

Name of the Faculty :..... Prof.: Vijetha.. T.S

Department :.. Electronics... &... Communication.. Eng.:

VISION OF THE INSTITUTE

"Transformative education by pursuing excellence in Engineering and Management through enhancing skills to meet the evolving needs of the community"

MISSION OF THE INSTITUTE

- To bestow quality technical education to imbibe knowledge, creativity and ethos to students community.
- To inculcate the best engineering practices through transformative education.
- To develop a knowledgeable individual for a dynamic industrial scenario.
- To inculcate research, entrepreneurial skills and human values in order to cater the needs of the society.

VISION OF THE DEPARTMENT

" Center of Excellence to Empower the young minds in the field of ECE in research focus & skill development through transformative Education catering to the needs of the society"

MISSION OF THE DEPARTMENT

- M1: To create Learning Environment to enable the students for Excellence in the field of ECE
- M2: To Empower the students with necessary skills for solving the complex technological problems
- M3: To inculcate research Culture among Teaching - Learning Group by guiding them towards research activities to bridge the gap b/w Industry and Academia
- M4: By Imbibing the Students with Human Values & Ethics through transformative Education and make them Socially Responsible Professional

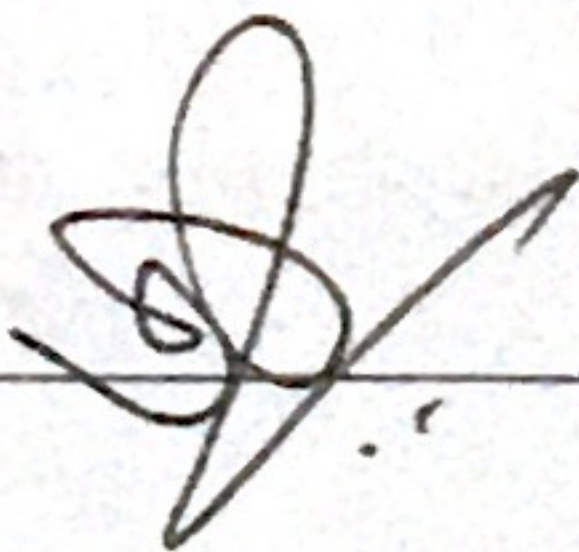
COURSE OUTCOMES	
CO1	Apply differential equations, Vector algebra, Integral multivariate Calculus & Complex Calculus to solve for basics electrostatics, magnetic
CO2	Evaluate problems on electric field due to point, linear, volume charge by applying conventional method or by Gauss law
CO3	Determine potential & energy with respect to point charge and capacitance using Laplace equation
CO4	Calculate magnetic field, force and potential energy with respect to magnetic material
CO5	Apply Maxwell's equation for time varying fields. EM waves in free space & conductor and also evaluate power associated with
CO6	EM waves using Poynting theorem

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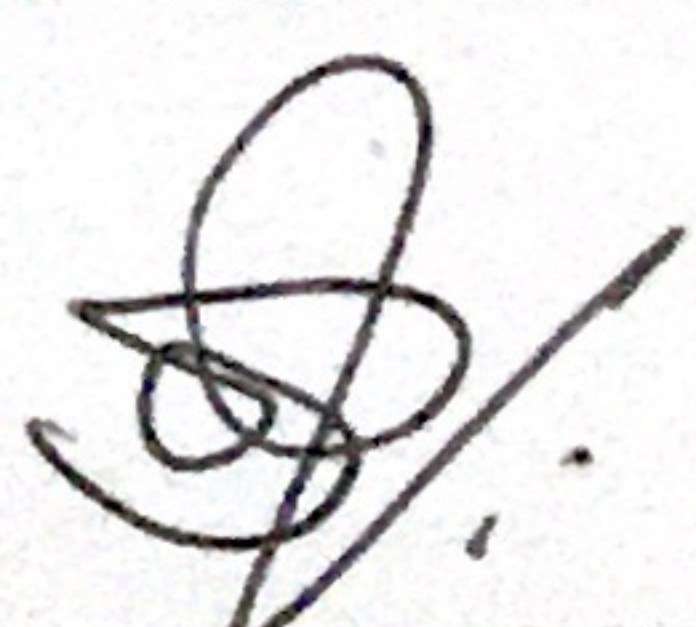
AIET	Lesson Plan & Execution			Format No.	ACD 08
				Issue No.	01
				Rev. No.	00
Name of the faculty			Prof. Vijetha. T.S		
Semester and Section			5 th Semester		
Date of Commencement			10 th October 2022		
Last Working Day of the Semester			27 th Jan - 2023		
Source Materials List					
1. Engineering Electromagnetics			W.H. Hayt & J.A Buck		
2. Engineering Electromagnetics			Dr. Basavanaju		
3.					
4.					
5.					
Subject Name			Electromagnetic Waves - 18EC55		
	Plan			Execution	
Period	Date	Topics to be covered	Source Material needed	Topics Covered	Date
					Source Material Referred
1	10/10/2022	Module-1 Vector Calculus	1	Introduction to Vector Calculus	27/10/2022
2	11/10/2022	Coulomb's Law	1	Vector addition Product	31/10/2022
3	12/10/22	Electric field Intensity	1	Coulomb's Law	02/11/2022
4	12/10/22	Continuous charge Distribution	1	Electric field Intensity	03/11/2022

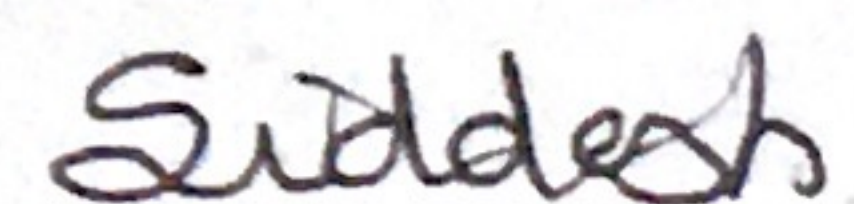
Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
5	13/10/22	line charge	1	line charge	07/11/22	1
6	17/10/22	Sheet of charges	1	Continuous charge	09/11/22	1
7	18/10/22	Flux Density	1	flux density	09/11/22	1
8	19/10/22	Problems	1	Problems.	10/11/22	1
9	19/10/22	Module-2 Gauss Law	1	sheet of charges	10/11/22	1
10	20/10/22	Application of Law	1	Module-2 Gauss Law	14/11/22	1
11	25/10/22	line of Surface Charge	1	line charge	15/11/22	1
12	27/10/22	Volume charge	1	Surface charge	16/11/22	1
13	31/10/22	Divergence	1	Divergence	16/11/22	1
14	02/11/22	Theorem	1	maxwell eq	17/11/22	1
15	02/11/22	Energy & Potential	1	Theorem	17/11/22	1
16	03/11/22	Problems	1	Problems	17/11/22	1
17	07/11/22	Module-3 Poisson's Law	1	Problems	21/11/22	1

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
18	8/11/22	Laplace's Equation	1	Potential at point	22/11/22	1
19	9/11/22	Uniqueness Theorem	1	Potential distribution	23/11/22	1
20	9/11/22	Problems	1	Potential difference	23/11/22	1
21	10/11/22	Biot-Savart's Law	1	Potential of line charge	23/11/22	1
22	14/11/22	Ampere's Circuital Law	1	Relation b/w E & V	16/11/22	1
23	15/11/22	Stoke's Theorem	1	module-3 Poisson's Law	24/11/21	1
24	16/11/22	Magnetic Potential	1	Biot-Savart's	25/11/21	1
25	16/11/22	module-4 Magnetic force	1	Application of Biot-Savart	28/11/21	1
26	17/11/22	Lorentz Equation	1	Ampere's law	29/11/21	1
27	21/11/22	Force b/w element	1	Application of Ampere's	30/11/21	1
28	22/11/22	Magnetization	1	Ampere's law diff	30/11/21	1
29	23/11/22	Permeability	1	Problems	01/12/21	1
30	23/11/22	Boundary Condition	1	Gauss Law pt form	02/12/21	1

Period	Plan			Execution			Pe
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred	
31	24/11/22	Reluctance	1	problems	05/12/21	1	
32	28/11/22	Faraday's law	1	Toroidal coil	06/12/21	1	
33	29/11/22	module-5 Maxwell's Equation	1	First 2. A	09/12/21	1	
34	30/11/22	Displacement Current	1	Ampere's Law curl	12/12/22	1	
35	30/11/22	Conduction Current	1	Stoke's Theorem	13/12/22	1	
36	01/12/22	Point form	1	Uniqueness Theorem	14/12/22	1	
37	05/12/22	Integral form	1	Problems	14/12/22	1	
38	06/12/22	Uniform plane wave	1	module-4 Lorentz force	15/12/22	1	
39	07/12/22	Poynting Theorem	1	magnetic force	19/12/22	1	
40	07/12/22	Problems	1	Force block element	20/12/22	1	
41				Force on st. cond	21/12/22	1	
42				Magnetization	22/12/22	1	
43				Problems	26/12/22	1	

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
44				Normal comp	27/12/22	1
45				Tangential comp	28/12/22	1
46				Reluctance	28/12/22	1
47				Problems	29/12/22	1
48				Boundary Condition	29/12/22	1
49				Problems	30/12/22	1
50				Problems	30/12/22	1
51				Module - 5 Wave equation	04/01/23	1
52				Uniform plane	05/01/23	1
53				Faraday's law	06/01/23	1
54				Maxwell eq	06/01/23	1
55				Int form of maxwell	09/01/23	1
56				Displacement current	10/01/23	1

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Refer
57				Conduction current	11/01/23	1
58				Velocity of wave	12/01/23	1
59				Conducting medium	16/01/23	1
60				v, λ, ρ constant	17/01/23	1
61				Intrinsic Imp	17/01/23	1
62				Skin depth	18/01/23	1
63				Poynting theorem	18/01/23	1
64				Problems	19/01/23	1
65				Problems	19/01/23	1
66				Problems	19/01/23	1
67				Problems	20/01/23	1
68				Thind ZA	25/01/23	1
						

Others	Planned	Actual	Remarks :
Special Classes	10	28	
Tutorials	1/week	1/week	
Assignments	5	6	
Seminars	-	-	
IA Tests	3	3	
Portions Covered in the entire Semester	100 %. All 5 modules		
Course Effectiveness			
Students Feedback			
Students Responce			
Result	No. of Students AP	No. of Students Passed	% of Result
	58.	56	97%.
Faculty in Charge			
Signature of Principal (& Remarks if any)	 HOD's Signature H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mj. MOODBIDRI - 574 225		

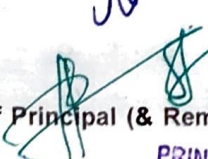
AJET	Lesson Plan & Execution			Format No.	ACD 08	
				Issue No.	01	
				Rev. No.	00	
Name of the faculty			M. Ansha Prathiba			
Semester and Section			6 th Semester			
Date of Commencement			20/3/2023			
Last Working Day of the Semester			10/7/2023			
Source Materials List						
1. The Definitive Guide to the ARM Cortex			Joseph Yiu, 2nd Edition, Noones, (Elsevier) 2010			
2. Introduction to Embedded System			Shibu KV, Tata McGraw Hill Education Private Limited, 2nd Edition			
3. Embedded systems - A contemporary design tool			James K Packel, John Wiley, 2008, ISBN: 978-0-471-72180-2			
4. Embedded Real Time Systems.			KVKK Prasad, Dreamtech Publications, 2003			
5. Embedded systems			Rajkumar, 2nd edition, Mc Graw Hill publication 2010			
Subject Name						
Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
1	20/3/2023	<u>Module - 1</u> ARM-32 Bit Micro controller Introduction	Text 1	<u>Module : 1</u> ARM-32 bit Micro-controller Instruction.	16/3/23	Text 1
2	21/3/2023	Thumb 2-Technology	Text 1	Thumb 2 Technology	16/3/23	Text 1
3	23/3/2023	Application of ARM cortex M3	Text 1	Application of ARM cortex M3	17/3/23	Text 1
4	24/3/2023	Architecture of ARM CORTEX M3	Text 1	Architecture of ARM cortex M3	20/3/23	Text 1

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Refer
5	25/3/23	Various Units in Architecture	Text 1	Various Units in Architecture	21/3/23	TI
6	24/3/23	Debugging support	Text 1	General purpose Special Registers	23/3/23	TI
7	25/3/23	General purpose Register & Special Registers	Text 1	Exception & Interrupts	24/3/23	TI
8	27/3/23	Exception and Interrupts.	Text 1	Debugging support	28/3/23	TI
9	28/3/23	Stack operation	Text 1	Stack operation	30/3/23	TI
10	30/3/23	Reset sequencing	Text 1	Reset sequence.	31/3/23	TI
<u>Module: 2</u>						
11	31/3/23	ARM Cortex M3 Instruction Set	Text 1	Instruction set classification	31/4/23	TI
12	1/4/23	Assembly Basics	Text 1	Moving data with in the processor.	2/5/23	TI
13	2/5/23	Moving & Arithmetic Instr.	Text 1	Arithmetic & Logic operation	4/5/23	TI
14	4/5/23	Shift Rotate & Logical Instruction	Text 1	Shift & Rotate operation	5/5/23	TI
15	5/5/23	Memory Barrier Instruction	Text 1	Bit Band operation.	6/5/23	TI
16	6/5/23	Assembly C Language	Text 1	Memory Map	8/5/23	TI
17	8/5/23	useful Instructions	Text 1	Assembly C Language	9/5/23	TI

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
18	9/5/23	Thumb and ARM Instructions	Text 1	CM&IS	11/5/23	T1
19	11/5/23	CM&IS	Text 1	Memory Barrier Instruction	12/5/23	T1
20	12/5/23	Conditional and Branch Instruction	Text 1	Assembly and C language programming	15/5/23	T1
21	13/5/23	<u>Module: 3</u> Embedded system vs General computing system.	Text 2	<u>Module: 3</u> Embedded vs General system	15/5/23	T2
22	15/5/23	classification of Embedded system.	Text 2	classification of Embedded system	23/5/23	T2
23	16/5/23	Application of Embedded system	Text 2	Application of Embedded system	24/5/23	T2
24	18/5/23	Elements of Embedded system	Text 2	Elements of Embedded system	29/5/23	T2
25	19/5/23	Diff b/w RISC & CISC Hardware & Princeton	Text 2	Diff B/W RISC & CISC	30/5/23	T2
26	20/5/23	Big and Little Indian formats	Text 2	Hardware & Princeton.	1/6/23	T2
27	22/5/23	Memory (RAM & ROM)	Text 2	Big and Little Indian formats	2/6/23	T2
28	23/5/23	Sensors & Actuators	Text 2	Sensors & Actuators	3/6/23	T2
29	1/6/23	opto coupler	Text 2	Memory (RAM & ROM)	5/6/23	T2
30	2/6/23	Communication Interfaces.	Text 2	opto coupler.	6/6/23	T2

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
31	3/6/23	<u>Module: 4</u> Characteristics of Embedded System	Text 2	Communication Interfaces.	8/6/23	T2
32	8/6/23	Quality Attributes of Embedded system.	Text 2	<u>Module: 4</u> Characteristics of Embedded system	9/6/23	T2
33	9/6/23	Non-operational Attributes	Text 2	Quality Attributes of Embedded system.	10/6/23	T2
34	10/6/23	Domain specific Application	Text 2	Non-operational Attributes of ES	12/6/23	T2
35	12/6/23	Hardware & software co-design	Text 2	Domain specific Application	13/6/23	T2
36	13/6/23	Program Modeling	Text 2	Hardware & software co-Design	15/6/23	T2
37	15/6/23	Embedded Firm-ware Design	Text 2	Program Modeling	20/6/23	T2
38	20/6/23	Embedded function Development	Text 2	Embedded Firmware Design	22/6/23	T2
39	22/6/23	Hardware - software co-Design	Text 2	Embedded Development Environment	23/6/23	T2
40	23/6/23	Hardware - software co-Design - cont	Text 2	Hardware - software co-Design	24/6/23	T2
41	24/6/23	<u>Module: 5</u> RTOS & IDE Types of OS	Text 2	<u>Module: 5</u> Real time operating system	26/6/23	T2
42	26/6/23	Task, Process and Threads	Text 2	Types of OS	27/6/23	T2
43	27/6/23	Task scheduling Types	Text 2	Task, Process Threads.	27/6/23	T2

Period	Plan			Execution		
	Date	Topics to be covered	Source Material needed	Topics Covered	Date	Source Material Referred
44	30/6/23	Task - communication	Text 2	Promptive Scheduling	30/6/23	T2
45	1/7/23	How to choose & RTOS.	Text 2	Non-Promptive Scheduling	1/7/23	T2
46	3/7/23	Integration and Testing of ES	Text 2	Round Robin Scheduling	3/7/23	T2
47	4/7/23	Simulator	Text 2	Task - Scheduling	3/7/23	T2
48	5/7/23	Emulator	Text 2	Task - Communication	4/7/23	T2
49	8/7/23	Debugging Support.	Text 2	How to choose RTOS	5/7/23	T2
50	10/7/23	Integrated Development Environment	Text 2	Integration and Testing of ES.	5/7/23	T2
51				Simulation & Emulator.	8/7/23	T2
52				Integrated Development Environment	10/7/23	T2
53				Debugging Support.	10/7/23	T2.

Others	Planned	Actual	Remarks :
Special Classes	-	03	
Tutorials	Xweek	Xweek	
Assignments	4	4	
Seminars	-	-	
IA Tests	3	3	
Portions Covered in the entire Semester	100%		
Course Effectiveness			
Students Feedback			
Students Responce			
Result	No. of Students AP	No. of Students Passed	% of Result
	58	53	92%
Faculty in Charge   Signature of Principal (& Remarks if any) PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODIBIDRI - 574 225, D.K  HOD's Signature H.O.D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODIBIDRI - 574 225			