

# HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi, Accredited with 'A' grade by NAAC  
(An Autonomous Institution, Affiliated to Anna University, Chennai)  
Coimbatore - 641 032.



Academic Year : 2023-2024

Semester : VI

Class & Branch : III - Agricultural Engineering

Course Code & Title : 21AG6181 - Professional Ethics

## SUBJECT RECORD

(ATTENDANCE AND ASSESMENT RECORD)

FACULTY NAME : MRS. RAMYA.K

DEPARTMENT : Agricultural Engineering

**TEXT BOOKS:**

- T1 Mike W. Martin and Roland Schmzinger, "Ethics in Engineering", Tata McGraw Hill, New Delhi, 2003  
 T2 Govindarajan M Natarajan S, Sentilal Kumar V. S, "Engineering Ethics", Prentice Hall of India, New Delhi, 2004.

**REFERENCE BOOKS:**

- R1 Charles B. Fleddermann, "Engineering Ethics", Pearson Prentice Hall, New Jersey, 2004.  
 R2 Charles E. Harris, Michael S. Pritchard and Michael J. Rabins, "Engineering Ethics – Concepts and Cases", Cengage Learning, 2009

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	3	1	2	-	-	3	-	-	-	2	3	2
CO2	3	3	3	2	1	-	-	3	-	-	-	3	2	2
CO3	3	3	3	1	1	-	-	3	-	-	-	2	2	2
CO4	3	3	3	3	3	-	-	3	-	-	-	2	2	2
CO5	3	3	3	3	3	-	-	3	-	-	-	2	2	2
Avg	3	2.8	3	2	2	-	-	3	-	-	-	2.2	2.2	2

*by*  
**Chairman - BoS**  
**AGRI - HICET**



*by*  
**Dean (Academics)**  
**HICET**

Programme	Course Code	Name of the Course	L	T	P	C
B.E.	21AG6181	PROFESSIONAL ETHICS	3	0	0	3

- Course Objective**
- To enable the students' minds to get an awareness on Engineering Ethics and Human Values
  - To instill Moral and to uphold Social Values in appreciation to the on par rights of others.

Unit	Description	Instructional Hours
	<b>HUMAN VALUES</b> Morals, values and Ethics – Integrity – Work ethic – Service learning – Civic virtue – Respect for others – Living peacefully – Caring – Sharing – Honesty – Courage – Valuing time – Cooperation – Commitment – Empathy – Self confidence – Character – Spirituality – Introduction to Yoga and meditation for professional excellence and stress management. Maintain physical health in yoga.	9
I		
	<b>ENGINEERING ETHICS</b> Senses of 'Engineering Ethics' – Variety of moral issues – Types of inquiry – Moral dilemmas – Moral Autonomy – Kohlberg's theory – Gilligan's theory – Consensus and Controversy – Models of professional roles - Theories about right action – Self-interest – Customs and Religion .	9
II		
	<b>SOCIAL EXPERIMENTATION</b> Engineering with societal Experimentation – Engineers as responsible Experimenters – Calibration Codes of Engineering Ethics – A Balanced Outlook on Law.	9
III		
	<b>SAFETY, RESPONSIBILITY AND RIGHTS ISSUES</b> Safety and Risk – Assessment of Safety and Risk – Risk Benefit Analysis and Reducing Risk – Respect for Authority – Collective Bargaining – Confidentiality – Conflicts of Interest – Occupational Crime – Professional Rights – Employee Rights – Intellectual Property Rights (IPR) – Discrimination.	9
IV		
	<b>GLOBAL ISSUES</b> Multinational Corporations – Environmental Ethics – Computer Ethics – Weapons Development – Engineers as Managers – Consulting Engineers – Engineers as Expert Witnesses and Advisors – Moral Leadership – Code of Conduct – Corporate Social Responsibility.	9
V		
	<b>Total Instructional Hours</b>	45

- Course Outcome**
- CO1: Upon completion of the course, the student should be able to apply ethics in society, discuss the ethical issues related to engineering and realize the responsibilities and rights in the society.  
 CO2: To learn Calibration Codes of Engineering Ethics  
 CO3: Understand the Intellectual Property Rights (IPR) for new invention  
 CO4: Assessment of Safety and Risk in effective way.  
 CO5: Understand the importance of Corporate Social Responsibility.

Name : MRS. K. RAMYA

Designation : Associate Professor

Department : Agricultural Engineering

Academic Year : 2023-2024

Semester : XI

Class & Branch : III - Agri

Course Code & Title : 21AG6181 - Professional ethics

Date of Opening : 03.01.24

Last Working Day : 4/5/2024

Total Classes Handled : 48 hours

Date :

Internal Test I : 29.2.2024

Internal Test II : 26.4.2024

Midterm Test : -

Internal Test III : -

Reg.No.	Name	Date														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	72072111001	ABINAYA . M														
2	72072111002	ABINESH KUMAR . M														
3	72072111003	ANAKHA SANTHUSH														
4	72072111004	ANTEL STEENA . J														
5	72072111005	ARUL PRAKASH . S														
6	72072111006	BALAVARUNAN . S														
7	72072111007	BASITH SHAIKH .														
8	72072111008	GOKUL . G														
9	72072111010	GOKULRAJ . C.T														
10	72072111011	GHOPIKA SRI . P														
11	72072111012	HARITHA HARL .														
12	72072111013	JEDA JENI . J														
13	72072111014	KAMALESH . M														
14	72072111015	KARPAGAVALLI . R														
15	72072111016	KAYIN BALA . R														
16	72072111017	KRITHIKDAS . K														
17	72072111018	MAHAHARINI . P														
18	72072111019	MOHAMED NASRUBEN . N														
19	72072111020	MUHAMMED MUHSIN . CA														
20	72072111021	NAVEN . M														
21	72072111022	POOJA . KR														
22	72072111023	PRASANTH . A														
23	72072111024	PRISCILLA . V														
24	72072111025	ROSHAN . J														
25	72072111026	SANTAI . M														

		Date														
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	72072111001															
2	72072111002															
3	72072111003															
4	72072111004															
5	72072111005															
6	72072111006															
7	72072111007															
8	72072111008															
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18	72072111019															
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23	72072111024															
24	72072111025															
25	72072111026															







Assignment / Tutorial Marks					Overall Marks for Assignment	Internal Test				Overall Weightage for test 60 20 Marks	Overall Weightage for Mid Sem 5-Marks	% of Attendance for			Overall Marks for Attendance 8	Internal Marks 40 25 Marks	
1	2	3	4	5		Test - I 50 Marks	Test - II 50 Marks	Test - III 100 Marks	Test - III 50 Marks			Test - I	Test - II	Test - III			
1	10	10			20	40	10									22	1
2	10	10			20	AB	30									22	2
3	10	10			20	AB	31									20	3
4	10	10			20	16	20									20	4
5	10	10			20	14	24									21	5
6	10	10			20	AB	30									20	6
7	10	10			20	48	76									31	7
8	10	10			20	50	60									29	8
9	10	10			20	50	88									33	9
10	10	10			20	40	10									22	10
11	10	10			20	52	52									30	11
12	10	10			20	88	92									25	12
13	10	10			20	10	22									23	13
14	10	10			20	64	54									30	14
15	10	10			20	62	72									32	15
16	10	10			20	12	36									22	16
17	10	10			20	40	66									29	17
18	10	10			20	10	20									20	18
19	10	10			20	10	20									25	19
20	10	10			20	52	20									26	20
21	5	10			15	58	28									26	21
22	10	10			20	50	34									20	22
23	10	10			20	AB	39									34	23
24	10	10			20	74	80									29	24
25	10	10			20	50	50									20	25







Assignment / Tutorial Marks					Overall Marks for Assignment 5	Internal Test				Overall Weightage for test 10 Marks	Overall Weightage for Mid Sem 5 Marks	% of Attendance for			Overall Marks for Attendance 5	Internal Marks 25 Marks
1	2	3	4	5		Test - I 50 Marks	Test - II 50 Marks	MidTerm 100 Marks	Test - III 50 Marks			Test - I	Test - II	Test - III		
							40	66								
						30	54								28	27
10	10				20	50	76								31	28
10	10				20	52	70								32	29
10	10				20	94	98								39	30
10	10				20	60	74								32	31
10	10				20	52	72								32	32
10	10				20	56	72								23	33
10	10				20	56	AB								32	34
10	10				20	39	82								28	35
9	19				18	58	46								20	36
9	9				18	AB	45								20	37
9	9				18	6	39								20	38
10	10				20	AB	26								20	39
10	10				20	4	33								36	40
10	10				20	82	80								20	41
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10	10				20	52	26								27	43
10	10				20	54	40								35	44
9	6				15	78	82								25	45
10	10				20	56	52								39	46
10	10				20	94	94								31	47
9	9				18	72	56								20	48
9	8				17	AB	43								20	49
						18	43								22	50







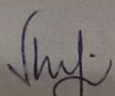
Assignment / Tutorial Marks					Overall Marks for Assignment 20	Internal Test				Overall Weightage for test 10 Marks	Overall Weightage for Mid Sem 5 Marks	% of Attendance			Overall Marks for Attendance 5	Internal Marks 25 Marks
1	2	3	4	5		Test - I 50 Marks	Test - II 50 Marks	Midterm 100 Marks	Test - III 50 Marks			Test - I	Test - II	Test - III		
9	9					18	AB	50								
7	8				15	80	44								27	52
10	10				20	32	32								24	53
10	10				20	40	30								24	54
9	9				18	AB	46								20	55
8	7				15	68	44								29	56
						74	54								27	57
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																75

# LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
<u>UNIT - I</u>						
1	24.1.24	4	morals, values and Ethics	PPT	chalkboard	
2	29.1.24	1	Integrity, work ethics, Service loyalty, CIVIL virtue	PPT		
3	31.1.24	4	respect for other, Living peacefully compass, sharing, honesty	PPT		
4	2.2.24	2	Honesty - courage, valuing time cooperation, commitment	PPT	chalkboard	
5	2.2.24	7	Empathy, self confidence character, spirituality.		chalkboard	
6	5.2.24	1	Introduction to Yoga and meditation for professional excellence	PPT		
7	7.2.24	4	Stress management	PPT	chalkboard	
8	9.2.24	2,7	maintain physical health in yoga	PPT		
<u>UNIT - II</u>						
9	12.2.24	1	Issues of Engineering Ethics, variety of moral issues.	PPT	chalkboard	
10	20.2.24	6	types of engineering moral dilemmas, moral autonomy	PPT		
11	20.2.24	7	Kohlberg, Gilligan's theory on genders and controversy	PPT	chalkboard	
12	21.2.24	2	models of professional ethics theories about right actions	PPT		

## LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
13	21.2.24	4	Self interest, customs and religions	PPT		
14	24.2.24	5	Religions. <u>UNIT-III</u>	PPT		
15	25.2.24	4	Engineering with social experiments, engineers as responsible Experimenters	PPT		
16	29.2.24	1,2,3,4	Revision of exam			
17	8-3-24	1	Calibration codes of engineering ethics.	Chalk	Talk	
18	9-3-24	1	Calibration codes of engineering ethics.	Chalk	Talk	
19	11/3/24	1	A Balanced outlook <sup>on</sup> law.	Chalk	Talk	
20	14/3/24	1	A Balanced outlook on law. <u>Unit - IV</u>	Chalk	Talk	
21	15/3/24	1	Safety and Risk	Chalk	Talk.	
22	16/3/24	1	Assessment of safety and Risk.	Chalk	Talk	
23	18/3/24	1	Risk benefit analysis & Reducing Risk.	Chalk	Talk	
24	21-3/24	1	Respect for Authority	Chalk	Talk	
25	21-3/24	1	Collective Bargaining	Chalk	Talk	
26	22-3-24	1	Confidentiality.	Chalk	Talk	
27	22-3-24	1	Conflicts of interest.	Chalk	Talk	
28	23-3-24	1	Occupational crime and	Chalk	Talk	

  
 Signature of HOD

## LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
			Professional rights.			
29.	28-3-24	1	Employee rights, intellectual property rights (IPR) and discrimination.	chalk	Talk	
			Unit - V			
30.	29-3-24	1	Multinational corporations, environmental ethics & computer ethics.	chalk	Talk	
31.	5-4-24	1	Weapons development, engineers as managers & consulting engineers.	chalk	Talk	
32.	10-4-24	3	Weapons development, engineers as managers & consulting engineers.	chalk	Talk	
33.	12-4-24	3	Engineers as expert witnesses and advisors.	chalk	Talk	
34.	18-4-24	4	Engineers as expert witnesses & advisors.	chalk	Talk	
35.	20-4-24	1	Moral leadership and code of conduct.	chalk	Talk	
36.	28-4-24	1	moral leadership and code of conduct.	chalk	Talk	
37.	29-4-24	1	Corporate social responsibility.	chalk	Talk	
38.	30-4-24	3	Corporate social responsibility.	chalk	Talk	







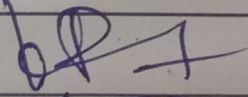
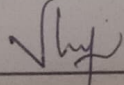
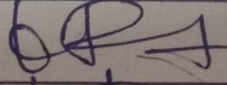
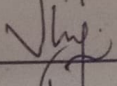
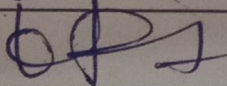
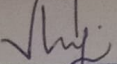
## CLASS TIME TABLE

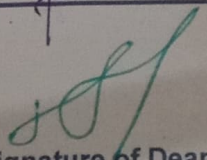
Day	PERIOD						
	1	2	3	4	5	6	7
Monday	21AG6181	21AG6202	21AG6201	21AG6302	← 21AG6201 →		21AG6202
Tuesday	21AG6302	SEM	← 21AG6401 →		21AG6201	← 21AG6202 →	
Wednesday	21AG6251	21AG6302	21AG6201	21AG6181	← 21AG6202 →		
Thursday	← 21AG6401 →		21AG6201	21AG6201	← 21AG6252 →		
Friday	21AG6202	21AG6181	← 21AG6251 →		LIB	SEM	21AG6181
Saturday	← 21AG6103, 05, 07, 09 →		← 21AG6210, 02. →		21AG6201	21AG6072	TWm

## INDIVIDUAL TIME TABLE

Day	PERIOD						
	1	2	3	4	5	6	7
Monday	21AG6181			Proctor			
Tuesday	Tutor						
Wednesday		Proctor		21AG6181			
Thursday							
Friday		21AG6181				21AG6181	
Saturday							

## RECORD OF INSPECTION

Sl.No.	Date of Inspection	Signature of Staff	Signature of HOD
1.	20/2/24		
	31/3/24		
	25/4/24		

  
Signature of Dean

# HINDUSTHAN

## COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi, Accredited with 'A' grade by NAAC  
(An Autonomous Institution, Affiliated to Anna University, Chennai)  
Coimbatore - 641 032.



Academic Year : 2023 - 2024

Semester : V

Class & Branch : III - AUTOMOBILE

Course Code & Title : 21AUS301 - ALTERNATIVE FUELS &  
ENERGY SYSTEM

### SUBJECT RECORD

(ATTENDANCE AND ASSESMENT RECORD)

FACULTY NAME : MUTIBURRANMAN. K

DEPARTMENT : AUTOMOBILE

Name : MUJIBURRAHMAN.K

Designation : ASSISTANT PROFESSOR

Department : AUTOMOBILE

Academic Year : 2023-24

Semester : V

Class & Branch : III - AUTOMOBILE

Course Code & Title : 21AUS301 - ALTERNATIVE FUELS & ENERGY SYSTEMS

Date of Opening : 07/02/2023

Last Working Day : 15/11/2023

Total Classes Handled : 45

Date :

Internal Test I : 9/10/2023

Internal Test II : 21/11/2023

Midterm Test :

Internal Test III :

Reg.No.	Name	Date				
		Month	Year	Day	Hour	Minute
		1	2	3	4	5
1	ABHISHEK . E	/	/	/	/	/
2	MHAMED ABDULLAH.M.S	/	/	/	/	/
3	ALPIN JAMES	/	/	/	/	/
4	P. ANBUSELIAN.	/	/	/	/	/
5	A. ARUN	/	/	/	/	/
6	ASHWATH K SUNIL	/	/	/	/	/
7	BHASKI	/	/	/	/	/
8	CHIRAN JEEVI .S	/	/	/	/	/
9	DAN VRSTAN.D	/	/	/	/	/
10	DEEPAK . V	/	/	/	/	/
11	R. DHANUSH KUMAR.	/	/	/	/	/
12	G. DHANYANATH	/	/	/	/	/
13	V. GURU PRASATH	/	/	/	/	/
14	M. HARITHARAN.	/	/	/	/	/
15	S. KARTHIKEYAN	/	/	/	/	/
16	V. KOUSHIK	/	/	/	/	/
17	T. LOGESH	/	/	/	/	/
18	S. MADHAVAN	/	/	/	/	/
19	V. MAHENDIRAN	/	/	/	/	/
20	M. MOHAMMED IRSHATH	/	/	/	/	/
21	M. MOHAMMAD ROSHAN ASHRAF	/	/	/	/	/
22	B. MOHAMMED ANSAR	/	/	/	/	/
23	M. MUSSEEB REMMAN	/	/	/	/	/
24	M. POTHAL MUTHU	/	/	/	/	/
25	B. RAJUL SHARMA	/	/	/	/	/

Reg.No.	Name	Date				
		Month	Year	Day	Hour	Minute
		1	2	3	4	5
1	ABHISHEK . E	/	/	/	/	/
2	MHAMED ABDULLAH.M.S	/	/	/	/	/
3	ALPIN JAMES	/	/	/	/	/
4	P. ANBUSELIAN.	/	/	/	/	/
5	A. ARUN	/	/	/	/	/
6	ASHWATH K SUNIL	/	/	/	/	/
7	BHASKI	/	/	/	/	/
8	CHIRAN JEEVI .S	/	/	/	/	/
9	DAN VRSTAN.D	/	/	/	/	/
10	DEEPAK . V	/	/	/	/	/
11	R. DHANUSH KUMAR.	/	/	/	/	/
12	G. DHANYANATH	/	/	/	/	/
13	V. GURU PRASATH	/	/	/	/	/
14	M. HARITHARAN.	/	/	/	/	/
15	S. KARTHIKEYAN	/	/	/	/	/
16	V. KOUSHIK	/	/	/	/	/
17	T. LOGESH	/	/	/	/	/
18	S. MADHAVAN	/	/	/	/	/
19	V. MAHENDIRAN	/	/	/	/	/
20	M. MOHAMMED IRSHATH	/	/	/	/	/
21	M. MOHAMMAD ROSHAN ASHRAF	/	/	/	/	/
22	B. MOHAMMED ANSAR	/	/	/	/	/
23	M. MUSSEEB REMMAN	/	/	/	/	/
24	M. POTHAL MUTHU	/	/	/	/	/
25	B. RAJUL SHARMA	/	/	/	/	/

2

3

26	27	28	30	1	2	3	4	4	6	6	8	9	9	14
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a	/	a	a	a	a	a	a	a	/	/	a	a	a	a
a	a	a	/	/	/	/	/	/	/	/	a	/	/	/
a	a	a	a	a	a	a	a	a	/	/	/	/	/	/
a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
/	/	/	/	a	/	/	/	/	/	/	a	a	a	a



	Assignment / Tutorial Marks					Overall Marks for Assignment	Internal Test				Overall Weightage for test 10 Marks	Overall Weightage for Mid Sem 5 Marks	% of Attendance for			Overall Marks for Attendance 5	Internal Marks 25 Marks
	1	2	3	4	5		Test - I	Test - II	MidTerm	Test - III			Test - I	Test - II	Test - III		
	50 Marks	50 Marks	100 Marks	50 Marks													
1	10	9				19	29	50			30		42	72			27
2	10	9				19	28	51			31		75	56			27
3	9	9	10			18	30	34			25		64	72			24
4	9	10				19	59	39			29		82	33			27
5	9	9				18	31	26			23		64	39			24
6	9	10	10			19	50	57			32		55	78			28
7	9	9				18	20	42			28		90	56			26
8	9	9				18	51	40			27		10	56			25
9	9	9				18	13	26			23		73	56			24
10	9	10	10			19	42	59			33		88	83			29
11	9	9				18	51	50			30		82	50			27
12	10	9				19	41	50			33		97	56			28
13	9	9				18	35	46			24		79	64			24
14	9	9				18	20	40			26		79	64			25
15	9	9				18	26	56			25		87	56			24
16	10	10				20	66	73			42		91	83			33
17	9	9				18	10	50			29		82	61			26
18	9	9				18	40	30			26		67	72			25
19	10	10	10			20	54	59			34		85	50			30
20	9	9				18	29	60			25		67	33			24
21	10	10				20	33	68			36		43	28			31
22	10	10	10			20	50	54			31		72	83			28
23	10	9				19	44	64			34		52	39			29
24	9	9				18	40	52			28		12	00			25
25	9	9				18	20	56			25		33	67			24

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Subject

Reg. No.	Name	Date																																	
		Month		Hour		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
26	720721102028 RAHUL SUDEEP	7	9	10	11	12	16	17	18	19	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
27	720721102029 A. RAJADURAI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	720721102030 K. ROBERT KENNADI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	720721102031 S. ROSHAN RAJA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	720721102032 SHANANDU SREESOBHAN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	720721102033 SPANCHO ALEX KOSHY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	720721102034 R. S. ANJAY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	720721102035 SM. SIDDHARTHA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	720721102036 P. SOUGANDHI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	720721102037 M. SUGRUVANESH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	720721102038 G. THIRAVIYAM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	720721102039 M. VEE RAMURTHY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	720721102040 LLC VISAY NARASHIMA RAJ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	720721102041 M. VISVAYASARATHI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	720721102042 R. VINOD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	720721102043 N. VISWANU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	720721102044 R.B. VISWANU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	720721102045 GO WITHAMPARASU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44	720721102801 ABHISHEK. TV	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45	720721102802 BALAJI. C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
46	720721102803 BALAJI. K	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
47	720721102804 DHEEBA RAJAS. G	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
48	720721102805 GANESH. A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
49	720721102806 HARIKUMAR. PS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
50	720721102807 JAYAPAL. V	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

26	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
43	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
46	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
47	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
49	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
50	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

26	27	28	30	1	2	3	4	4	6	6	8	9	9	14	
10	10	10	10	4	11	11	11	11	11	11	11	11	4	4	
4	1	3	6	4	4	1	2	4	6	7	4	3	4	5	
1	1	a	a	1	a	1	1	1	1	1	a	1	1	1	26
a	1	1	1	1	a	1	1	1	1	1	1	a	a	a	27
1	1	a	1	a	1	1	1	1	a	a	1	a	a	a	28
a	a	1	1	a	a	a	a	a	a	a	a	a	a	a	29
a	a	1	a	a	1	1	1	1	1	a	1	1	1	1	30
1	a	a	1	1	a	a	1	1	1	a	a	1	1	1	31
a	1	1	1	1	1	1	1	1	1	1	1	a	a	a	32
a	1	1	a	a	a	a	a	a	a	1	a	a	a	a	33
a	1	a	a	1	a	a	1	1	1	a	a	1	1	1	34
1	1	1	1	1	1	1	a	a	1	1	a	a	1	1	35
1	1	1	1	1	1	1	1	1	1	1	1	1	1	a	36
1	1	1	1	a	a	1	1	a	a	1	a	a	1	1	37
a	1	a	1	a	1	1	a	a	a	a	a	a	a	a	38
1	1	1	1	a	1	1	1	a	a	1	a	a	a	a	39
1	1	1	1	1	a	1	1	a	a	a	1	a	a	1	40
1	1	1	1	1	a	1	1	1	1	1	1	1	1	a	41
1	1	1	a	1	a	1	a	1	a	a	1	1	1	a	42
1	a	1	1	a	1	1	1	1	1	1	1	1	1	a	43
1	1	1	1	1	a	1	1	1	1	1	1	1	a	1	44
1	1	1	a	1	1	1	1	1	1	1	1	1	a	a	45
1	1	1	a	1	a	1	1	1	a	a	1	a	a	a	46
1	1	1	1	1	a	1	1	1	1	1	1	1	1	1	47
1	1	a	a	1	a	1	1	1	a	a	1	a	a	a	48
1	1	1	1	1	a	1	1	1	1	1	1	a	a	1	49
1	1	1	a	1	1	1	1	1	1	1	1	a	a	a	50



Assignment / Tutorial Marks					Overall Marks for Assignment 5	Internal Test				Overall Weightage for test 10 Marks	Overall Weightage for Mid Sem 5 Marks	% of Attendance for			Overall Marks for Attendance 5	Internal Marks 25 Marks
1	2	3	4	5		Test - I	Test - II	MidTerm	Test - III			Test - I	Test - II	Test - III		
60 Marks	50 Marks	100 Marks	50 Marks	60 Marks		5 Marks	5 Marks	5 Marks	5 Marks			5 Marks	5 Marks	5 Marks		
10	9				19	39	68			36		57	67			26
10	10				20	79	85			49		79	72			27
9	10				19	52	30			25		61	67			28
9	9				18	40	52			28		33	64			29
9	9				18	37	29			26		67	11			30
9	9				18	22	30			24		79	61			31
9	9				18	31	51			30		94	39			32
9	9				18	25	66			24		24	61			33
9	9				18	05	52			31		15	39			34
9	9				18	27	50			30		78	61			35
10	9				19	50	52			31		82	22			36
9	10				19	03	52			26		82	33			37
9	9				18	30	54			27		82	61			38
10	10				20	57	50			32		73	88			39
9	9				18	12	70			25		85	50			40
9	9				18	23	56			32		64	28			41
10	9				19	64	82			45		88	50			42
10	10				20	87	77			47		97	64			43
10	10				20	61	83			43		61	67			44
10	10				20	66	66			40		94	72			45
10	10				20	55	50			32		91	50			46
10	10				20	57	39			27		97	89			47
10	9				19	55	75			39		79	50			48
10	10				20	32	52			31		69	72			49
9	10				19	07	60			27		75	56			50



31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

27	27	25	30	1	2	3	4	4	6	6	8	9	9	14
10	10	10	10	11	11	11	11	11	11	11	11	11	11	11
4	1	3	6	4	4	1	2	4	6	7	4	3	4	3
/	/	/	a	/	/	/	/	/	/	/	/	/	a	a
a	a	/	a	/	/	/	/	/	/	a	a	a	a	a
a	a	/	a	/	/	/	/	/	/	a	a	/	a	a
/	/	/	/	/	/	/	/	/	/	/	/	/	a	a
a	/	/	/	/	/	/	/	/	/	/	/	/	a	a
/	/	/	a	/	a	/	/	/	/	a	a	/	a	a
/	a	a	a	/	/	/	/	/	/	a	a	/	a	a
/	/	/	a	/	/	/	/	/	/	/	/	/	/	a
/	/	/	a	a	a	/	/	/	/	/	/	/	a	a
/	/	/	/	/	a	/	/	/	/	/	/	/	a	a
a	/	a	a	a	/	/	/	/	/	/	/	/	/	a
/	/	/	/	/	a	/	a	a	/	/	/	/	a	a

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40	50	65	37	49	31	54	45	47	32	34	46	16	16	23
24	14	19	27	15	33	10	19	17	26	26	18	43	48	44

Assignment / Tutorial Marks					Overall Marks for Assignment 5 20	Internal Test				Overall Weightage for test 10 Marks	Overall Weightage for Mid Sem 5 Marks	% of Attendance			Overall Marks for Attendance 5	Internal Marks 25 Marks	
1	2	3	4	5		Test - I	Test - II	Midterm	Test - III			Test - I	Test - II	Test - III			
						50 Marks	50 Marks	100 Marks	50 Marks								
9	9				18	32	36			27		85	72			25	51
9	9				18	20	60			24		52	33			24	52
9	9				18	05	72			23		82	39			24	53
9	9				18	50	74			37		85	72			31	54
10	10				20	57	83			41		69	78			32	55
10	10				20	80	81			39		94	56			32	56
10	10				20	08	67			23		91	66			24	57
10	9				19	09	50			11		82	83			27	58
9	9				18	06	30			24		85	66			24	59
9	9				18	61	69			39		79	72			32	60
10	10				20	0	77			23		30	50			24	61
9	9				18	61	70			39		82	56			32	62
10	10				20	30	52			25		27	11			24	63
9	9				18	31	30			24		100	83			24	64
9	9																65
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LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
1.	7/8/2023	06	UNIT - I Vase, Mower, Co statements	lect	PPT	
2.	9/8/2023	04	Alternate fuels and its need.	lect	PPT	
3.	10/8/2023	04	Parameters to be considered while selecting alternate fuels.	lect	PPT	
4.	11/8/2023	01	Alternate fuels Preparation of alternative fuels	lect	PPT, Model	
5.	12/8/2023	02	Waste & Indian energy scenario as alternative fuels	lect	PPT	
6.	16/8/2023	05	Production Methods of Bio fuels	lect	PPT	
7.	17/8/2023	04	Pyrolysis Process	lect	PPT, Model	
8.	18/8/23	01	Gasification Process	lect	PPT	
9.	19/8/23	02	Digestion process UNIT - II	lect	PPT	
10.	21/8/23	06	Alcohol as Fuels	lect	PPT	
11.	22/08/23	01	Production methods of Alcohol	lect	PPT	
12.	23/08/23	04	Properties of Alcohol fuels	lect	PPT	

LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
13.	24/08/23	04	Methods of using alcohol in CI & SI Engines	lect	PPT	
14.	25/08/23	01	Blending dual fuel operation	lect	PPT	
15.	30/08/23	04	Surge Injection	lect	PPT	
16.	31/08/23	04	Performance in CI SI engines	lect	PPT	
17.	02/09/23	09	Emission and Combustion characteristics of SI engine	lect	PPT	
18.	03/09/23	01	Emission & Combustion in CI engines UNIT - III	lect	PPT, Model	
19.	11/09/23	06	Vegetable oil & its properties	lect	PPT	
20.	12/09/23	04	Methods of using vegetable oil in engine	lect	PPT	
21.	14/09/23	04	Blending of vegetable oil	lect	PPT, Model	
22.	15/09/23	01	Transesterification of vegetable oil	lect	PPT	
23.	20/09/23	04	Performance, Emission in diesel engine	lect	PPT	
24.	21/09/23	01	Combustion characteristics in diesel engine	lect	PPT	

LESSON PLAN

S No	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
25	23/01/23	02	Role of Manganese in Vegetable oil performance	lect	PS7	
26	23/01/23	06	Role of Additives in Vegetable oil	lect	PS7	
27	23/01/23	04	Red of Defumigant in vegetable oil	lect	PS7	
28	18/01/23	04	UNIT-IV Production method of Hydrogen	lect	PS7	
29	19/01/23	04	Comparative properties of Hydrogen	lect	PS7	
30	20/01/23	01	Reaction associated with Hydrogen as fuel	lect	PS7	
31	26/01/23	04	Dryness methods of using Hydrogen	lect	PS7, Mubob	
32	27/01/23	01	Qualitative Analysis in Engine	lect	PS7	
33	28/01/23	02	Hydrogen storage	lect	PS7	
34	30/01/23	06	Comparative Analysis of Emission Analysis	lect	PS7	
35	01/01/23	04	Emission Analysis	lect	PS7	
36	02/01/23	04	Safety Aspects of Hydrogen	lect	PS7	

LESSON PLAN

S No	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
1	24/01/23		UNIT-V			
37	03/01/2023	01	Production method of Nitrogen & Natural gas	lect	PS7	
38	04/01/2023	02	Production of LNG	lect	PS7	
39	04/01/2023	04	Properties of LNG, Biogas & Natural gas	lect	PS7	
40	04/01/2023	06	CO & H <sub>2</sub> S scrubbing in Biogas	lect	PS7, Mubob	
41	06/01/2023	07	Modification in SI & CI Engines	lect	PS7	
42	09/01/2023	04	Performance & Emission of Biogas & LNG in SI Eng	lect	PS7, Mubob	
43	09/01/2023	03	Performance & Emission of LNG in CI Eng	lect	PS7	
44	09/01/2023	04	Comparison & emission of Biogas in CI Eng	lect	PS7, Mubob	
45	11/01/2023	03	Performance of LNG in CI - Engine	lect	PS7	





## **VISION**

“ To become a premier institution by producing professionals with strong technical knowledge, innovative research skills and high ethical values”.

## **MISSION**

To provide academic excellence in technical education through novel teaching methods.

To empower students with creative skills and leadership qualities.

To produce dedicated professionals with social responsibility.

## **Dr.APJ Abdul Kalam's Oath for Teachers**

1. First and foremost ,I will love teaching. Teaching is my soul.
2. I realize that I am responsible for shaping not just students but ignited youths who are the most powerful resource under the earth, on the earth and above the earth. I will be fully committed for the great mission of teaching.
3. I will consider myself to be a great teacher, only when I can, lifts the students average to the best performance by way of my special teaching.
4. All my actions with my students will be with kindness and affection, like a mother, sister, father and brother.
5. I will organiz and conduct my life, in such a way that my life itself as message for my students.
6. I will encourage my students to ask questions and develop the spirit of inquiry,. so that they blossom in to creative enlightened citizens.
7. I will treat all the students equally and will not support any differentiation on account of religion, community or language.
8. I will continuously build the capacities in teaching so that I can impart education to my students.
9. I will celebrate the success of my students, with great Elan.
10. I realize by being a teacher, I am making an important contribution to all the National Development Activities.
11. I will continuously endeavour to fill my mind, with great thoughts and spread the nobility in thinking and action.

# HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi, Accredited with 'A' grade by NAAC  
(An Autonomous Institution, Affiliated to Anna University, Chennai)  
Coimbatore - 641 032.



Academic Year : 2023-24 (EVEN) Semester : IV

Class & Branch : II / CHEMICAL ENGG.

Course Code & Title : 22CH4203 - PROCESS HEAT TRANSFER

## SUBJECT RECORD (ATTENDANCE AND ASSESMENT RECORD)

FACULTY NAME : S. NAGUL DEY

DEPARTMENT : CHEMICAL ENGINEERING

Programme	Course Code	Name of the Course	L	T	P	C
B.TECH.	22CH4203	PROCESS HEAT TRANSFER	3	0	0	3

The student should be able to

- Course Objective**
1. Learn various heat transfer methods involved in chemical processes.
  2. Study the mechanism of heat transfer in unit operations such as evaporation, drying etc.
  3. Apply heat transfer concepts in real industry scenario
  4. Understand the concept of radiation and evaporation.
  5. Calculate the various dimensionless numbers in heat exchangers.

Unit	Description	Instructional Hours
I	<b>CONDUCTION:</b> Importance of heat transfer in Chemical Engineering operations – Modes of heat transfer – Fourier's law of heat conduction – one dimensional steady state heat conduction equation for flat plate, hollow cylinder and sphere – Heat conduction through a series of resistances – Thermal conductivity measurement; effect of temperature on thermal conductivity; Heat transfer in extended surfaces- Optimum and economic thickness of insulation.	9
II	<b>CONVECTION:</b> Concepts of heat transfer by convection – Natural and forced convection, analogies between transfer of momentum and heat – Reynold's analogy, Prandtl and Coulburn analogy. Dimensional analysis in heat transfer, heat transfer coefficient for flow through a pipe, flow past flat plate, flow through packed beds.	9
III	<b>HEAT TRANSFER WITH PHASE CHANGE:</b> Heat transfer to fluids with phase change – heat transfer from condensing vapours, drop wise and film wise condensation, Derivation of Nusselt equation for vertical and horizontal tubes, condensation of superheated vapors, Heat transfer to boiling liquids – mechanism of boiling, nucleate boiling and film boiling.	9
IV	<b>RADIATION :</b> Radiation heat transfer – Thermal radiation – Laws of radiation – Black body concepts– Emissive power – Radiation shape factor – Gray bodies – Radiation shields. <b>EVAPORATION:</b> Introduction – Types of Evaporators – Capacity – Steam economy – Boiling point elevation (Duhring rule); Material and energy balance of single effect evaporator; Theory of multiple effect evaporators; Design of single and multiple effect evaporators, Vapor recompression method.	9
V	<b>HEAT EXCHANGERS:</b> Heat exchangers – Types and practical application – Concept of LMTD & Overall heat transfer coefficient; Effectiveness – NTU method for heat exchanger design; Fouling factor and estimation of Overall heat transfer coefficient; Special type of heat exchangers.	9
<b>Total Instructional Hours</b>		45
<b>Course Outcome</b>	CO1	Ability to understand and solve conduction problems.
	CO2	Ability to analyze and solve problems on convection.
	CO3	Ability to apply analogies and correlations to solve industrial problems.
	CO4	Ability to analyze and solve problems on radiation and Evaporation.
	CO5	Ability to design and analyze the performance of heat exchangers.

**TEXT BOOK:**

- T1 Binay. K Dutta, "Heat Transfer: Principles and Applications", PHI Learning private limited  
T2 Coulson, J.M. and Richardson, J.F., "Chemical Engineering" Vol.I, VI Edition, Asian Books Pvt. Ltd., India, 2006  
T3 McCabe, W.L., Smith, J.C., and Harriot, P., "Unit Operations in Chemical Engineering", XII Edition., McGraw-Hill, 2017

**REFERENCES:**

- R1 Kern, D.Q., "Process Heat Transfer", McGraw-Hill, 2001  
R2 Holman, J. P., 'Heat Transfer', X Edition., McGraw Hill, 2009.  
R3 Ozisik, M. N., "Heat Transfer: A Basic Approach", McGraw-Hill, 1984  
R4 Frank Kreith, Raj M Manglik, Principles of Heat Transfer, 8 th ed., Cengage Learning, USA, 2016.  
R5 Analysis of heat and mass transfer by Eckert and Drake, McGraw-Hill

**Chairman - BoS  
OHE - HICET**



**Dean (Academics)  
HICET**

Name : S. ANJUL DEY  
Designation : CHEMICAL ENGG. / AP  
Department : CHEMICAL ENGG.

Academic Year : 2023-24 (EVEN) Semester : IV

Class & Branch : III / CHEMICAL ENGG.

Course Code & Title : 22CH4203 / PROCESS HEAT TRANSFER

Date of Opening : 5/2/24

Last Working Day : 16/5/24

Total Classes Handled : 46 hrs.

Date :

Internal Test I : 3/4/24

Internal Test II : 29/5/24

Midterm Test :

Internal Test III :

Reg.No.	Name	Date	5	6	7	8	9	10	11	12	13	14	15	
		Month	2	2	2	2	2	2	2	2	2	2	2	
		Hour	1	4	2	7	1	4	2	6	1	5	2	3
1	T20T22114001	ABDUL AZIZ .K	/	/	/	/	/	/	/	/	/	/	/	
2	T20T22114002	ABINESH .P	/	/	/	/	/	/	/	/	/	/	/	
3	T20T22114003	ABISHEKPRABHU .P	/	/	/	/	/	/	/	/	/	/	/	
4	T20T22114004	AKSHAY .M	/	/	/	/	/	/	/	/	/	/	/	
5	T20T22114005	AMBARALLEN REY .Y	/	/	/	/	/	/	/	/	/	/	/	
6	T20T22114006	ANBARASAN .K	/	/	/	/	/	/	/	/	/	/	/	
7	T20T22114007	ANBUSELVAN .K	/	/	/	/	/	/	/	/	/	/	/	
8	T20T22114008	ANEETT.DAS .T	/	/	/	/	/	/	/	/	/	/	/	
9	T20T22114009	ANOOB .S	/	/	/	/	/	/	/	/	/	/	/	
10	T20T22114010	ANTON VIBIN .G	/	/	/	/	/	/	/	/	/	/	/	
11	T20T22114011	BALAJI .D	/	/	/	/	/	/	/	/	/	/	/	
12	T20T22114012	BELLWIN RAI .P	/	/	/	/	/	/	/	/	/	/	/	
13	T20T22114013	DEEPAK .P	/	/	/	/	/	/	/	/	/	/	/	
14	T20T22114014	DHARSHINI .A.Y	/	/	/	/	/	/	/	/	/	/	/	
15	T20T22114015	FADL FAISAL MOHAMMED	/	/	/	/	/	/	/	/	/	/	/	
16	T20T22114016	FAYAS AHAMED .S	/	/	/	/	/	/	/	/	/	/	/	
17	T20T22114017	GANADHARAN .K	/	/	/	/	/	/	/	/	/	/	/	
18	T20T22114018	GOKUL .D	/	/	/	/	/	/	/	/	/	/	/	
19	T20T22114019	GOPIKRISHNAN .P.V	/	/	/	/	/	/	/	/	/	/	/	
20	T20T22114020	HARIHARAN .S	/	/	/	/	/	/	/	/	/	/	/	
21	T20T22114021	HIJAZ ALFAZER .A	/	/	/	/	/	/	/	/	/	/	/	
22	T20T22114022	JOTHIKRISHNAN .N	/	/	/	/	/	/	/	/	/	/	/	
23	T20T22114023	KRISHNA PRABHAKARAN .M	/	/	/	/	/	/	/	/	/	/	/	
24	T20T22114024	LOGESH .K	/	/	/	/	/	/	/	/	/	/	/	
25	T20T22114025	MADHUMITHA .S	/	/	/	/	/	/	/	/	/	/	/	





Subject

Reg.No.	Name	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Month	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		Hour	1	4	4	2	7	1	4	2	6	1	5	2	3	5	6
26	T20T22114026	MOHAMMED FAIZEL . M	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
27	T20T22114027	MDHAMMED HANEEN . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28	T20T22114029	MOHAMMED CHALU . VP	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29	T20T22114030	MUHAMMED SHAMEEM . K	a	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30	T20T22114031	MUHAMMED SIDHAN . AK	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31	T20T22114032	MURUGANAYAGIAM . S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32	T20T22114033	NANDHAKISHOR . C	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33	T20T22114034	NARENDHIRAN . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
34	T20T22114035	NAVEENKUMAR . D	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
35	T20T22114036	PADMA PRIYA . P.S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
36	T20T22114037	PATCHAMUTHU . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
37	T20T22114038	PRITHIVRAJ . C	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
38	T20T22114039	RAGHAY . P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
39	T20T22114040	RAGHULRAJ . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
40	T20T22114041	RAHIL AHMED . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
41	T20T22114042	RINS . TN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
42	T20T22114043	RUBAN DVRAL . E	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
43	T20T22114044	SAKTHI GIJHAN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
44	T20T22114045	SANJANA . S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
45	T20T22114046	SARAN MEETHAN . L	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
46	T20T22114047	SATHISHKUMAR . A	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
47	T20T22114048	SHARUN . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
48	T20T22114049	SIVARAMAN . S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
49	T20T22114050	SRIKANTH . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
50	T20T22114051	SRI NITHI . S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/



Subject

Reg.No.	Name	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
		Month	5	8	9	9	12	15	16	16	19	21	23	23	23	23	23	23	23
		Hour	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
51	720722114052	SRIRAM .M	1	1	1	a	a	a	a	a	1	1	a	a	a	a	a		
52	720722114053	SUBASHINI .S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
53	720722114054	SUJDESHANA .S	1	1	1	1	1	a	1	1	1	1	1	1	1	1	1		
54	720722114055	SURIYA .S	1	1	1	a	1	1	1	1	1	1	1	1	1	1	1		
55	720722114056	VAISHALI .B	1	a	a	a	a	a	1	1	1	1	1	1	1	1	1		
56	720722114057	VISHWA .B	1	1	1	1	1	1	a	a	1	1	1	1	1	1	1		
57	720722114058	YUVARAJ .B	a	a	1	1	1	1	1	1	1	a	1	1	1	1	1		
58	720722114801	ABHISHEK .E	1	1	1	a	a	1	a	a	1	1	1	1	1	1	1		
59	720722114802	FASIL SHEREEF .K.P	a	1	1	1	a	1	1	1	1	a	1	1	1	1	1		
60	720722114803	GOWTHAMAN .K	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
61	720722114804	MAHESH SARAN .S	1	1	1	a	a	a	a	a	a	a	a	a	a	a	a		
62	720722114805	MUHAMMED SHAHNAD .A	a	a	1	a	1	a	a	a	1	1	1	1	1	1	1		
63	720722114806	PRASANTH .K	1	1	1	a	a	a	a	a	a	a	1	1	1	1	1		
64	720722114807	SHAM SUNDER .B	1	1	1	a	1	a	a	a	1	1	1	1	1	1	1		
65	720722114808	SIVA SURYA .R.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
66																			
67																			
68																			
69																			
70																			
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72																			
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74																			
75																			



## LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
			<u>Unit-I</u>			
1	5/2/24	1	Importance of H.T in Chemical Engg. Operatn	Video	Youtube	
2	7/2/24	4	Modes of H.T, Fourier's law	ppT	Google Slides	
3	8/2/24	4	One dimension Steady State Heat Conduct <sup>n</sup> for Flat plate	BB	CBT	
4	9/2/24	2	Sphere	BB	CBT	
5	9/2/24	7	Cylinder	BB	CBT	
6	12/2/24	1	Heat Conduct <sup>n</sup> through a Series of resistances	BB	CBT	
7	15/2/24	4	Thermal Conductivity measurement effect of Temp. on k	BB	CBT	
8	16/2/24	2	H.T in extended Surface	BB	CBT	
9	16/2/24	6	Optimum & Economic thickness of insulat <sup>n</sup>	BB	CBT	
			<u>Unit-II</u>			
10	19/2/24	1	Concept of H.T by Convec <sup>n</sup>	Video	Youtube	
11	21/2/24	5	Natural Convection	BB	CBT	
12	23/2/24	2	Forced Convection	BB	CBT	
13	23/2/24	3	Application	BB	CBT	
14	23/2/24	5	Analogies b/w transfer of momentum & heat	BB	CBT	

## LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
15	23/2/24	6	Reynolds analogy	BB	C&T	
<del>16</del>			Prandtl & Colburn analogy	BB	C&T	
16	26/2/24	1	Dimensional analysis in H.T.	BB	C&T	
17	29/2/24	4	H.T Coefficient for flow through pipe	BB	C&T	
18	4/3/24	1	Flow past Flat Plate Flow through Packed Bed	BB	C&T	
			<u>UNIT - III</u>			
19	7/3/24	5	H.T to fluids with Phase Change	BB	C&T	
20	13/3/24	2	H.T from Condensing Vapor	BB	C&T	
21	14/3/24	4	Drop wise Condensation	BB	Edu Puzzle	
22	15/3/24	2	Film wise Condensation	BB	Edu Puzzle	
23	15/3/24	4	Nusselt eq <sup>n</sup> for Vertical tubes	BB	C&T	
24	16/3/24	5	Nusselt eq <sup>n</sup> for horiz. tubes	BB	C&T	
25	25/3/24	1	Condensation of Superheated Vapors	BB, L	C&T, Youtube	
26	08/4/24	1	H.T to Boiling liquids Mechanism of Boiling	BB	C&T	
27	12/4/24	2	Nucleate & Film Boiling	BB, PPT	C&T, Edu Puzzle	
				BB, PPT	C&T, Edu Puzzle	

## LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
			<u>UNIT-IV</u>			
28	12/4/24	6	Rad <sup>m</sup> Heat Transfer	BB Video	CFT Youtube	
29	13/4/24	5	Thermal rad <sup>m</sup> - Law of rad <sup>m</sup> - BB Concept - Emission	BB PPT	CFT Quizizz	
30	13/4/24	7	Rad <sup>m</sup> Shape factor - Grey bodies - Rad <sup>m</sup> shield	BB	CFT	
31	15/4/24	1	Types of Evaporators - Capacity - Steam economy - B.P.E	BB	CFT	
32	18/4/24	4	Material B energy balance of Single effect Evaporator, Theory of MEE	BB Video	CFT Youtube	
33	22/4/24	1	Design of Single eff. Evap.	BB	CFT	
34	25/4/24	5	Design of MEE.	BB	CFT	
35	26/4/24	6	Nomical Problems	BB	CFT	
36	29/4/24	1	Vapor recombin <sup>n</sup> Mtd	BB	CFT	
			<u>UNIT-V</u>			
37	30/4/24	3	Heat Exchanger - Types & Practical applicatn	BB PPT	Quizizz	







## SPECIAL ACADEMIC ACTIVITIES ORGANISED

Date	Topic	Event	Remarks on Student Performance
12/12/24	Digital Catalyst	Guest lecture	—
			—
			—
			—
			—
			—
			—
			—
			—
			—
			—
			—

Event: Industrial Visits / Guest Lectures / Workshops / Mini - Projects / Seminars / Assignments, ect  
(Additional sheet may be attached as necessary)

## STUDENT'S COUNCELLING RECORD

Reg no:- 4 has advised to attend the class regularly.

  
 Signature of Dean


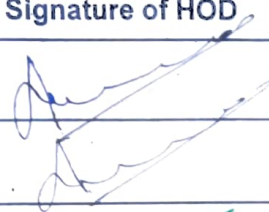




## CLASS TIME TABLE

		PERIOD							
Period → ↓ Day	1 9.15-10.05	2 10.05-10.55	BREAK (15min)	3 11.10 - 12.00	4 12.00-12.50	LUNCH BREAK (1hr 10min)	5 2.00-2.50	6 2.50-3.40	7 3.40-4.30
Monday	22CH4203	22CH4201		22MA4151	22CH4204		←	22CH4001	→
Tuesday	22CH4204	22CH4201		22CH4251	22EE4205		←	22MA4151	→
Wednesday	22HE4101	22CH4201		22EE4205	22MA4151		←	22CH4251	→
Thursday	LIB	22CH4202		22HE4101	22CH4203		←	22EE4205	→
Friday	22CH4202	22CH4203		22CH4251	22CH4202		22EE4205	SEM	SEM
Saturday	22CH4251	22CH4201		22MA4151	22CH4204		22CH4203	22HE4101	TWM

## INDIVIDUAL TIME TABLE

		PERIOD									
Period → Day	1 9.15-10.05	2 10.05-10.55	BREAK (15min)	3 11.10 - 12.00	4 12.00-12.50	LUNCH BREAK (1hr 10min)	5 2.00-2.50	6 2.50-3.40	7 3.40-4.30	8 4.30-5.30	
Monday	22CH4203							←	22CH4001	→	21CH6200
Tuesday				21CH6401	21CH6401				SEM-III		21CH6200
Wednesday											
Thursday	21CH6401	21CH6401			22CH4203						
Friday		22CH4203							SEM-II		
Saturday	21CH6200	21CH6200						22CH4203		TWM	

## RECORD OF INSPECTION

Sl.No.	Date of Inspection	Signature of Staff	Signature of HOD
1	29/2/24		
2	3/4/24		
3	16/5/24		

  
Signature of Dean

## VISION

“ To become a premier institution by producing professionals with strong technical knowledge, innovative research skills and high ethical values”.

## MISSION

To provide academic excellence in technical education through novel teaching methods.

To empower students with creative skills and leadership qualities.

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