



KONGU ENGINEERING COLLEGE
(Autonomous)
PERUNDURAI, ERODE - 638 060



DEPARTMENT OF AUTOMOBILE ENGINEERING

Ref: - KEC/ AUTO/OC-01

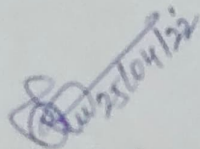
Date: 25.04.2022

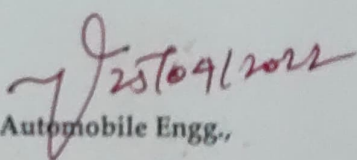
CIRCULAR

This to inform that a one credit course on "20VC023 - Advanced Vehicle Technology" will be conducted from 25.05.2022 to 10.06.2022 for the benefit of II-year Automobile Engineering Students. The duration of the course is 30 hours. Interested students are asked to enroll their names to Mr. K Nithyanandhan on or before 15.05.2022. The maximum student strength is limited to 40.

Course Faculty

1. Mr. K Nithyanandhan / Assistant Professor / KEC
2. Mr. S Ranjithkumar / Assistant Professor / KEC


Faculty - in charge
(Mr. K Nithyanandhan)


HoD / Automobile Engg.,

Copy to:

1. II-year Automobile Engineering
2. File

KONGU ENGINEERING COLLEGE
PERUNDURAI ERODE-638060
(AUTONOMOUS)

DEPARTMENT OF AUTOMOBILE ENGINEERING

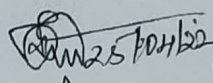
Date: 25.04.2022

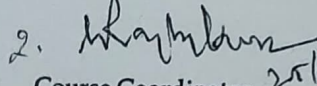
DETAILS OF ONE CREDIT COURSE

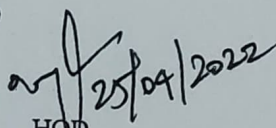
1.	Academic Year	:	2021-22		Semester: Even	
2.	Course Title	:	Advanced vehicle technology			
3.	Type of Course	:	New Course			
	If "Already offered course",	:	Course Code:	Version:		
4.	Course Coordinator(s)	:	1. S. Ranjithkumar 2. K. Nithyanandhan			
5.	Course offered by	:	Internal faculty			
6.	Name and designation of external resource persons	:	NIL			
7.	Details about external organization	:	NIL			
8.	Course fee for external experts		Max. number of students/Batch		Course fee / student	
	-		30		NA	
9.	No. of days	Period		No. of hours	Venue	
		From	To	Lecture	Practical	
	15	29.04.2022	29.05.2022	30	-	30
10.	Pre-requisites for offering the course	:	-			
11.	Course offered to	:	Programme	Branch	Year/Semester	Regulations
			B. E	Automobile	II / IV	2020
12.	Course Main Contents	:	Day 1	Introduction- need of advanced systems in vehicles		
		:	Day 2	Anti-theft device-immobilizer concept, system components and working. Remote less Key Entry (RKE)		
		:	Day 3	PRKE system, working principle, merits and demerits		
		:	Day 4	Intelligent Parking Assist System (IPAS), working, merits and demerits		
		:	Day 5	Advanced technologies of 2021- ADAS system, Automatic Emergency Braking		
		:	Day 6	Teen driver technology		
		:	Day 7	Exit Warning to Protect Cyclists		

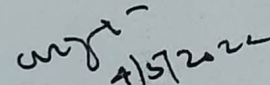
			Day 8	Stolen Vehicle Tracking Software	
			Day 9	Intelligent prosecution of dangerous driving	
			Day 10	Monitoring of drunk driving and Fatigue driving; Vehicle auxiliary intelligent technology	
			Day 11	Intelligent control technology of a car light, vehicle wind screen wiper	
			Day 12	steering technology of Head lamps	
			Day 13	Control technology for safety vehicle distance	
			Day 14	switch technology in car doors	
			Day 15	Optical techniques for defect evaluation.	
13.	Course Outcomes	:	After completing the course, the student will be able to: • Aware role of various intelligent systems of vehicle for safety. • Differentiate old systems from intelligent systems of vehicle • Know the working principles involved in Advanced Vehicle Technology systems		
14.	Course Assessment (Min. 2)	:	S. No.	Type	Max. Marks
			1.	Assessment Test I	50
			2.	Assessment Test II	50
				Total	100 Marks
15.	Any other details	:	Nil		

The above proposal may kindly be approved.

1.  25/04/22 (K. Nithyanandan)

2.  25/04/22
Course Coordinator

 25/04/2022
HOD

 25/04/2022
CCO/Academic

20VC023 - ADVANCED VEHICLE TECHNOLOGY

L	T	P	Credit
2	0	0	1

Preamble	This course will provide a knowledge about the advanced technologies in the automobile industries.	
Unit - I	Vehicle Safety Systems:	15
Introduction- necessity of advanced systems in vehicles- Anti-theft device-immobilizer concept, system components and working. Remote less Key Entry (RKE) –PRKE system, working principle, merits and demerits - Intelligent Parking Assist System (IPAS), working, merits and demerits- Advanced technologies of 2021- ADAS system, Automatic Emergency Braking, Teen driver technology, Exit Warning to Protect Cyclists and Stolen Vehicle Tracking Software. Variable geometry turbo charging.		
Unit - II	Quality and Safety Management:	15
Intelligent prosecution of dangerous driving – Monitoring of drunk driving and Fatigue driving; Vehicle auxiliary intelligent Technology-Intelligent control technology of a car light, vehicle wind screen wiper, steering technology of Head lamps. Control technology for safety vehicle distance; switch technology in car doors, Engines: Variable geometry turbo charging; Optical techniques for defect evaluation.		

Total: 30

REFERENCES:

1. Xiubin Zhang Muhammad Mansoor Khan: Principles of Intelligent Automobiles –Springer, 2018
2. "New advances on vehicular technology and automotive engineering "-Edited by Joao Paulo Carmo and Joao Eduardo, Intech design team-July 2012.

COURSE OUTCOMES:

On completion of the course, the students will be able to

BT Mapped
(Highest Level)

CO1	understand the role of various intelligent systems of vehicle for safety	Understanding (K2)
CO2	compare the old systems from intelligent systems of vehicle	Understanding (K2)
CO3	know the working principles involved in Advanced Vehicle Technology systems	Understanding (K2)

Mapping of COs with POs and PSOs

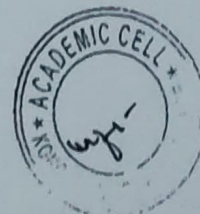
COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2		3		2	1								1
CO2	2		2		1	1								1
CO3	2		3		2									1

1 – Slight, 2 – Moderate, 3 – Substantial, BT- Bloom's Taxonomy

ASSESSMENT PATTERN - THEORY

Test / Bloom's Category*	Remembering (K1) %	Understanding (K2) %	Applying (K3) %	Analyzing (K4) %	Evaluating (K5) %	Creating (K6) %	Total %
Assessment Test1(50marks)	45	55					100
Assessment Test2(50marks)	40	60					100

Signature of the Chairman
Board of Studies - Automobile



Verified
[Signature] 06/10/2022

N. 29/7/22
[N. Beepalan/ap/Bos Coordinator]

[N. NITHYANANDHAN/AP/AUTO]

 Estd : 1984	KONGU ENGINEERING COLLEGE (Autonomous) PERUNDURAI - 638060 INTERNAL QUALITY ASSURANCE CELL		 CERT No. 99-100-20788 ISO 9001:2015
	Department of Automobile Engineering Attendance Sheet		

Title of the Course: 20VC023 - ADVANCED VEHICLE TECHNOLOGY

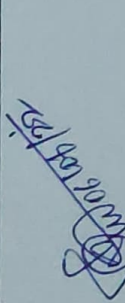
Date: From 05-05-2022 to 02-06-2022

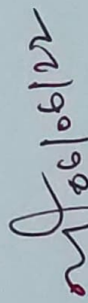
Sl. No.	Roll No.	Name	05/05	06/05	09/05	10/05	11/05	12/05	18/05	20/05	23/05	24/05	25/05	30/05	31/05	01/06	02/06
1	20AUR001	Abinaya S	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
2	20AUR004	Elamughil E	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	20AUR011	Mothys P N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	20AUR013	Narasimmabharathi S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	20AUR014	Nithiyarasan R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	20AUR015	Praveen Kumar S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	20AUR016	Sabari P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
8	20AUR017	Sibi Srinivas V R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	20AUR018	Sivakarthick S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
10	20AUR019	Somesh S S	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A
11	20AUR021	Vairavan T	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
12	20AUR022	Vasanth C	A	P	P	P	P	P	P	P	P	P	P	A	P	A	P
13	20AUR023	Vasanth T	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A
14	20AUR024	Vignesh.J	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P
15	20AUL026	Anbupranav B	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P

27/06/22

27/06/22
NITHYARASAN R

Sl. No.	Roll No.	Name	05/05	06/05	09/05	10/05	11/05	12/05	18/05	20/05	23/05	24/05	25/05	30/05	31/05	01/06	02/06
16	20AUL027	Barathkumar S	P	P	A	P	P	P	P	P	P	P	P	P	P	P	A
17	20AUL028	Dharanidharan S	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P
18	20AUL031	Jeevaprasanth T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	20AUL032	Kaaran S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
20	20AUL033	Kamalesh MD	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P
21	20AUL036	Mehanathan KS	P	A	P	P	A	P	P	P	P	P	P	P	P	A	P
22	20AUL037	Muruganantham C	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23	20AUL039	Nangulan P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A
24	20AUL042	Rajesh T	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
25	20AUL043	Rohit A S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	20AUL044	Rohith R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	20AUL045	Santhosh Surya S	P	A	P	P	P	P	P	P	P	A	A	P	P	P	P
28	20AUL046	Sarveshnanarayanan G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	20AUL048	Siluvaiarun Edison S	P	P	A	A	A	P	P	P	P	P	P	P	P	P	A
30	20AUL055	Sudharsan N	P	P	P	P	P	A	P	A	P	P	P	A	P	P	P
31	20AUL056	Sujith P	P	A	A	A	A	A	P	P	P	P	P	P	P	P	P


 Course Coordinator
 (A. NITHYANANDHAN)


 HOD Automobile



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DEPARTMENT OF AUTOMOBILE ENGINEERING



20VC023 - ADVANCED VEHICLE TECHNOLOGY

Attendance Percentage

Sl. No.	Roll No.	Name	Number of hours present	Number of hours absent	Attendance Percentage
1	20AUR001	Abinaya S	28	2	93
2	20AUR004	Elamughil E	30	0	100
3	20AUR011	Mothys P N	30	0	100
4	20AUR013	Narasimmabharathi S	30	0	100
5	20AUR014	Nithiyarasan R	30	0	100
6	20AUR015	Praveen Kumar S	28	2	93
7	20AUR016	Sabari P	30	0	100
8	20AUR017	Sibi Srinivas V R	28	2	93
9	20AUR018	Sivakarthish S	26	2	93
10	20AUR019	Somesh S S	30	0	100
11	20AUR021	Vairavan T	24	6	80
12	20AUR022	Vasanth C	24	6	80
13	20AUR023	Vasanth T	30	0	100
14	20AUR024	Vignesh.J	26	4	86
15	20AUL026	Anbupranav B	28	2	93
16	20AUL027	Barathkumar S	26	4	86
17	20AUL028	Dharani Dharan S	26	4	86
18	20AUL031	Jeevaprasanth T	30	0	100
19	20AUL032	Kaaran S	28	2	93
20	20AUL033	Kamalesh M D	28	2	93
21	20AUL036	Mehanathan K S	22	8	73
22	20AUL037	Muruganantham C	30	0	100
23	20AUL039	Nagulan P	26	4	86
24	20AUL042	Rajesh T	28	2	93
25	20AUL043	Rohit A S	30	0	100
26	20AUL044	Rohith R	30	0	100
27	20AUL045	Santhosh Surya S	24	6	80
28	20AUL046	Sarveshnanarayanan G	30	0	100
29	20AUL048	Siluvaiaarunedison S	22	8	73
30	20AUL055	Sudharsan N	24	6	80
31	20AUL056	Sujith P	20	10	66

Course Faculty

HoD/Automobile



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20VC023 - ADVANCED VEHICLE TECHNOLOGY
MARK SHEET

Sl. No.	Roll No.	Name	Test 1 out of 50	Test 1 out of 50	Total Mark out of 100
1	20AUR001	Abinaya S	38	50	88
2	20AUR004	Elamughil E	37	50	87
3	20AUR011	Mothys P N	39	50	89
4	20AUR013	Narasimmabharathi S	41	49	90
5	20AUR014	Nithiyarasan R	40	50	90
6	20AUR015	Praveen Kumar S	38	41	79
7	20AUR016	Sabari P	40	50	90
8	20AUR017	Sibi Srinivas V R	40	50	90
9	20AUR018	Sivakarthick S	39	42	81
10	20AUR019	Somesh S S	39	50	89
11	20AUR021	Vairavan T	41	46	87
12	20AUR022	Vasanth C	38	41	79
13	20AUR023	Vasanth T	38	50	88
14	20AUR024	Vignesh.J	40	50	90
15	20AUL026	Anbupranav B	41	50	91
16	20AUL027	Barathkumar S	40	50	90
17	20AUL028	Dharanidharan S	39	50	89
18	20AUL031	Jeevaprasanth T	21	50	71
19	20AUL032	Kaaran S	39	44	83
20	20AUL033	Kamalesh M D	40	50	90
21	20AUL036	Mehanathan K S	34	50	84
22	20AUL037	Muruganantham C	40	50	90
23	20AUL039	Nagulan P	38	50	88
24	20AUL042	Rajesh T	40	50	90
25	20AUL043	Rohit A S	40	49	89
26	20AUL044	Rohith R	42	50	92
27	20AUL045	Santhosh Surya S	40	50	90
28	20AUL046	Sarveshnarayanan G	37	49	86
29	20AUL048	Siluvaiarunedison S	34	48	82
30	20AUL055	Sudharsan N	40	50	90
31	20AUL056	Sujith P	40	50	90

(Signature)
Course Faculty
(NITHYANANDHAN)

(Signature)
HoD/Automobile