

MANAV RACHNA INTERNATIONAL UNIVERSITY

Metric 1.3.2(Q_nm)	Number of value-added courses for imparting transferable and life skills offered during the year
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AY 2016-17

Course Name	Course Code	Duration (Hours)	Number of students enrolled	Number of students passed
Automotive safety system	AU-VA-003	32	31	31



MANAV RACHNA INTERNATIONAL UNIVERSITY FARIDABAD

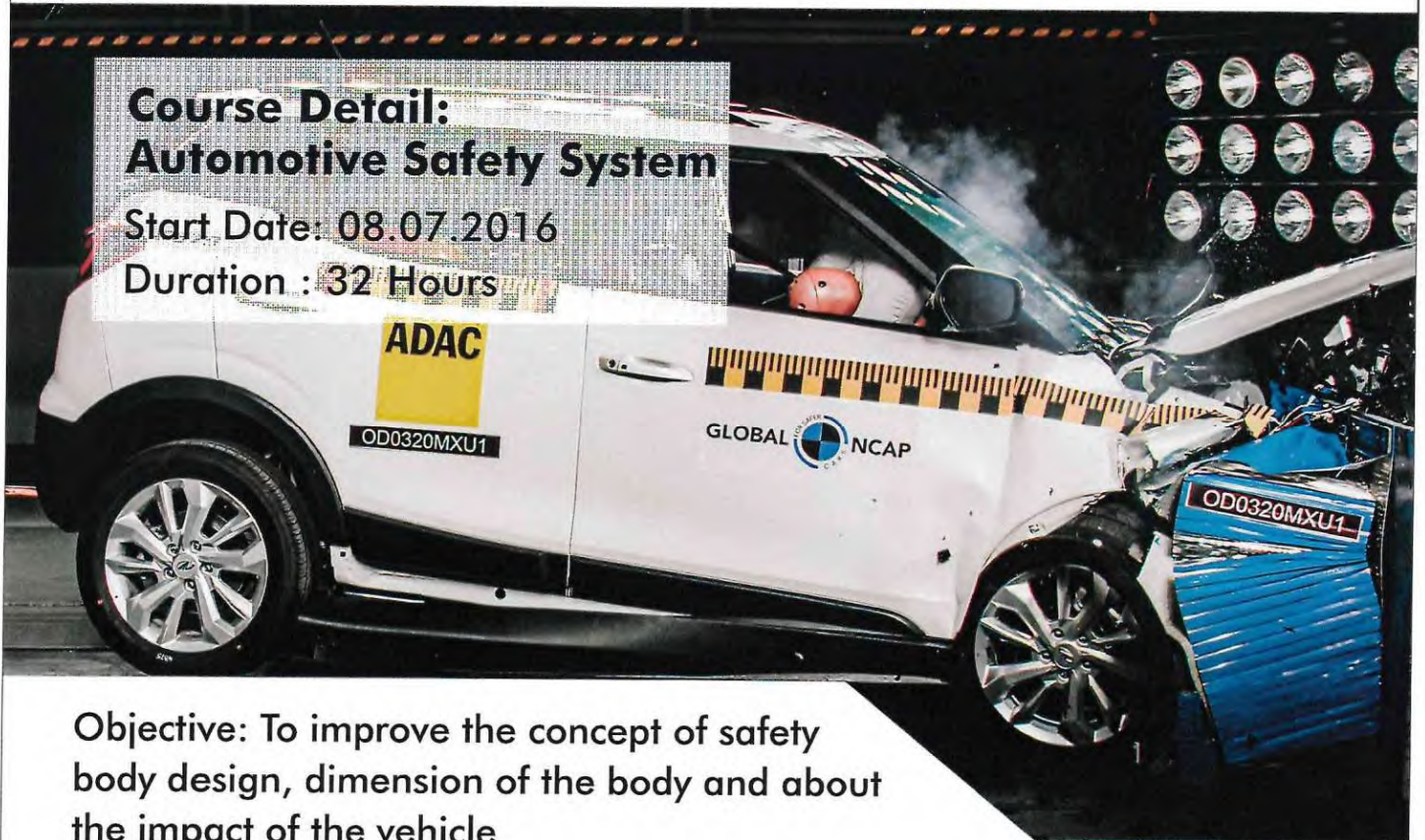
(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology

DEPARTMENT OF AUTOMOBILE ENGINEERING

Value Added Course Details

(ODD SEM 2016-17)



Objective: To improve the concept of safety body design, dimension of the body and about the impact of the vehicle

Key highlights: Safety Concepts, Safety Equipments, Comfort and Convenience System

Resource person: Mr. Nitin Waghmare

Registration Open from: 14.06.2016

Contact details: Sunny Bhatia, Assistant Professor

Contact Number: 8826004666



MANAV RACHNA INTERNATIONAL UNIVERSITY FARIDABAD

(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology

DEPARTMENT OF AUTOMOBILE ENGINEERING

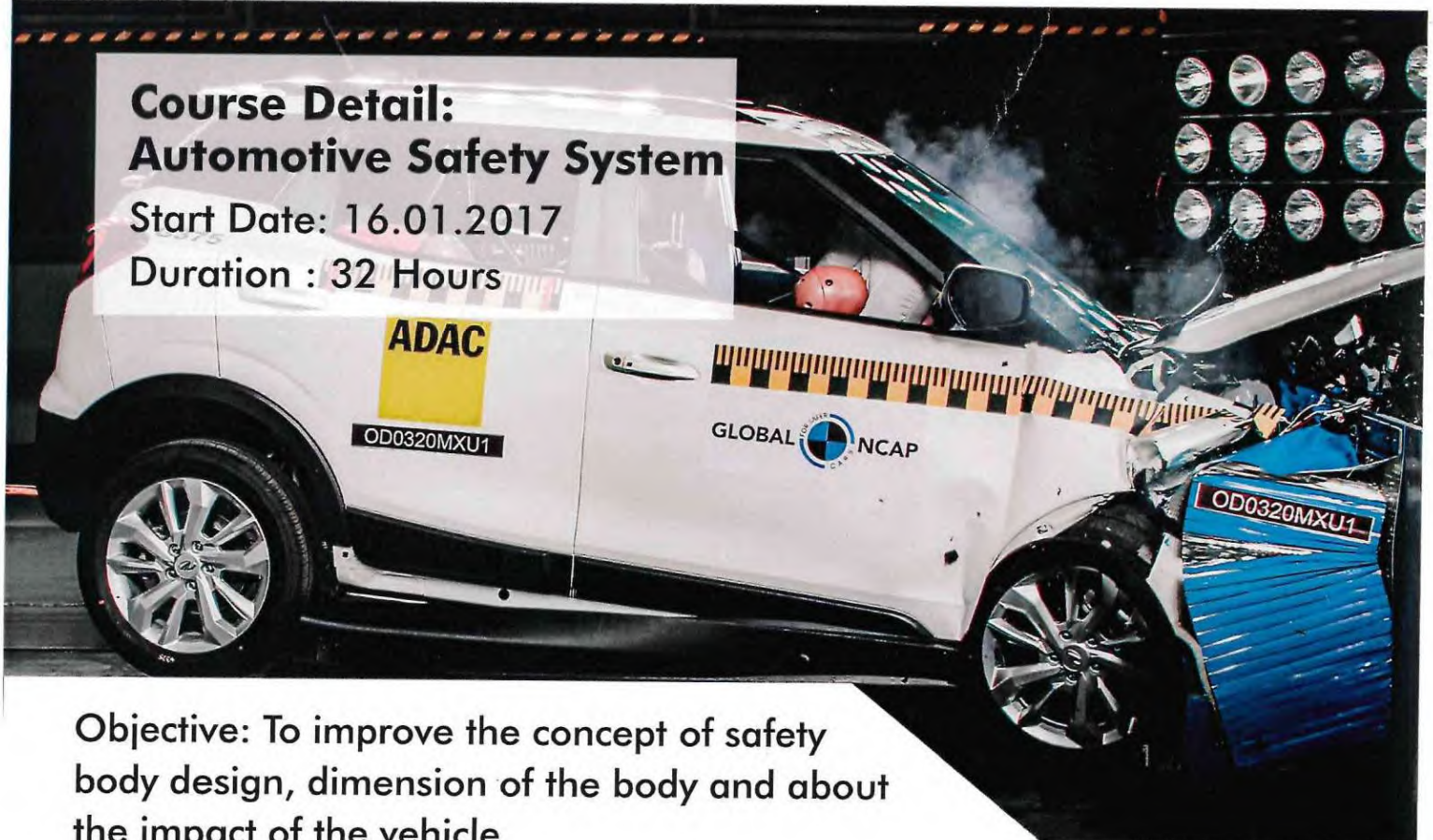
Value Added Course Details

(EVEN SEM 2016-17)

**Course Detail:
Automotive Safety System**

Start Date: 16.01.2017

Duration : 32 Hours



Objective: To improve the concept of safety body design, dimension of the body and about the impact of the vehicle

Key highlights: Safety Concepts, Safety Equipments, Comfort and Convenience System

Resource person: Mr. Nitin Waghmare

Registration Open from: 14.12.2016

Contact details: Sunny Bhatia, Assistant Professor

Contact Number: 8826004666



Manav Rachna International University

(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology Department of Automobile Engineering

SYLLABUS

AUTOMOTIVE SAFETY SYSTEM (Course Code: AU.VA003)

Course: Value Added

Course Coordinator: Nitin Waghmare

Periods/week: 32 hours

Course Outcomes:

- The student will be able to Identify and locate the most important parts of a vehicle.
- The student will be familiar in various systems that enhance vehicle safety, passenger Comfort, recent technologies in automobile field etc.
- The students able to describe the purpose of the fundamental automotive system in a vehicle.
- The students able to analyze the various safety equipments in an automobile vehicle.
- The student able to analyze how the vehicle's structure absorbs impact in a crash.
- The students able to create and design the comfort system and essential system in a vehicle

Syllabus:

Introduction: Design of the body for safety, energy equation, deceleration of vehicle inside passenger compartment, deceleration on impact with stationary and movable obstacle, safety sandwich construction. Safety Concepts: driving safety, conditional safety, perceptibility safety, exterior safety, interior safety, deformation behavior of vehicle body, speed and acceleration characteristics of passenger compartment on impact. Safety Equipments: regulations, automatic seat belt tightener system, collapsible steering column, tilt able steering wheel, electronic system for activating air bags, bumper design for safety. Collision Warning and Avoidance: Collision warning system, causes of rear end collision, frontal and rear object detection, object detection system with braking system Interactions. Comfort and Convenience System: Steering and mirror adjustment, central locking system, Garage door opening system, tyre pressure control system, rain sensor system.

Reference

- Ronald.K.Jurgen, "Automotive Electronics Handbook", Second Edition, McGraw-Hill Inc., 1999.

H.O.D



S.NO	ROLL NO.	STUDENT NAME	16.01.2017	16.01.2017	16.01.2017	16.01.2017	17.01.2017	17.01.2017	17.01.2017	17.01.2017	18.01.2017	18.01.2017	18.01.2017	18.01.2017	19.01.2017	19.01.2017	19.01.2017	19.01.2017	20.01.2017	20.01.2017	20.01.2017	20.01.2017	21.01.2017	21.01.2017	21.01.2017	21.01.2017	23.01.2017	23.01.2017	23.01.2017	23.01.2017	24.01.2017	24.01.2017	24.01.2017	24.01.2017	Total	% attendance
			4hrs				4hrs				4hrs				4hrs				4hrs				4hrs				4hrs				4hrs					
1	1/14/FET/BME/1/021	ANKIT	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	A	p	p	p	A	A	p	p	26	86.67%	
2	1/14/FET/BME/1/022	ABHISHEK VASHISHT	A	A	p	p	p	A	A	p	p	p	A	A	p	p	A	A	A	p	p	p	p	p	p	p	p	p	p	A	A	p	p	22	73.33%	
3	1/14/FET/BAU/1/001	HIMANSHU SETHI	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	A	p	p	p	p	p	p	p	p	p	p	A	p	p	28	93.33%		
4	1/14/FET/BAU/1/003	SANJEEV	p	A	p	p	p	A	A	p	p	p	A	A	p	p	p	A	A	p	p	p	p	p	p	p	p	A	A	p	p	p	p	23	76.67%	
5	1/14/FET/BAU/1/006	AMIT YADAV	p	p	p	A	A	p	p	A	A	p	p	p	p	p	A	p	p	p	p	p	p	p	p	p	p	p	A	A	p	p	p	p	26	86.67%
6	1/14/FET/BAU/1/011	KAPIL YADAV	p	p	p	p	p	p	p	p	p	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	30	100.00%	
7	15/FET/AU(L)/1001	SANGRAM BISWAS	A	A	p	p	p	p	A	A	p	p	p	p	p	p	p	p	A	p	A	p	A	p	p	p	p	p	A	p	A	p	p	23	76.67%	
8	1/14/FET/BAU/2/003	MOHAMMED TANZEEL	p	p	p	A	p	p	p	p	A	A	p	A	A	p	p	p	p	A	p	p	p	p	p	p	p	A	p	A	p	p	24	80.00%		
9	1/14/FET/BAU/2/005	TANMAY GOYAL	p	p	p	p	p	A	A	p	A	A	A	p	p	p	p	p	A	p	p	p	p	p	p	p	A	p	A	p	p	p	p	26	86.67%	
10	1/14/FET/BAU/2/007	HARIT BATRA	p	p	A	A	p	p	p	p	p	A	p	p	p	p	p	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	23	76.67%	
11	1/14/FET/BAU/2/009	VASU DHINGRA	A	p	p	p	p	p	A	A	p	p	p	p	p	A	p	p	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	27	90.00%	
12	1/14/FET/BAU/2/011	RAJAN NIRWAL	p	p	A	A	p	p	p	p	p	p	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	26	86.67%	
13	14/FET/M(L)/2001	ATUL DHIMAN	p	p	A	A	p	A	A	p	A	A	p	p	p	p	p	p	A	p	p	p	p	p	p	p	p	A	A	p	p	p	p	23	76.67%	
14	14/FET/M(L)/2008	ROHIT BORAH	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	p	p	p	p	p	p	p	p	p	p	A	A	p	p	p	p	28	93.33%	
15	1/13/FET/BME/1/065	ROHAN GOEL	p	A	A	p	p	A	A	p	p	p	p	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	A	p	p	25	83.33%	
16	1/13/FET/BME/1/066	HIMANSHU TOLAMBIA	A	p	p	p	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	24	80.00%	
17	1/14/FET/BCI/1/018	HARSH VARDHAN	p	A	A	p	p	p	p	p	p	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	A	p	p	p	p	26	86.67%	
18	1/14/FET/BCI/1/019	MOHIT ATRI	p	p	p	p	p	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	A	p	p	p	p	25	83.33%	
19	1/14/FET/BCI/1/020	KULDEEP SINGH	p	p	A	A	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	A	p	A	p	p	p	24	80.00%	

Course Coordinator
 Signature 



MANAV RACHNA INTERNATIONAL UNIVERSITY
 FACULTY OF ENGINEERING AND TECHNOLOGY
 DEPARTMENT OF AUTOMOBILE ENGINEERING
 SUBJECTS NAME: AUTOMOTIVE SAFETY
 SUBJECT CODE: AU-VA-003

S.NO	ROLL NO.	STUDENT NAME	08.07.2016	08.07.2016	09.07.2016	09.07.2016	09.07.2016	11.07.2016	11.07.2016	11.07.2016	12.07.2016	12.07.2016	12.07.2016	13.07.2016	13.07.2016	13.07.2016	14.07.2016	14.07.2016	14.07.2016	15.07.2016	15.07.2016	15.07.2016	16.07.2016	16.07.2016	16.07.2016	18.07.2016	18.07.2016	18.07.2016	19.07.2016	19.07.2016	19.07.2016	20.07.2016	20.07.2016	20.07.2016	Total	% attendance	
			2hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs		3hrs				
1	1/13/FET/BEE/2/006	SAMI AKHTAR	P	P	P	A	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	32		
2	1/13/FET/BEE/2/013	NIKHIL KHERA	A	P	P	P	P	A	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	93.33%
3	14/FCH/BCOM(H)/077	SAKSHI GULATI	P	P	A	A	A	P	P	P	P	P	P	P	P	A	P	P	A	P	A	P	P	P	P	P	A	A	P	P	P	P	P	P	P	27	90.00%
4	1/13/FET/BCS/1/071	AAKRITI SINGLA	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	24	80.00%
5	1/13/FET/BCS/1/072	REVAANT SYAL	P	P	P	P	P	A	P	A	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	28	93.33%
6	1/13/FET/BCS/1/073	CHARU KHANJO	P	P	A	P	P	A	P	P	P	P	A	P	P	P	P	A	P	P	A	A	A	P	P	P	A	P	A	A	P	P	P	P	P	26	86.67%
7	14/FCH/BCOM(H)/055	MOHAMMAD RAISUZZAMAN	A	P	P	P	P	P	P	P	P	A	A	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	22	73.33%
8	14/FCH/BCOM(H)/056	MOHIT BHADANA	P	P	P	P	A	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	27	90.00%
9	14/FCH/BCOM(H)/057	MOHIT HANS	P	P	A	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	27	90.00%
10	14/FCH/BCOM(H)/058	MONALISA DAS	A	P	P	P	P	A	A	P	P	A	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	83.33%
11	14/FCH/BCOM(H)/065	PRATEEK CHADDA	P	A	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	27	90.00%
12	14/FCH/BCOM(H)/066	PRIYA GOYAL	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	29	96.67%

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MANAV RACHNA
vidyanatariksha

MANAV RACHNA INTERNATIONAL UNIVERSITY

(Faridabad, Haryana)

(Deemed to be University under section 3 of the UGC act, 1956)

Faculty of Engineering and Technology
Department of Automobile Engineering

Academic Year: 2016-17

It is to certify that _____ Roll No: _____ student
of _____ programme of MRIU has successfully
completed the certificate course / value-added course titled “Automotive safety
system” course code “AU-VA-003” conducted by the Department from 08.07.2016 to
20.07.2016

Course Coordinator

Date: 08.08.2016

Head of Department



MANAV RACHNA
vidyanatariksha

MANAV RACHNA INTERNATIONAL UNIVERSITY

(Faridabad, Haryana)

(Deemed to be University under section 3 of the UGC act, 1956)

Faculty of Engineering and Technology
Department of Automobile Engineering

Academic Year: 2016-17

It is to certify that _____ Roll No: _____ student
of _____ programme of MRIU has successfully
completed the certificate course / value-added course titled “Automotive safety
system” course code “AU-VA-003” conducted by the Department from 16.01.2017 to
24.01.2017.

Course Coordinator

Date: 10.02.2017

Head of Department

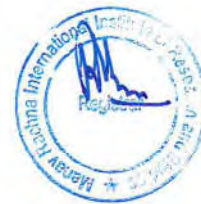


MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

Metric 1.3.2(Q_nm)	Number of value-added courses for imparting transferable and life skills offered during the year
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AY 2017-18

Course Name	Course Code	Duration (Hours)	Number of students enrolled	Number of students passed
Automotive safety system	AU-VA-003	32	34	32



MANAV RACHNA INTERNATIONAL UNIVERSITY FARIDABAD

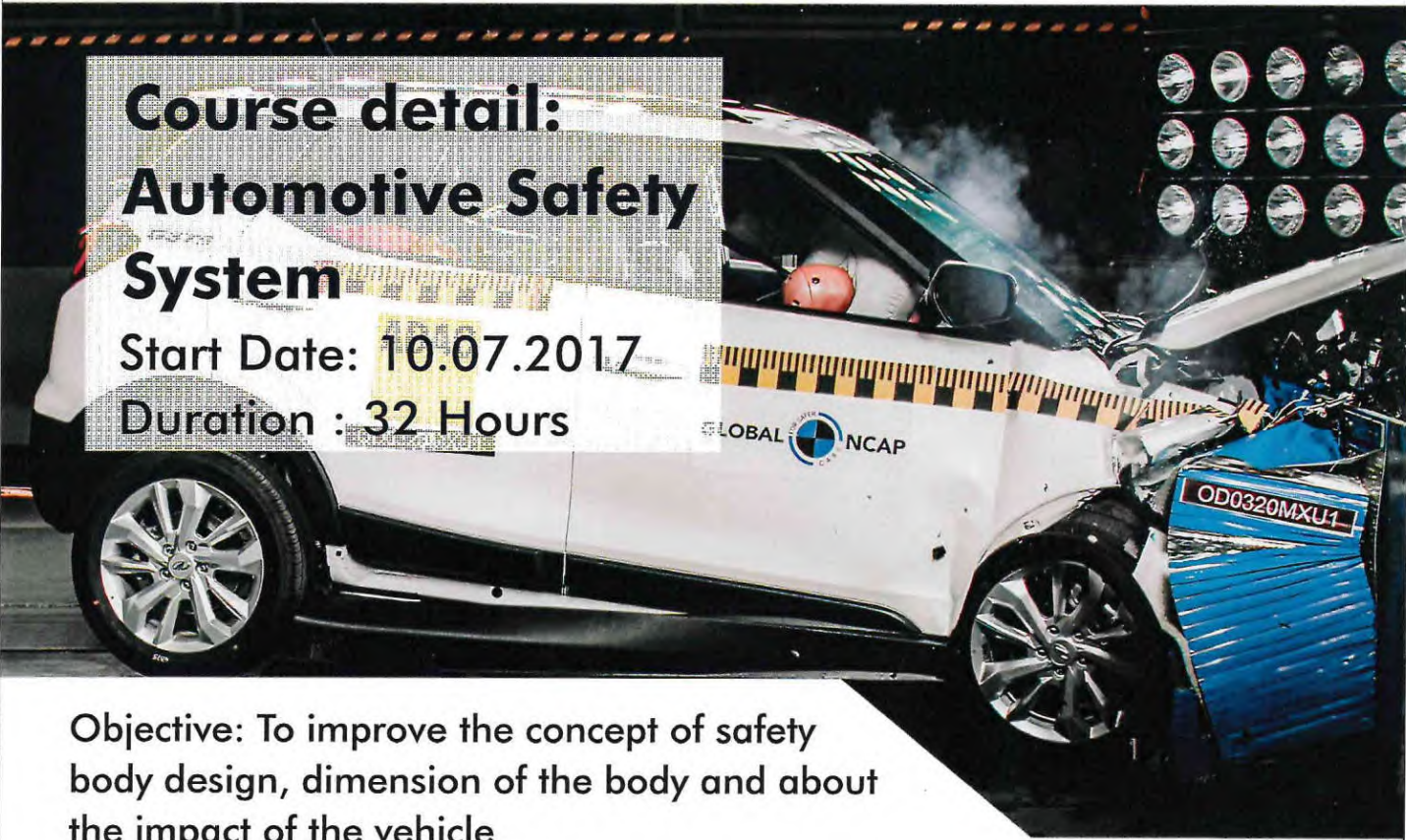
(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology

DEPARTMENT OF AUTOMOBILE ENGINEERING

Value Added Course Details

(ODD SEM 2017-18)



**Course detail:
Automotive Safety
System**

Start Date: 10.07.2017

Duration : 32 Hours

Objective: To improve the concept of safety body design, dimension of the body and about the impact of the vehicle

Key highlights: Safety Concepts, Safety Equipments, Comfort and Convenience System

Resource person: Mr. Nitin Waghmare

Registration Open from: 16.06.2017

Contact details: Sunny Bhatia, Assistant Professor

Contact Number: 8826004666



Manav Rachna International University

(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology Department of Automobile Engineering

SYLLABUS

AUTOMOTIVE SAFETY SYSTEM (Course Code: AU.VA003)

Course: Value Added

Course Coordinator: Nitin Waghmare

Periods/week: 32 hours

Course Outcomes:

- The student will be able to Identify and locate the most important parts of a vehicle.
- The student will be familiar in various systems that enhance vehicle safety, passenger Comfort, recent technologies in automobile field etc.
- The students able to describe the purpose of the fundamental automotive system in a vehicle.
- The students able to analyze the various safety equipments in an automobile vehicle.
- The student able to analyze how the vehicle's structure absorbs impact in a crash.
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Reference

- Ronald.K.Jurgen, "Automotive Electronics Handbook", Second Edition, McGraw-Hill Inc., 1999.



H.O.D

S.NO	ROLL NO	STUDENT NAME	10.07.2017	10.07.2017	10.07.2017	10.07.2017	11.07.2017	11.07.2017	11.07.2017	11.07.2017	12.07.2017	12.07.2017	12.07.2017	12.07.2017	13.07.2017	13.07.2017	13.07.2017	13.07.2017	14.07.2017	14.07.2017	14.07.2017	14.07.2017	15.07.2017	15.07.2017	15.07.2017	15.07.2017	17.07.2017	17.07.2017	17.07.2017	17.07.2017	18.07.2017	18.07.2017	18.07.2017	18.07.2017	Total	% Attendance		
			4hrs				4hrs				4hrs				4hrs				4hrs				4hrs				4hrs				4hrs						4hrs	
1	17/FET/AU(L)/004	ROHIT GUPTA	P	A	A	P	P	P	A	A	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32		
2	17/FET/AU(L)/005	SHAGUN SHARMA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	83.3	
3	17/FET/AU(L)/006	HIMANSHU UPADHAYAY	P	A	A	P	P	A	A	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	28	93.3	
4	1/15/FET/BAU/1/018	DIBYA MANI GAUTAM	P	P	P	P	P	A	A	P	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	26	86.7
5	1/15/FET/BAU/1/020	MOHIT YADAV	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	10	33.3	
6	16/FET/AU(L)/1002	GURPREET ARORA	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	100.0	
7	1/15/FET/BAE/1/007	JITENDRA SINGH	P	P	P	P	A	A	P	P	A	A	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7
8	1/15/FET/BAE/1/008	ABHISHEK PRATAP SINGH	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7
9	1/15/FET/BCI/1/032	HEISNAM BOSKY DEVI	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	100.0
10	1/15/FET/BCI/1/034	SAHIL BANSAL	P	P	P	P	P	P	A	A	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	28	93.3
11	1/16/FET/BME/1/030	ANKIT	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	83.3
12	1/16/FET/BME/1/035	PRANKUL	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	12	40.0
13	1/16/FET/BME/1/042	KUNWAR	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7
14	1/16/FET/BME/1/045	SHANU	A	A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	28	93.3
																																					26	86.7

Course Coordinator:

Signature



S.NO	ROLL NO	STUDENT NAME	10.07.2017	10.07.2017	10.07.2017	10.07.2017	11.07.2017	11.07.2017	11.07.2017	11.07.2017	12.07.2017	12.07.2017	12.07.2017	12.07.2017	13.07.2017	13.07.2017	13.07.2017	13.07.2017	14.07.2017	14.07.2017	14.07.2017	14.07.2017	15.07.2017	15.07.2017	15.07.2017	15.07.2017	17.07.2017	17.07.2017	17.07.2017	17.07.2017	18.07.2017	18.07.2017	18.07.2017	18.07.2017	Total	% Attendance	
			4hrs				4hrs				4hrs				4hrs				4hrs				4hrs				4hrs										
15	1/16/FET/BME/1/033	MANJEET KUMAR	P	A	A	P	P	P	A	A	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	25	83.3		
16	1/16/FET/BME/1/034	AAKASH TIWARI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	A	A	P	P	P	P	P	28	93.3	
17	1/16/FET/BME/1/035	PRANKUL VERMA	P	A	A	P	P	A	A	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7	
18	1/16/FET/BME/1/036	LALIT KUMAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	A	A	P	P	P	P	P	P	28	93.3	
19	1/16/FET/BME/1/037	MD YASIR SAIFI	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	100.0	
20	1/16/FET/BME/1/038	AMAN PRASAD	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	A	A	P	P	P	P	P	P	P	P	P	P	26	86.7	
21	1/16/FET/BME/1/039	AAKASH SISODIA	P	P	P	P	A	A	P	P	A	A	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7
22	1/16/FET/BME/1/040	SHIVAM BHARDWAJ	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	100.0	
23	1/16/FET/BME/1/080	Mayank Bhardwaj	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	28	93.3
24	17/FET/M(L)/001	ANMOL SHARMA	P	A	A	P	P	P	A	A	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	25	83.3	
25	17/FET/M(L)/002	ARUN BANSAL	P	A	A	P	P	P	A	A	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	25	83.3	
26	17/FET/M(L)/003	VIKAS KUMAR JHA	P	P	P	P	P	P	P	A	A	P	P	P	P	A	A	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7
27	17/FET/M(L)/004	MAYANK KHANNA	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	28	93.3
28	17/FET/M(L)/005	SANTOSH MANDAL	A	A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	26	86.7
29	17/FET/M(L)/006	SHAHROZ KHAN	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	28	93.3
30	17/FET/M(L)/007	SARANSH GUPTA	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	25	83.3
31	17/FET/M(L)/008	ANURAG SINGH	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	25	83.3
32	17/FET/M(L)/009	YOGESH KASHYAP	P	P	P	P	P	P	P	A	A	P	P	P	P	A	A	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	86.7
33	17/FET/M(L)/011	RITANSHU	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	28	93.3
34	1/16/FET/BME/1/031	JAI PRAKASH	A	A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	26	86.7

Course Coordinator
Signature





MANAV RACHNA
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MANAV RACHNA INTERNATIONAL UNIVERSITY

(Faridabad, Haryana)

(Deemed to be University under section 3 of the UGC act, 1956)

Faculty of Engineering and Technology
Department of Automobile Engineering

Academic Year: 2017-18

It is to certify that _____ Roll No: _____ student
of _____ programme of MRIU has
successfully completed the certificate course / value-added course titled "Automotive
safety system" course code "AU-VA-003" conducted by the Department from
10.07.2017 to 18.07.2017.

Course Coordinator

Date: 28.07.2017

Head of Department



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

Metric 1.3.2(Q_nm)	Number of value-added courses for imparting transferable and life skills offered during the year
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AY 2018-19

Course Name	Course Code	Duration (Hours)	Number of students enrolled	Number of students passed
Automotive Safety System	AU-VA-003	32	45	44



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology

DEPARTMENT OF AUTOMOBILE ENGINEERING

Value Added Course Details

(ODD SEM 2018-19)



Objective: To improve the concept of safety body design, dimension of the body and about the impact of the vehicle

Key highlights: Safety Concepts, Safety Equipments, Comfort and Convenience System

Resource person: Mr. Nitin Waghmare

Registration Open from: 13.06.2018

Contact details: Sunny Bhatia, Assistant Professor

Contact Number: 8826004666



Manav Rachna International Institute of Research and Studies

(Deemed to be University under section 3 of the UGC Act 1956)

**Faculty of Engineering and Technology
Department of Automobile Engineering**

SYLLABUS

AUTOMOTIVE SAFETY SYSTEM (Course Code: AU.VA003)

Course: Value Added

Course Coordinator: Nitin Waghmare

Periods/week: 32 hours

Course Outcomes:

- The student will be able to Identify and locate the most important parts of a vehicle.
- The student will be familiar in various systems that enhance vehicle safety, passenger Comfort, recent technologies in automobile field etc.
- The students able to describe the purpose of the fundamental automotive system in a vehicle.
- The students able to analyze the various safety equipments in an automobile vehicle.
- The student able to analyze how the vehicle's structure absorbs impact in a crash.
- The students able to create and design the comfort system and essential system in a vehicle


Syllabus:

Introduction: Design of the body for safety, energy equation, deceleration of vehicle inside passenger compartment, deceleration on impact with stationary and movable obstacle, safety sandwich construction. Safety Concepts: driving safety, conditional safety, perceptibility safety, exterior safety, interior safety, deformation behavior of vehicle body, speed and acceleration characteristics of passenger compartment on impact. Safety Equipments: regulations, automatic seat belt tightener system, collapsible steering column, tilt able steering wheel, electronic system for activating air bags, bumper design for safety: Collision Warning and Avoidance: Collision warning system, causes of rear end collision, frontal and rear object detection, object detection system with braking system Interactions. Comfort and Convenience System: Steering and mirror adjustment, central locking system, Garage door opening system, tyre pressure control system, rain sensor system.

Reference

- Ronald.K.Jurgen, "Automotive Electronics Handbook", Second Edition, McGraw-Hill Inc., 1999.




Head of the Department
Automobile Engineering
FEET, MRIIRS, Faridabad

MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES
 FACULTY OF ENGINEERING AND TECHNOLOGY
 DEPARTMENT OF AUTOMOBILE ENGINEERING
 ACADEMIC YEAR (2018-19) ODD SEMESTER
 SUBJECTS NAME: AUTOMOTIVE SAFETY SYSTEM
 SUBJECT CODE: AU-VA-003

S.no	Roll No	Name	06.07.2018				07.07.2018				08.07.2018				09.07.2018				10.07.2018				11.07.2018				12.07.2018				13.07.2018				14.07.2018				Total Attendance	% Attendance
			4hrs				4hrs				4hrs				4hrs				4hrs				4hrs				4hrs													
			A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32			
26	18/FMS/MBA/001	SHIV SHANKAR SHANKAR PANDEY	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	81.25			
27	18/FMS/MBA/002	AMANPREET KAUR	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	81.25		
28	18/FMS/MBA/003	ESHA VERMA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	84.38		
29	18/FMS/MBA/004	PABITRA GHIMIRE	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	87.50		
30	18/FMS/MBA/005	RAKHI SHERAWAT	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	81.25		
31	18/FMS/MBA/006	KIRAN NEGI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	93.75		
32	18/FMS/MBA/007	SHIVANI UPREJA	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	87.50		
33	18/FMS/MBA/008	SHIVAM PANWAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	84.38		
34	18/FMS/MBA/009	MUKUL VERMA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	29	90.63		
35	18/FMS/MBA/010	SUVENDU NAYAK	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	78.13		
36	16/FCBS/BBA(BANK)/002	AJAY SHARMA	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	84.38		
37	16/FCBS/BBA(BANK)/003	AKASH	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	81.25		
38	16/FCBS/BBA(BANK)/004	AKSHAY GOPALKA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	84.38		
39	16/FCBS/BBA(BANK)/005	AMAN BAKSHI	P	P	P	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	13	40.63		
40	16/FCBS/BBA(BANK)/006	ESHA GOYAL	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	78.13		
41	16/FCBS/BBA(BANK)/008	KRITIKA OBEROI	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	84.38		
42	16/FCBS/BBA(BANK)/010	LAKSHYA CHAUDHARY	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	81.25		
43	16/FCBS/BBA(BANK)/011	MAHENDRA PRATAP SINGH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	78.13		
44	16/FCBS/BBA(BANK)/013	MILIND BHATIA	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	75.00		
45	16/FCBS/BBA(BANK)/015	POONAM GOYAL	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	84.38		

Course Coordinator






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MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

(Faridabad, Haryana)

(Deemed to be University under section 3 of the UGC act, 1956)

Faculty of Engineering and Technology

Department of Automobile Engineering

Academic Year: 2018-19

It is to certify that _____ Roll No: _____ student
of _____ programme of MRIU has
successfully completed the certificate course / value-added course titled "Automotive safety
system" course code "AU-VA-003" conducted by the Department from 06.07.2018 to 14.07.2018.

Course Coordinator

Date: 26.07.2018

Head of Department



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

Metric 1.3.2(Q_nm)	Number of value-added courses for imparting transferable and life skills offered during the year
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AY 2020-21

Course Name	Course Code	Duration (Hours)	Number of students enrolled	Number of students passed
Automotive Safety System	AU-VA-003	32	24	23



MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

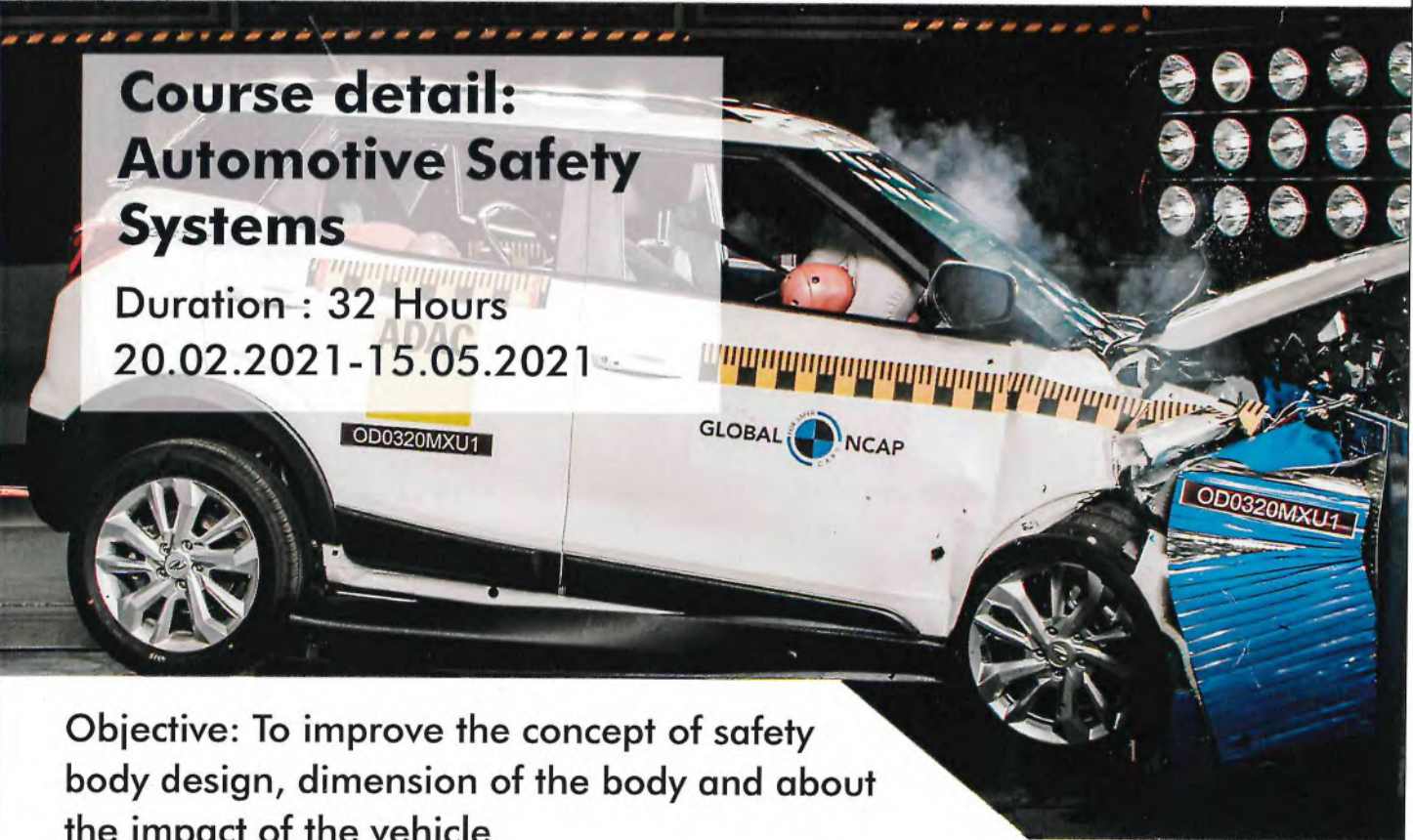
(Deemed to be University under section 3 of the UGC Act 1956)

Faculty of Engineering and Technology

DEPARTMENT OF AUTOMOBILE ENGINEERING

Value Added Course Details

(EVENSEM 2020-21)



**Course detail:
Automotive Safety
Systems**

Duration : 32 Hours

20.02.2021-15.05.2021

Objective: To improve the concept of safety body design, dimension of the body and about the impact of the vehicle

Key highlights: Safety Concepts, Safety Equipments, Comfort and Convenience System

Resource person: Mr. Nitin Waghmare

Registration Open from: 01.02.2021

Contact details: Sunny Bhatia, Assistant Professor

Contact Number: 8826004666



Manav Rachna International Institute of Research and Studies

(Deemed to be University under section 3 of the UGC Act 1956)

**Faculty of Engineering and Technology
Department of Automobile Engineering**

SYLLABUS

AUTOMOTIVE SAFETY SYSTEM (Course Code: AU.VA003)

Course: Value Added

Course Coordinator: Nitin Waghmare

Periods/week: 32 hours

Course Outcomes:

- The student will be able to Identify and locate the most important parts of a vehicle.
- The student will be familiar in various systems that enhance vehicle safety, passenger Comfort, recent technologies in automobile field etc.
- The students able to describe the purpose of the fundamental automotive system in a vehicle.
- The students able to analyze the various safety equipments in an automobile vehicle.
- The student able to analyze how the vehicle's structure absorbs impact in a crash.
- The students able to create and design the comfort system and essential system in a vehicle

Syllabus:

Introduction: Design of the body for safety, energy equation, deceleration of vehicle inside passenger compartment, deceleration on impact with stationary and movable obstacle, safety sandwich construction. Safety Concepts: driving safety, conditional safety, perceptibility safety, exterior safety, interior safety, deformation behavior of vehicle body, speed and acceleration characteristics of passenger compartment on impact. Safety Equipments: regulations, automatic seat belt tightener system, collapsible steering column, tilt able steering wheel, electronic system for activating air bags, bumper design for safety: Collision Warning and Avoidance: Collision warning system, causes of rear end collision, frontal and rear object detection, object detection system with braking system Interactions. Comfort and Convenience System: Steering and mirror adjustment, central locking system, Garage door opening system, tyre pressure control system, rain sensor system.

Reference

- Ronald.K.Jurgen, "Automotive Electronics Handbook", Second Edition, McGraw-Hill Inc., 1999.




Head of the Department
Automobile Engineering
FET, MRIIRS, Faridabad



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MANAV RACHNA INTERNATIONAL INSTITUTE OF RESEARCH AND STUDIES

(Faridabad, Haryana)

(Deemed to be University under section 3 of the UGC act, 1956)

Faculty of Engineering and Technology

Department of Automobile Engineering

Academic Year: 2020-21

It is to certify that _____ Roll No: _____ student
of _____ programme of MRIIRS
has successfully completed the certificate course / value-added course titled "Automotive safety
System" course code "AU-VA-003" conducted by the Department from 20.02.2021 to 15.05.2021.

Course Coordinator

Date: 03.06.2021

Head of Department