

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma in Automobile Engineering
Semester: 4

Subject Name: VEHICLE BODY ENGINEERING

Sr. No.	Course Content
1	<p>BODY DETAILS :</p> <p>1.1 Car body details Types: saloon car, convertibles, limousine, estate van/car, racing car and sports car</p> <p>1.2 Bus body details Types: mini bus, single decker, double-decker, two level and articulated bus, Bus body layout: floor height, engine location, entrance & exit location, Conventional and integral type construction</p> <p>1.3 Commercial body details Types: flat platform, drop side, tipper body, tanker body</p>
2	<p>BODY REPAIR TOOLS AND SHOP EQUIPMENT :</p> <p>2.1 Basic hand tools</p> <p>2.2 Power tools</p> <p>2.3 Body shop equipments</p> <p>2.4 Safety measures</p>
3	<p>MINOR BODY REPAIRS :</p> <p>3.1 Repairing of small dents</p> <p>3.2 Repairing of rusted body panels</p>
4	<p>MAJOR BODY REPAIRS :</p> <p>4.1 Front end collision</p> <p>4.2 Rear end collision</p> <p>4.3 Side collision</p> <p>4.4 Roll-over damage</p>
5	<p>MISCELLANEOUS BODY SERVICE :</p> <p>5.1 Interior trim and upholstery</p> <p>5.2 Glass and door service</p> <p>5.3 Body insulation and sealing</p> <p>5.4 Exterior trim</p>
6	<p>BODY MATERIALS AND SURFACE FINISH :</p> <p>6.1 Timber, metal sheets (steel, aluminum etc.), plastic, GRP (glass reinforced plastic), FRP (fiber reinforced plastic), composite materials, glass</p> <p>6.2 Corrosion, anticorrosion methods, paint and painting process.</p>

SUGGESTIVE LIST OF LABORATORY EXPERIMENTS:

1. Study of car-body construction with sketches.
2. Study the construction of typical truck & bus body and draw sketches.
3. Study of tools required for body repairing work.
4. Study of minor body repairing work.
5. Study of major body repairing work.
6. Study of glasses and door fitting and repairing process.
7. Study of upholstery.
8. Study of various body materials.
9. Study of paints, painting process and surface finish process.

Reference Books:

Sr. No.	Title	Author	Publisher
1	Auto Body Repair	Clarence A. Brooks, Lester G. Duenk, W. Randolph Williams	Glencoe/McGraw-Hill
2	The Repair of Vehicle Bodies	A. Robinson	Heinemann Educational Books Ltd.
3	The Principles of Auto Body Repairing and Repainting	A. Tait, A.G. Deroche, N.N. Hildebrand	Prentice-Hall, Inc., London
4	Vehicle Body Engineering	J. Pawlowski	Business Books (London)
5	Automobile Engineering – Vol.-IV	Anil Chhikara	Satya Prakashan, New Delhi
6	Vehicle Body Layout and Analysis	John Fenton	Mechanical Engineering Publications (London)
7	Automotive Refinishing	Harry T. Chudy	Prentice Hall
8	Motor Body Repair and Refinishing	E.B.weston	Newnes-Butterworth (Oxford)
9	Body Construction and Design	Giles J.G.	Liiffe Books Butterworth & Co.
10	Automobile Engineering – Vol.-V	Anil Chhikara	Satya Prakashan, New Delhi