

# CBSE | DEPARTMENT OF SKILL EDUCATION

## CURRICULUM FOR SESSION 2022-2023

### **AUTOMOTIVE (SUBJECT CODE 404)**

**JOB ROLE: SALES EXECUTIVE DEALER**

**CLASS – IX & X**

#### **COURSE OVERVIEW:**

Automotive - Sales Executive Dealer performs the activity related to preparation of sales of automobile products such as two wheeler, four wheeler, light motor vehicle, heavy automobile and transport vehicle. As sales executive he plan promote sales of automobile products through various mean such as retailer, dealer, stockiest and other outlets. Sales Executive Dealer is responsible for supporting sales to generate sales leads (telemarketing activities) and also support overall sales process to support both sales and service activities.

#### **OBJECTIVES OF THE COURSE:**

Followings are the main objectives of this course.

- Communicate effectively with the customers;
- Identify the principal components of a computer system
- Identify and control hazards in the workplace that pose a danger or threat to their safety or, or that of others.
- Demonstrate self-management skills.
- Demonstrate the ability to provide a self-analysis in context of entrepreneurial skills and abilities.
- Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection.
- Identify and demonstrate safe use of hand and power tools/equipment used in vehicle showroom;
- Generate sales leads through telemarketing activities
- Support the overall sales process
- Plan and organise work to meet expected outcomes
- Recognize the benefits of great customer service;

- Provide customers necessary information appropriately and systematically;
- Use techniques to provide services based on customer's needs and wants;
- Administer first aid to a casualty with small cuts, grazes, bruises, external bleeding, minor burns and scalds.

### **SALIENT FEATURES:**

- Automotive as a vehicle unit.
- Systems/sub systems & components.
- Automotive electronics for safety, pollution control, fuel efficiency and comforts.
- Other related areas of automotive electronics for traffic management, diagnostics, repair etc.

### **LIST OF EQUIPMENT AND MATERIALS:**

The list given below is suggestive and an exhaustive list should be prepared by the vocational teacher. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

1. Two Post lift
2. Air compressor
3. Wheel balancer
4. Bench vice
5. Work tables
6. Bench grinder
7. Oil draining & filling equipment
8. Cooling system tester
9. Multi meter
10. Hydro meter
11. BC clamp meter
12. Coolant tester
13. Battery & charging system tester (Megatronics)
14. Diagnostic tool (genesis Evo)
15. Hand tools
16. Pneumatic tools
17. Torque wrenches
18. Car seat covers
19. Steering covers
20. Gear Knob covers
21. Fender covers/kits
22. Floor mats
23. Cotton gloves
24. Hard toed boots

25. Sun glasses (3 m)
26. Bump caps
27. Air tester filter machine
28. Hydraulic press
29. Hydraulic jacks
30. Vehicle safety stands
31. Parts washing station car
32. Pullers
33. Sliding hammer
34. Wheel aligner
35. Head Light Focusing
36. A/c Machine (124 Robin air)
37. General Hand Tools
38. A/c Leakage Tester
39. Old car

### **CAREER OPPORTUNITIES:**

Automobile engineering is a huge industry. There is great number of employment opportunities in the following fields:

- Private national and multinational automobile companies
- Service stations
- Private transport companies

### **VERTICAL MOBILITY:**

At BSC level, students may start their career as –

- Sales Consultant in Showroom
- Dealership Telecaller Sales Executive

### **CURRICULUM:**

This course is a planned sequence of instructions consisting of Units meant for developing employability and Skills competencies of students of Class IX and X opting for Skills subject along with other subjects.

**AUTOMOTIVE (SUBJECT CODE – 404)****CLASS – IX (SESSION 2022-2023)**

Total Marks: 100 (Theory-50 + Practical-50)

	<b>UNITS</b>	<b>NO. OF HOURS for Theory and Practical 220</b>	<b>MAX. MARKS for Theory and Practical 100</b>
<b>Part A</b>	<b>Employability Skills</b>		
	Unit 1 : Communication Skills-I	13	2
	Unit 2 : Self-Management Skills-I	07	2
	Unit 3 : ICT Skills-I	13	2
	Unit 4 : Entrepreneurial Skills-I	10	2
	Unit 5 : Green Skills-I	07	2
	<b>Total</b>	<b>50</b>	<b>10</b>
<b>Part B</b>	<b>Subject Specific Skills</b>		
	Unit 1: History and Evolution of Automobiles	10	4
	Unit 2: Various types of Automobiles	10	4
	Unit 3: Major Systems & Components of an Automobile	27	12
	Unit 3: Major Systems & Components of an Automobile	13	6
	Unit 4: Road Safety	15	6
	Unit 5: Automobiles and our Environment	15	8
	<b>Total</b>	<b>90</b>	<b>40</b>
<b>Part C</b>	<b>Practical Work</b>		
	Project		10
	Viva	20	05
	Practical File		15
	Demonstration of skill competency via Lab Activities	60	20
	<b>Total</b>	<b>80</b>	<b>50</b>
	<b>GRAND TOTAL</b>	<b>220</b>	<b>100</b>

**NOTE:** Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

## **PRACTICAL GUIDELINES FOR CLASS IX**

### **Assessment of performance:**

The two internal examiners, assigned for the conduct and assessment of Practical Examinations each in **Secondary School Curriculum (Under NSQF)**. Question for the viva examinations should be conducted by both the examiners. Question to be more of General nature, project work or the curriculum. Investigatory Project especially those that show considerable amount of effort and originality, on the part of the student, should get suitable high marks, while project of a routine or stereotyped nature should only receive MEDIOCRE marks.

### **Procedure for Record of Marks in the Practical answer-books:**

The examiner will indicate separately marks of practical examination on the title page of the answer-books under the following heads:-

#### **Project -10 marks**

Projects for the final practical is given below .Student may be assigned

#### **Viva based on Project -05 marks**

The teacher conducting the final practical examination may ask verbal questions related to the project, if any, done by the student. Alternatively, if no project has been assigned to the students, viva may be based on questions of practical nature from the field of subject as per the Curriculum

#### **Practical File -15 Marks**

Students to make a power point presentation / assignment / practical file / report. Instructor shall assign them any outlet to study the elements.

Suggested list of Practical –

1. Servicing and testing of major components of a vehicle
2. Project on automotive innovation.

### **Demonstration of skill competency in Lab Activities -20 marks**

#### **Guidelines for Project Preparation:**

The final project work should encompass chapters on:

- a) Introduction,
- b) Identification of core and advance issues,
- c) Learning and understanding and
- d) Observation during the project period.

**AUTOMOTIVE (SUBJECT CODE – 404)****CLASS – X (SESSION 2022-2023)**

Total Marks: 100 (Theory-50 + Practical-50)

	UNITS	NO. OF HOURS for Theory and Practical 220	MAX. MARKS for Theory and Practical 100
<b>Part A</b>	<b>Employability Skills</b>		
	Unit 1 : Communication Skills-II*	13	-
	Unit 2 : Self-Management Skills-II	07	3
	Unit 3 : ICT Skills-II	13	3
	Unit 4 : Entrepreneurial Skills-II	10	4
	Unit 5 : Green Skills-II*	07	-
	<b>Total</b>	<b>50</b>	<b>10</b>
<b>Part B</b>	<b>Subject Specific Skills</b>		
	Unit 1: Automobile and its components	20	10
	Unit 2: Tools	10	06
	Unit 3: Vehicle Servicing	8	04
	Unit 3: Vehicle Servicing	12	06
	Unit 4: Customer sales care	15	04
	Unit 5: Innovation and Development	15	06
	Unit 6: Reading of Service manual	10	04
	<b>Total</b>	<b>90</b>	<b>40</b>
<b>Part C</b>	<b>Practical Work</b>		
	Project	20	10
	Viva		05
	Practical File		15
	Demonstration of skill competency via Lab Activities	60	20
	<b>Total</b>	<b>80</b>	<b>50</b>
	<b>GRAND TOTAL</b>	<b>220</b>	<b>100</b>

**Note:** \* marked units are to be assessed through Internal Assessment/ Student Activities. They are not to be assessed in Theory Exams

## **PRACTICAL GUIDELINES FOR CLASS X**

### **Assessment of performance:**

The two internal examiners, assigned for the conduct and assessment of Practical Examinations each in **Secondary School Curriculum (Under NSQF)**. Question for the viva examinations should be conducted by both the examiners. Question to be more of General nature, project work or the curriculum. Investigatory Project especially those that show considerable amount of effort and originality, on the part of the student, should get suitable high marks, while project of a routine or stereotyped nature should only receive MEDIOCRE marks.

### **Procedure for Record of Marks in the Practical answer-books:**

The examiner will indicate separately marks of practical examination on the title page of the answer-books under the following heads:-

#### **Project -10 marks**

Projects for the final practical is given below .Student may be assigned

#### **Viva based on Project -05 marks**

The teacher conducting the final practical examination may ask verbal questions related to the project, if any, done by the student. Alternatively, if no project has been assigned to the students, viva may be based on questions of practical nature from the field of subject as per the Curriculum

#### **Practical File -15 Marks**

Students to make a PowerPoint presentation. Alternatively, if they can't be assigned a power point presentation then they can communicate their project work through practical file.

Suggested list of Projects –

1. Servicing and testing of major and minor components of a vehicle
2. Project on automotive innovation.

### **Demonstration of skill competency in Lab Activities -20 marks**

#### **Guidelines for Project Preparation:**

The final project work should encompass chapters on:

- a) Introduction,
- b) Identification of core and advance issues,
- c) Learning and understanding, and
- d) Observation during the project.

Activity question to be created by internal examiner, to be conducted on the practical day (30 minutes).

## DETAILED CURRICULUM/ TOPICS:

### Part-A: EMPLOYABILITY SKILLS

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-II*	10
2.	Unit 2: Self-management Skills-II	10
3.	Unit 3: Information and Communication Technology Skills-II	10
4.	Unit 4: Entrepreneurial Skills-II	15
5.	Unit 5: Green Skills-II*	05
	<b>TOTAL DURATION</b>	<b>50</b>

**Note:** \* marked units are to be assessed through Internal Assessment/ Student Activities. They are not to be assessed in Theory Exams

Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

### Part-B – SUBJECT SPECIFIC SKILLS

UNIT	SESSION	TOPIC/ ACTIVITY/ PRACTICAL
Unit 1: Automobile and its components	Session 1 : Chassis	<ul style="list-style-type: none"><li>Types of Chassis</li></ul>
	Session 2 : Body or Superstructure	<ul style="list-style-type: none"><li>Demonstration of Auto body</li></ul>
	Session 3 : Engine	<ul style="list-style-type: none"><li>Dismantling and assembly of petrol and diesel engine</li></ul>
	Session 4 : Lubrication System	<ul style="list-style-type: none"><li>Demonstration of parts of lubrication system.</li></ul>
	Session 5 : Cooling System	<ul style="list-style-type: none"><li>Demonstration of water cooling system</li></ul>
	Session 6 : Fuel Supply System	<ul style="list-style-type: none"><li>Project on various types of fuel supply system.</li></ul>
	<b>Session - 7: Transmission System*</b>	<ul style="list-style-type: none"><li><b>Types of Universal Joints</b></li></ul>
	<b>Session - 8: Front Axle*</b>	<ul style="list-style-type: none"><li><b>Live &amp; Dead front Axle</b></li><li><b>Types of arrangement of Front Axle</b></li><li><b>Rigid Axle Beam</b></li></ul>

**\*Note: To be assessed in practicals only. No question shall be asked from this portion in Theory exams.**



UNIT	SESSION	TOPIC/ ACTIVITY/ PRACTICAL
	Session 9 : Steering System	<ul style="list-style-type: none"> <li>• Demonstration of mechanical type steering system</li> </ul>
	Session 10 : Rear Axle	<ul style="list-style-type: none"> <li>• Demonstration of differential and various types of gears used in final drive.</li> </ul>
	<b>Session 11:- Suspension System*</b>	<ul style="list-style-type: none"> <li>• <b>Common problems of the suspension system &amp; preventive measures</b></li> </ul>
	Session 12 : Wheel and Tyres	<ul style="list-style-type: none"> <li>• Cut section of wheel</li> </ul>
	Session 13 : Brakes	<ul style="list-style-type: none"> <li>• Demonstration of mechanical braking system.</li> </ul>
	Session 14 : Electrical and Electronics System	<ul style="list-style-type: none"> <li>• Demonstration of lead acid battery with its all components.</li> </ul>
Unit-2: Tools	<b>Session 1 - Hand Tool*</b>	<ul style="list-style-type: none"> <li>• <b>Demonstration of all Hand Tools</b></li> </ul>
	<b>Session 2 - Measuring Tools*</b>	<ul style="list-style-type: none"> <li>• <b>Demonstration of Measuring Tools</b></li> </ul>
	<b>Session 3 - Electrical Tools*</b>	<ul style="list-style-type: none"> <li>• <b>Demonstration of Electrical Tools</b></li> </ul>
	Session 4 : Special Tools	<ul style="list-style-type: none"> <li>• Model of special tools</li> </ul>
	Session 5 : Service Workshop Equipment	<ul style="list-style-type: none"> <li>• Working of air compressor and wheel balancing machine.</li> </ul>
Unit-3: Vehicle Servicing	Session 1 : Washing of a Vehicle	<ul style="list-style-type: none"> <li>• Procedure for vehicle washing</li> </ul>
	Session 2 : Changing of Oil and Oil Filter	<ul style="list-style-type: none"> <li>• Procedure for changing of oil and oil filter</li> </ul>
	Session 3 : Changing of Air Filter	<ul style="list-style-type: none"> <li>• Procedure for changing Air Filter</li> </ul>
	Session 4 : Changing of Fuel Filter	<ul style="list-style-type: none"> <li>• Procedure for changing Fuel Filter</li> </ul>
	Session 5 : Changing of Coolant	<ul style="list-style-type: none"> <li>• Procedure for changing Coolant</li> </ul>
Unit-4: Customer Sales Care	Session 1 : Customer Service	<ul style="list-style-type: none"> <li>• Dramatization of customer service</li> </ul>
Unit-5: Innovation and Development	Session 1 : Innovation and Development	<ul style="list-style-type: none"> <li>• To make presentation on new innovations</li> </ul>
Unit-6: Reading of Service manual	Session 1: Reading of Service manual	<ul style="list-style-type: none"> <li>• Use any owners and service manual.</li> </ul>

**\*Note: To be assessed in practicals only. No question shall be asked from this portion in Theory exams.**