

**GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT**

**COURSE CURRICULUM**  
**COURSE TITLE: AUTOMOBILE INDUSTRIAL MANAGEMENT**  
**(Code: 3340204)**

<b>Diploma Programme in which this course is offered</b>	<b>Semester in which offered</b>
<b>Automobile Engineering</b>	<b>4<sup>th</sup> semester</b>

**1. RATIONALE**

In our country, automobile industry has grown many folds. The market is flooded with many manufacturers of various kinds of automobiles, who are continuously upgrading and innovating their products, thus automobiles is big business opportunity. Automobile business may be small, medium and large scale but for their efficient and effective management, understanding of some management concepts is necessary. In addition to this it is must to know government rules for safe driving, ownership and fitness of vehicle, etc. The diploma engineer whether in employment or in business, should therefore have awareness of various kinds of business, auto business management, and different rules & acts. This course helps diploma engineers to equip with this information.

**2. COMPETENCY**

The course content should be taught and curriculum should be implemented with the aim to develop different types of skills leading to the achievement of the following competency

- **Plan, organize, and manage various aspects of automobile operations and business for profitability and growth.**

**3. COURSE OUTCOMES (CO's)**

The theory should be taught and practical should be carried out in such a manner that students are able to acquire different learning out comes in cognitive, psychomotor and affective domain to demonstrate following course outcomes.

- i. Describe merit and demerit of different forms of business organizations.
- ii. Identify and describe sources of business finances
- iii. Apply CPM and PERT techniques as network planning tools
- iv. Use various inventory control techniques for better material management
- v. Explain various steps involved in preventive maintenance
- vi. Describe motor vehicle rules and driving regulations
- vii. Explain the procedure for issuing a driving license and registration of vehicle
- viii. Explain various steps involved in vehicle selling technique.

#### 4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				Total Marks
L	T	P		Theory Marks		Practical Marks		
			C	ESE	PA	ESE	PA	100
3	0	0	3	70	30	00	00	

**Legends:** L-Lecture; T – Tutorial/Teacher Guided Student Activity; P - Practical; C – Credit;; ESE - End Semester Examination; PA - Progressive Assessment.

#### 5. DETAILED COURSE CONTENTS

Unit	Major Learning Outcomes (in Cognitive Domain)	Topics and Sub-topics
<b>Unit – I Elements of forms of Business Management</b>	1.a Describe forms of business organizations 1.b Describe self employment & entrepreneurship	1.1 Nature of business organization. 1.2 Merits & demerits of the sole trading, partnership, Joint stock company, Co-operative & State enterprise, etc. 1.3 Self employment & Entrepreneurship
<b>Unit – II Elements of Business Finance</b>	2.a Describe sources of business finances	2.1 Sources of raising business finance such as shares, debentures bonds, commercial banks, Public deposits and co-op. credit bank, etc. 2.2. Specialized Agencies of finance such as IDBI, IFC, ICICI, NIDC, LITI, LIC, GSPE, GIDC, GSIC, etc. and their function.
<b>Unit– III Net Work Analysis</b>	3.a Describe planning tools: CPM and PERT 3.b Determine the critical path on a network	3.1 Meaning of CPM and PERT. 3.2 Meaning of activity and event 3.3 Rules of constructing a network using dummy and real activities. 3.4 Calculation of net work.
<b>Unit– IV Material Management</b>	4.a Explain the different purchasing systems 4.b Classify the stores 4.c Carryout the codification of different items 4.d Explain various inventory control techniques. 4.e Prepare ABC analysis chart	4.1 Functions of material management. 4.2 System of purchasing. 4.3 Types of forms used in purchasing. 4.4 Stores management: Functions of store keeping, Types of stores, Materials to be stored, Types of records maintained in the stores, Classification and codification of stores. 4.5 Inventory control: Importance, and its techniques.
<b>Unit– V Preventive Maintenance</b>	5.a Explain importance of preventive maintenance 5.b Explain various steps involved in preventive maintenance	5.1 Preventive maintenance: Meaning, Philosophy, functions, designing a preventive maintenance schedule, Economical aspects, dos & don'ts. 5.2 Factors to be taken into account while making preventive maintenance schedule.

Unit	Major Learning Outcomes (in Cognitive Domain)	Topics and Sub-topics
<b>Unit– VI Motor Vehicle Rules &amp; Regulation</b>	6. a State terms related to motor vehicle act 6.b Describe the control of traffic 6.c State registration marks and mandatory signs & other traffic signs	6.1 Key terms of motor vehicle act FAW, RAW, UW, RLW, LMV, HMV public carrier, private carrier, etc. 6.2 Control of traffic, important clauses. 6.3 Registration marks & mandatory signs & other traffic signs. 6.4 Provisions of motor vehicle act on driving regulations.
<b>Unit-VII Licensing</b>	7.a Describe necessity of obtaining the driving license 7.b Explain the procedure for issuing a driving license 7.c Explain duties of driver and conductor of motor vehicle	7.1 Necessity and eligibilities for obtaining the driving license 7.2 Form contents, validity and currency of driving license 7.3 Renewal, revocation, endorsement and power of disqualifying the holder for driving license 7.4 Conducts and duties of driver of motor vehicle 7.5 Necessities and granting of conductor's license 7.6 Duties and conducts of conductor rule
<b>Unit-VIII Registration of motor vehicle</b>	8.a Explain the procedure for registration of vehicle 8.b Explain the information about refusal of registration of vehicle, cancellation of registration, transfer of ownership of the vehicle.	8.1 Registration of Motor Vehicle 8.2 The exhibition of registration 8.3 Information about the refusal of registration of vehicle 8.4 Procedure for registration of vehicles removed to another state 8.5 The Provision for transfer of ownership of the vehicle. 8.6 The Provision for alteration in vehicle. 8.7 The suspension of registration. 8.8 The cancellation of registration of vehicle. 8.9 The necessity of certificate of fitness of transport vehicle.
<b>Unit– IX Vehicle Sales &amp; Sales Promotion</b>	9.a Describe salient features of agreement between dealer and manufacture. 9.b Explain various steps involved in vehicle selling technique. 9.c Describe management of self employment type organizations.	9.1 Salient features of manufacture dealer agreement. 9.2 Various steps involved in vehicle selling techniques. 9.3 Professional approach of selling vehicle. 9.4 Management of self employment: Prospecting of customers, and customer care.

## 6. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total
1.	Elements of forms of Business Management.	02	04	-	-	04
2.	Elements of Business Finance.	02	03	-	-	03
3.	Net Work Analysis.	05	03	02	02	07
4.	Material Management.	09	06	04	04	14
5.	Preventive Maintenance.	04	05	02	-	07
6.	Motor Vehicle Rules & Regulations	06	05	02	-	07
7.	Licensing	05	06	04		10
8.	Registration of motor vehicle	05	06	05		11
9.	Vehicle Sales & Sales Promotion	04	03	04	-	07
	Total	42	41	23	06	70

**Legends:** R = Remember, U = Understand, A= Apply and above Level (Bloom's revised taxonomy)

**Note:** This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table

## 7. SUGGESTED LIST OF PRACTICAL/EXERCISES

Not Applicable

## 8. SUGGESTED LIST OF STUDENT ACTIVITIES

Following is the list of proposed student activities such as:

- Seminar by Students on a given topic
- Write brief report of various types of maintain records in stores
- Fill up various types of forms/formats
- Write assignments (classroom, library, home)
- To prepare report as an assignment from industrial survey/internet/library/or group discussion on any of the automobile sales promotion.

## 9. SPECIAL INSTRUCTIONAL STRATEGIES (If Any)

- Lecture cum discussion by using standard forms/formats
- Field visit to R.T.O.
- Case study on ABC analysis chart, CPM & PERT, Inventory models etc.

## 10. SUGGESTED LEARNING RESOURCES

### (A) List of Books

S. No.	Name of the book	Author	Publication
1	Material Management	Ammer	Taraporevala
2	Industrial Maintenance	H. P. Garg	S.chand
3	Modern Maintenance Management	E. J. Miller	
4	Material Management	N. K. Nair	Vikas Publication House pvt.ltd

S. No.	Name of the book	Author	Publication
5	Industrial Engineering and Management	O.P.Khanna	Dhanpat Rai
6	Motor vehicles Act, 1989		
7	The Gujarat Motor vehicles Rules, 1989		
8	The Central Motor vehicle Rules,1989		
9	CPM and PERT (Principles & applications)	L. S. Srinath	Ease-West Press Pvt. Ltd New Delhi
10	Industrial Organisation & Engg. Economics	S. C. Sharma	Khanna

**(B) List of websites**

- i. [www.b-u.ac.in/sde\\_book/bcom\\_bs.pdf](http://www.b-u.ac.in/sde_book/bcom_bs.pdf)
- ii. [home.snc.edu/eliotelfner/333/stones/page3.html](http://home.snc.edu/eliotelfner/333/stones/page3.html)
- iii. [www.morth.nic.in](http://www.morth.nic.in)
- iv. [www.sarathi.nic.in](http://www.sarathi.nic.in)
- v. [www.vahan.nic.in](http://www.vahan.nic.in)
- vi. [www.b-u.ac.in/sde\\_book/bcom\\_bs.pdf](http://www.b-u.ac.in/sde_book/bcom_bs.pdf)
- vii. [home.snc.edu/eliotelfner/333/stones/page3.html](http://home.snc.edu/eliotelfner/333/stones/page3.html)
- viii. [www.morth.nic.in](http://www.morth.nic.in)
- ix. [www.sarathi.nic.in](http://www.sarathi.nic.in)
- x. [www.vahan.nic.in](http://www.vahan.nic.in)

**11. COURSE CURRICULUM DEVELOPMENT COMMITTEE**

**Faculty Members from Polytechnics**

- **Prof. D. A. Dave**, H.O.D., Automobile Engineering Department, Sir Bhavsinhji Polytechnic Institute, Bhavnagar.
- **Prof. D. J. Gohel**, Lecturer, Automobile engineering Department C.U.Shah Polytechnic, Surendranagar
- **Prof. S. V. Trivedi**, H.O.D., Automobile Engineering Department, Parul Institute of Technology, Vadodara.
- **Prof. A. C. Suthar** Lecturer, Automobile Engineering Department, M. L. Institute of Diploma Studies, Bhandu

**Coordinator and Faculty Members from NITTTR Bhopal**

- **Dr. C. K. Chugh**, Professor, Department of Mechanical Engineering
- **Dr. K. K. Jain**, Professor Department of Mechanical Engineering