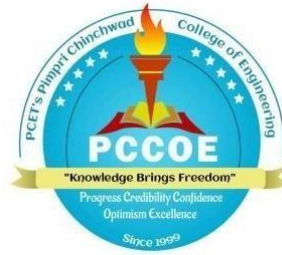


**Pimpri Chinchwad Education Trust's
PIMPRI CHINCHWAD COLLEGE OF
ENGINEERING**
SECTOR NO. 26, PRADHIKARAN, NIGDI, PUNE 411044
An Autonomous Institute Approved by AICTE and Affiliated to SPPU, Pune



**Curriculum Structure of
B. Voc. Logistics Management
and
Syllabus of B. Voc. Program
(Approved by Board of Studies, B. Voc. Program, PCCoE)
(Course 2023)**



Effective from Academic Year 2023-24

Institute Vision

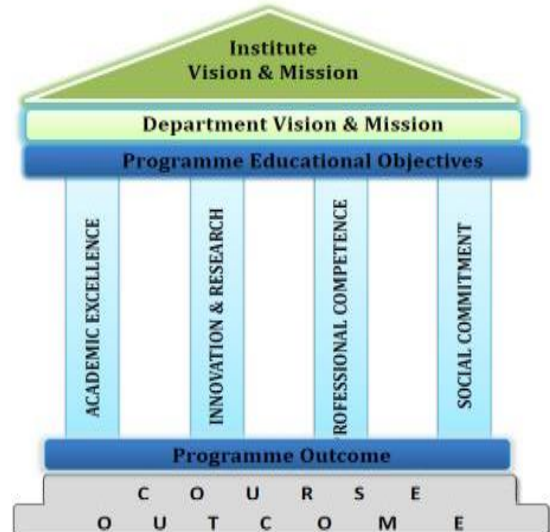
To be one of the top 100 Engineering Institutes of India in coming five years by offering exemplarily Ethical, Sustainable and Value Added Quality Education through a matching ecosystem for building successful careers.

Institute Mission

1. Serving the needs of the society at large through establishment of a state-of-art Engineering Institute.
2. Imparting right Attitude, Skills, and Knowledge for self-sustenance through Quality Education.
3. Creating globally competent and Sensible engineers, researchers and entrepreneurs with an ability to think and act independently in demanding situations.

Quality Policy

We at PCCOE are committed to impart Value Added Quality Education to satisfy the applicable requirements, needs and expectations of the Students and Stakeholders. We shall strive for academic excellence, professional competence and social commitment in fine blend with innovation and research. We shall achieve this by establishing and strengthening state-of- the-art Engineering and Management Institute through continual improvement in effective implementation of Quality Management System.



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ABBREVIATIONS

Abbreviations	Course Full Name
MJ	Major/ Core Course
MI	Minor/ Program Specific Course
MD	Multidisciplinary course
AEC	Ability Enhancement Course
VAC	Value added Course
SEC	Skill Enhancement Course: Internship/ Project/ Mini Project

CURRICULUM STRUCTURE
STRUCTURE FOR IST YEAR B. Voc. (LOGISTICS
MANAGEMENT)
SEMESTER I

B. Voc. Structure		Sem-I	Teaching Scheme				Examination Scheme						
Course Code	Course Type	Course Name	L	P	H	CR	IE 1	IE 2	ETE	T W	O R	PR	Total
VLM21101	MJ	Core Course I: Fundamentals of SCM	3	-	3	3	25	25	50	-	-	-	100
VCM21201/ VLM21201	MI	Program Specific Elective Course I:	3	-	3	3	25	25	50	-	-	-	100
VLM21301	MD	Multidisciplinary Course I: : Fundamentals of Management	2	-	2	2	20	20	40	-	-	-	80
VLM21401	AEC	Ability Enhancement Course I: Writing skills		2	2	1	-	-	-	50	-	-	50
VLM21501	VAC	Value added Course I: Health & wellness		2	2	1	-	-	-	50	-	-	50
VLM21601	SEC	On Job Training (ELE/Q5901)	-	20	20	10	-	-	-	-	-	200	200
Total			8	24	32	20	70	70	140	100	-	200	580

SEMESTER II

B. Voc. Structure		Sem-II	Teaching Scheme				Examination Scheme						
Course Code	Course Type	Course Name	L	P	H	CR	IE 1	IE 2	ETE	T W	O R	PR	Total
VLM22102	MJ	Core Course II: Warehouse & Inventory Management	3	-	3	3	25	25	50	-	-	-	100
VCM22202/ VLM22202	MI	Program Specific Elective Course II	3	-	3	3	25	25	50	-	-	-	100
VLM22302	MD	Multidisciplinary Course II: Business Accounting	2	-	2	2	20	20	40	-	-	-	80
VLM22402	AEC	Ability Enhancement Course II: Language I (Soft Skill)		2	2	1	-	-	-	50	-	-	50
VLM22502	VAC	Value added Course II: IT Tools		2	2	1	-	-	-	50	-	-	50
VLM22602	SEC	On Job Training (ELE/Q5902)	-	20	20	10	-	-	-	-	-	200	200
Total			8	24	32	20	70	70	140	100	-	200	580

LIST OF COURSES – PROGRAM-SPECIFIC ELECTIVE COURSE I

Course Code	Course Name	
VLM21201	Introduction to Logistics Management	Choose any one
VCM21201	Engineering Drawing	

LIST OF COURSES – PROGRAM-SPECIFIC ELECTIVE COURSE II

Course Code	Course Name	
VLM22202	Marketing Management & Customer Relationship Management	Choose any one
VCM22202	Basics of Electrical & Electronics	

Abbreviation: **L-** Lecture; **P-** Practical; **H-** Hours; **CR-** Credits; **IE 1** – Internal Evaluation-1; **IE 2** – Internal Evaluation-II; **ETE** – End Term Examination; **TW** – Term Work; **OR** – Oral Exam; **PR** – Practical Exam.

**STRUCTURE FOR IIND YEAR B. Voc. (LOGISTICS MANAGEMENT)
SEMESTER III**

B. Voc. Structure		Sem-III	Teaching Scheme				Examination Scheme						
Course Code	Course Type	Course Name	L	P	H	CR	IE 1	IE 2	ET E	T W	O R	PR	Total
VLM23103	MJ	Core Course III	2	-	2	2	20	20	40	-	-	-	80
VLM23104	MJ	Core Course III	-	2	2	1	-	-	-	-	-	50	50
VLM23203	MI	Pr. Sp. Course III	2	-	2	2	20	20	40	-	-	-	80
VLM23204	MI	Pr. Sp. Course IV	-	2	2	1	-	-	-	-	-	50	50
VLM23303	MD	Multidisciplinary Course III	2	-	2	2	20	20	40	-	-	-	80
VLM23403	AEC	Ability Enhancement Course III		2	2	1	-	-	-	50	-	-	50
VLM23503	VAC	Value added Course III		2	2	1	-	-	-	50	-	-	50
VLM23603	SEC	Internship III: On Job Training	-	20	20	10	-	-	-	-	-	200	200
Total			6	28	34	20	60	60	120	100	-	300	640

SEMESTER -IV

B. Voc. Structure		Sem-IV	Teaching Scheme				Examination Scheme						
Course Code	Course Type	Course Name	L	P	H	CR	IE 1	IE 2	ET E	TW	O R	PR	Total
VLM24104	MJ	Core Course IV	2	-	2	3	25	25	50	-	-	-	100
VLM24105	MJ	Core Course V	-	2	2	1	-	-	-	-	-	50	50
VLM24205	MI	Pr. Sp. Course V	2	-	2	2	20	20	40	-	-	-	80
VLM24404	AEC	Ability Enhancement Course IV		2	2	1	-	-	-	50	-	-	50
VLM24504	VAC	Value added Course IV		2	2	1	-	-	-	50	-	-	50
VLM24604	SEC	Project I: Mini Project	-	4	4	2	-	-	-	-	-	50	50
VLM24605	SEC	Internship III: On Job Training	-	20	20	10	-	-	-	-	-	200	200
Total			4	30	34	20	45	45	90	100	-	300	580

Abbreviation: L- Lecture; P- Practical; H- Hours; CR- Credits; IE 1 – Internal Evaluation-1; IE 2 – Internal Evaluation-II; ETE – End Term Examination; TW – Term Work; OR – Oral Exam; PR – Practical Exam.

STRUCTURE FOR IIIRD YEAR B. Voc. (LOGISTICS MANAGEMENT)

SEMESTER V

B. Voc. Structure			Sem-V				Teaching Scheme				Examination Scheme				
Course Code	Course Type	Course Name	L	P	H	CR	IE 1	IE 2	ET E	TW	O R	PR	Total		
VLM25106	MJ	Core Course VI	2	-	2	3	25	25	50	-	-	-	100		
VLM25107	MJ	Core Course VII	-	2	2	1	-	-	-	-	-	50	50		
VLM25108	MJ	Core Course VIII	2	-	2	3	25	25	50	-	-	-	100		
VLM25109	MJ	Core Course IX	-	2	2	1	-	-	-	-	-	50	50		
VLM25206	MI	Pr. Sp. Course VI	2	-	2	2	20	20	40	-	-	-	80		
VLM25606	SEC	Internship V: On-Job Training	-	20	20	10	-	-	-	-	-	200	200		
Total			6	24	30	20	70	70	140	-	-	300	580		

SEMESTER -VI

B. Voc. Structure			Sem-VI				Teaching Scheme				Examination Scheme				
Course Code	Course Type	Course Name	L	P	H	CR	IE 1	IE 2	ET E	TW	O R	PR	Total		
VLM26110	MJ	Core Course X	2	-	2	3	25	25	50	-	-	-	100		
VLM26111	MJ	Core Course XI	-	2	2	1	-	-	-	-	-	50	50		
VLM26207	MI	Pr. Sp. course VII	2	-	2	2	20	20	40	-	-	-	80		
VLM26607	SEC	Project II: Project	-	8	8	4	-	-	-	50	150	-	200		
VLM26608	SEC	Internship VI: On Job Training	-	20	20	10	-	-	-	-	-	200	200		
Total			4	30	34	20	45	45	90	50	150	250	630		

Abbreviation: L- Lecture; P- Practical; H- Hours; CR- Credits; IE 1 – Internal Evaluation-1; IE 2– Internal Evaluation-II; ETE – End Term Examination; TW – Term Work; OR – Oral Exam, PR – Practical Exam.

Course Syllabus

Semester-I

Program: B. Voc. (Logistics Management)				Semester: I		
Course: Professional core course I: Fundamentals of Supply Chain Management				Code: VLM21101		
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
3	3	3	25	25	50	100
Course Objectives:						
<ol style="list-style-type: none"> 1. To develop an understanding of basic concepts and the role of supply chain management in business. 2. To understand how supply chain drivers play an important role in redefining value chain excellence of Firms. 3. To develop analytical and critical understanding & skills for planning, designing and operations of supply chain. 4. To understand, appraise and integrate various supply chain strategies. 						
Course outcomes:						
After learning the course, student will be able to						
<ol style="list-style-type: none"> 1. Understand the fundamentals concepts of Supply Chain Management. 2. Understand the supply chain Business processes which are applied in various industries. . 3. Understand the Purchasing and Supplier management system and Vendor Management . 4. Importance of Forecasting & Demand Measurement 5. Understand Organization and Control of SCM in various industries. 6. Identify the Recent Trends and development in Supply chain management in various Business Sector. 						
Detailed Syllabus:						
Unit	Description					Duration (45 Hrs)
1	Introduction to Supply Chain Management : Introduction to the Concept of Supply Chain Management. Importance & Objectives Supply Chain Management. Models of SCM, Evolution of SCM. Distribution channels, design of distribution channel, channel design. Case Study : The Supply chain of Amul - From Cow to Kitchen					8
2	Key Supply Chain Business Processes : Concept of Supply Chain Planning & its Importance. Concept of Sourcing in Supply Chain Management, Concept of Producing and Distributing. Managing material flow and distribution. Case study on Grofers: A Influencing Factors and Constraints in an E-Commerce Driven Supply Chain.					8
3	Purchasing and Supplier Management Concept of Purchasing and Supplier Management. Concept of Vendor Management., Factors to be considered before Vendor Selection Process, Steps in Vendor Selection Process, Concept of Procurement Outsourcing, Reasons for Procurement outsourcing. Case study: Maxion Wheels Procurement & Vendor Selection Process					8
4	Forecasting & Demand Management : Demand management process, the role of forecasting and production, basic approach to forecasting Relationship between customer service and demand management. Case Study – Bullwhip Effect					7
5	Organization & Control in Supply Chain : Need for supply chain organizational structure, importance of supply chain organization, organizational development, organizational structure in integrated logistics, organizational choice and organizational scope.					7
6	Recent Trends in Supply Chain Management Recent Developments in Supply Chain Management, The Role of E- Commerce in Supply Chain Management, Green Supply Chain Management. Case study : The coordination of E-commerce and Logistics A case study of Amazon.com					7

Text Books:

1. Martin Christopher, *Logistics and Supply Chain Management*.
2. Sunil Chopra and Peter Meindal, *Supply Chain Management*.
3. Donald J. Bowersox and David J. Closs, *Integrated Logistics Management*
4. N. Chandrasekharan, *Supply Chain Management*.

Reference Books:

1. Martin Christopher, *Logistics and Supply Chain Management*.
2. N. Chandra sekaran, *Supply Chain Management Process, System & Practice*, Oxford, 1st Edition.
3. Levi, Kaminsky et al, *Designing & Managing the Supply Chain –Concept, Strategies & Case studies*, TMGH, 3rd Edition.

Program: B. Voc. (Logistics Management)				Semester: I		
Course: Program Specific Elective Course I: Engineering Drawing				Code: VCM21201		
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
3	3	3	20	30	50	100
Course Objectives:						
<ol style="list-style-type: none"> 1. To develop imagination of physical objects to be represented on paper for engineering communication. 2. To develop the interpretation and manual drawing skills. 3. To develop the physical realization and manual drawing skill 						
Course Outcomes (Cos)						
After learning the course, students will be able to						
<ol style="list-style-type: none"> 1. Understand the drawing sheets, dimensioning and tolerances. 2. Understand and draw the projections of point and line on reference planes, inclined planes. 3. Understand the orthographic projections, first and third angle projections methods, draw orthographic views 4. Understand and draw the Isometric scale, construction of Isometric view of simple objects 5. Understand and draw the development of lateral surfaces of simple solids. 6. Understand and draw the free hand sketches of standard components of machine. 						
Detailed Syllabus						
Unit	Description					Duration (45 Hrs)
1	Introduction Layout of drawing sheets, sizes of drawing sheets, different types of lines used in drawing practice, Dimensioning – linear, angular, aligned system, unidirectional system, parallel dimensioning, chain dimensioning, location dimension and size dimension. Tolerances – methods of representing tolerances, unilateral and bilateral tolerances, tolerance on linear and angular dimensions, geometrical tolerances.					7
2	Projection of Line and Planes Introduction, Projection of points – points on the different quadrants and on the reference planes. Projection of straight lines (only first angle projection method) – Line on the reference planes - perpendicular to one plane and parallel to other plane – inclined to one plane and parallel to the other plane – parallel to both the planes –inclined to both the planes. Projection of planes (only first angle projection method) - Types of planes, Projection of planes perpendicular to both the reference planes, Perpendicular to one plane and parallel to other plane, Perpendicular to one plane and inclined to the other plane, Inclined to both planes.					8
3	Orthographic Projections Reference planes, types of orthographic projections – First angle projections, Third angle projections, methods of obtaining orthographic views by First angle method.					6
4	Isometric View Introduction, Isometric scale, construction of Isometric view of simple objects from given orthographic.					8
5	Development of Lateral Surfaces of Solids Introduction, Development of lateral surfaces of Cone, Cylinder, Pyramid and Prism.					8
6	Freehand Sketching and introduction of AutoCAD software Free hand sketching FV and TV of standard machine parts – Hexagonal headed nut and bolt, foundation bolts, shafts, keys, couplings, springs, screw thread forms, welded joints, riveted joints.					8

Text Books

1. Bhatt N.D., and Panchal V.M., *Engineering Drawing*, Charotar Publishing House, 2010.
2. Agrawal B., and Agrawal C M “*Engineering drawing*”, Tata McGraw Hill Education Private Limited., 2014.

Reference books:

1. Gill P.S., *Engineering drawing*, S.K. Kataria & Sons., 2016.
2. Gopalakrishnan.K.R., *Engineering Drawing*, (Vol.I and Vol.II), Dhanalakshmi publishers, 1970.
3. Venugopal. K, and Sreekanjana G., *Engineering Graphics*, New Age International Publishers. 2019.
4. Natarajan K. V., *A text book of Engineering Drawing Graphics*. Dhanalakshmi Publishers, 2008.

Program: B. Voc. (Logistics Management)			Semester: I			
Course: Program Specific Elective Course I: Introduction to Logistics Management			Code: VLM21201			
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
3	3	3	25	25	50	100

Course Objectives:

1. To develop knowledge about key elements of logistics processes,.
2. To understand about the interconnectedness of business units and organizations (via the flow of products, money, and information) through Logistics Management.
3. To incorporate and learn the critical elements of logistics management processes based on the most relevant application in forward-thinking companies.
4. To incorporate a meaningful focus on the rate of change occurring in business today, and more specifically, in business logistics.

Course Outcomes:

After learning the course, students will be able to

1. **Understand** the fundamentals aspects of Logistics management.
2. **Apply** the rationale process of planning and resourcing in Logistic Management.
3. **Develop** in depth knowledge about the vehicles costing and related documentation
4. **Develop** the knowledge of Material handling equipment & basic knowledge of Packing.
5. **Understand** of concept of Sales & Marketing of Logistics activities
6. **Apply** current trends & Technologies of Logistics Information Systems .

Detailed Syllabus

Unit	Description	Duration (45 Hrs)
1	Introduction to Logistics Management Objectives of logistics, Significance of logistics, Logistical Value proposition, Logistical operations, Integrated Logistics, Evolution to 3 PL & 4PL. Case –Study – Mumbai Dabbawalas	8
2	Planning and Resourcing Need for Planning, Fleet management, Main types of road freight transport. Transport resource requirements, Vehicle routing and scheduling, Vehicle Selection: Types of vehicles, Types of operations, Load types and characteristics, Main types of vehicle body, Implications of vehicle selection.	8
3	Vehicle Costing Concept of Vehicle costing, Main types of costing systems, Costing the total transport operation Documenting and Information Flow. FTL, LTL, Documentation– Road Receipts/Truck Receipts/Waybills (RR/LR) Consignment note CMR, Booking – Invoicing & Information Flow. Case Studies on Documentation of Vehicle Planning	8
4	Material handling and packaging Principles and importance of materials handling, materials handling equipment, Safety Issues, Role of packaging, packaging for material handling efficiency, package design.	7
5	Sales & Marketing of Logistics Function, Scope & Challenges, Agreement Preparation, Customer grievance handling method, SWOT Analysis of Indian Market, Cross- Industrial standard, Market research And Analysis customer need, 7R's, Case Studies on Agreement with Customers	7

6	<p>CURRENT Contours E-Logistics – Structure and Operation. Logistics Resource Management e-LRM. Automatic Identification Technologies. Reverse Logistics – Scope, design and as a competitive tool - Green Logistics Importance, scope of E- Commerce in Indian market, Role of IT in Supply Chain/Logistics.</p>	7
<p>Text Books</p> <ol style="list-style-type: none"> 1. Agrawal D.K., Textbook of Logistics and Supply Chain Management, MacMillan India, Limited, 2003. 2. David J. Bloomberg, Stephen Lemay, <i>Logistic</i>, 8th edition, Pearson Education Dorling Kindersley; 1st edition, 2015. 3. Satish C. Ailawadi& Rakesh Singh, <i>Logistics Management</i>, 2nd Edition, Prentice-Hall of India Pvt Ltd., New Delhi,2013. <p>Reference books:</p> <ol style="list-style-type: none"> 4. Bowersox D., Closs D., and Mixby Copper, M., Supply Chain Logistics Management, McGraw Hill, 2002. 5. Ballou, Business Logistics/Supply Chain Management, Pearson Education. 6. Bowersox, D.J., Logistics Management, Tat McGraw Hill, 2002 		

Program:	B. Voc. (Logistics Management)			Semester: I		
Course:	Multidisciplinary Course I: Fundamentals of Management			Code: VLM21301		
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
2	2	2	20	20	40	80
Course Objectives:						
<ol style="list-style-type: none"> To Develop knowledge of fundamental management concepts and skills To understand and apply the functions of management: such as planning, organizing, leading, controlling, and Decision – Making. To demonstrate critical thinking when presented with management problems. To identify the key competencies needed to be an effective manager. 						
Course Outcomes:						
After learning the course, students will be able to						
<ol style="list-style-type: none"> Understand the concept of Management, Planning & Business Organization Develop in depth knowledge of Organizing & Staffing. Apply necessary skills to Coordinate & Communicate and think effectively Identify the areas to control and selecting the Appropriate controlling methods/Techniques. 						
Detailed Syllabus:						
Unit	Description					Duration (30Hrs)
1	<p>Basics of Management: Definitions of Management, Functions of Management, Significance of Management Objectives of Management, Levels of Management, Evolution of Management thought-Contribution of Taylor and Henry Fayol .</p> <p>Concept of Business Organization, Nature of Business, Functions of Business Organization, Factors Affecting the Establishment of Business Organization</p> <p>Planning Concept and Definition of Planning, Objectives of Planning ,Importance of Planning, The Process of Planning, Limitations of Planning, Types of Plans</p>					8
2	<p>Organizing Concept & Definition of Organizing, Objectives, and Types of Organizational structures, Concept of Authority & Responsibilities, Delegation of authority, Concept of Centralization, Decentralization and Recentralization & Span of control.</p> <p>Staffing Concept & Definition of Staffing, Staffing activities in HRM, Objectives of Staffing, Advantages of Staffing, Process of Staffing, Recruitment,. Selection, Orientation and Placement, Training and Development.</p>					8
3	<p>Coordination & Communication in Management Definition of Coordination, Characteristics of Coordination, Importance of Coordination, Symptoms of Poor Coordination, Tools for Coordinating the Activities, Co-operation for Coordination. Concept of Communication, Process of Communication, Types of communication, Barriers in communication.</p>					7
4	<p>Controlling Definition, Purpose of Controlling, Importance of Controlling, Steps in Control Process, Characteristics of Effective Controls, Advantages of Controlling Process, Planning and Controlling</p>					7

Text Books:

1. *Principles and Practice of Management*-Himalaya Publishing.
2. Dr. L. M. Prasad, *Principles and Practice of Management*, Sultan Chand & Sons.

Reference books:

1. Madhushree Nanda & Stephan Robbins, *Fundamentals of Management: Essential Concepts and Applications*.
2. Chhabra T, *Fundamentals of Management*.
1. Robbins Decenzo, *Fundamentals of Management*.

Program: B. Voc. (Logistics Management)				Semester: I		
Course: Ability Enhancement Course I: Writing Skills				Code: VLM21401		
Teaching Scheme			Evaluation Scheme			
Practical	Hours	Credit	IE 1	IE 2	TW	Total
2	2	1	-	-	50	50
Objectives:						
<ol style="list-style-type: none"> To introduce students to effective writing. To expose students to various types of documents To equip students with fundamental skills for effective written communication 						
Course Outcomes:						
After learning the course students will						
<ol style="list-style-type: none"> Understand different writing styles such as descriptive and narrative writing. Write summaries and persuasive letters Write business emails and structured reports Write job applications and resume/CV for job purposes 						
Guideline:						
Total: Any 6 practical assignments to be conducted.						
Detailed Syllabus:						
Unit	Description					
1	Introduction to Effective Writing Skills Aspects and characteristics of writing skills. Importance of cohesion and coherence in writing.					
2	Write a descriptive paragraph: Write a descriptive paragraph about a person, place, or object. Encourage them to use sensory details and vivid language to create a picture in the reader's mind.					
3	Write a personal narrative: Write a personal narrative about a memorable event. Use descriptive language, dialogue, and reflection to make the story come alive.					
4	Write a summary and response: Read an article or essay and write a summary of the main points, followed by a personal response that explains your thoughts and reactions to the piece.					
5	Write a persuasive letter: Write a persuasive letter to a local or national government representative, expressing your opinions on a current issue or proposing a solution to a problem.					
6	Business email writing: Write a business email on a given scenario. Write a formal email, using appropriate tone, format, and language..					
7	Report writing assignment: Write a report on a given topic. Use clear prompt, a report outline, in a structured and professional format, using appropriate language and terminology.					
8	Job Application/ Cover Letter: Write a job application in a professional format with all the necessary details.					
9	Resume/CV writing assignment: Write a professional resume or CV. Use a professional format. Highlight skills, experiences, and qualifications relevant to the target job or industry.					

Reference Books:

1. Seely, John. *Oxford Guide to Effective Writing and Speaking*. OUP 2nd edition, 2005
2. Goins, Jeff. *You Are a Writer (So Start Acting Like One)*. Tribe Press
3. Brohaugh, William. *Write Tight: Say Exactly What You Mean with Precision and Power*.
4. Janzer, Anne. *The Writer's Process: Getting Your Brain in Gear*. Cuesta Park Consulting, 2016
5. King, Stephen. *On Writing: A Memoir of the Craft*. Scribner, 2010

Program: B. Voc. (Logistics Management)				Semester: I		
Course: Value Added Course I: Health and wellness				Code: VLM21501		
Teaching Scheme			Evaluation Scheme			
Practical	Hours	Credit	IE 1	IE 2	TW	Total
2	2	1	-	-	50	50
Course Objectives:						
<ol style="list-style-type: none"> 1. Prepare graduates to become wellness, health, fitness, nutrition education or foodservice professionals 2. Prepare students for a variety of careers in wellness, fitness, food and nutrition education and foodservice 						
Course Outcomes:						
After learning the course students will be able to						
<ol style="list-style-type: none"> 1. Students will be able to describe the principles of health and wellness from a multidimensional and interdisciplinary perspective. 2. Students will be able to think and act ethically in the context of health, nutrition and wellness. 						
Guideline:						
Total: Any 5 experiments/assignments to be conducted						
Detailed Syllabus:						
Sr. No.	Description					
1	Psychology of happiness: What is happiness? What makes us happy? Socio-economic factors and happiness; Positive emotions					
2	Can we become happier? Genetic set-point and hedonic adaptation; Sustainable happiness model and intentional activities					
3	Happiness Activities 1: Expressing gratitude and positive thinking; Love and kindness; Avoiding overthinking and social comparison					
4	Happiness Activities 2: Identifying signature strengths; achieving happiness with "Flow".					
5	Is happiness sufficient? The concept of eudaimonic well-being; Self-determination and motivation					
6	Meaning and purpose in life: The concept of meaning in life and logo-therapy; Life goals					
Reference Books:						
<ol style="list-style-type: none"> 1. W. Weiten, and M. A. Lloyd, <i>Psychology Applied to Modern Life: Adjustment in the 21st Century</i>, Wadsworth Publishing, 2007 2. R. Harington, <i>Stress, Health and well-being: Thriving in the 21st century</i>, Wadsworth Publishing, 2013. 3. I. Boniwell, <i>Positive psychology in a nutshell</i>, McGraw-Hill Education, 2012. 4. S. Lyubomirsky, <i>The how of happiness</i>, Penguin Press, 2008. 						

Program: B. Voc. (Logistics Management)			Semester: I			
Course: On Job Training (LSC/Q0102)			Code: VLM21601			
Teaching Scheme			Evaluation Scheme			
Practical	Hours	Credit	TW	PR	OR	Total
20	20	10	-	200	-	200
Guidelines: Students will take on-the-job training in the industry in the domain of Logistics as per the following job description and personal attributes.						
Course Objectives:						
<ol style="list-style-type: none"> 1. To expose students to the industry environment and enhance their technical skills while working in Private/public enterprises, government agencies, research labs, or any other organized technical club. 2. To apply knowledge and abilities relevant to engineering technology concepts, principles, and techniques to real-life industrial work/projects. 3. To develop higher-order thinking skills to work with people of diverse backgrounds and cultures and work effectively within cross-disciplined environments. 						
Course Outcomes:						
On the completion of the OJT, students will be able to –						
<ol style="list-style-type: none"> 1. To apply theoretical knowledge in real-life applications with new perspectives to problem-solving. 2. To practice communication and teamwork skills while building a professional network of prospective employment. 3. To write technical reports and document the project outcomes along with enhancing the technical presentations skills 						
Job Role: Warehouse Supervisor						
	Job Description					
	The individual supervises day-to-day operations at a warehouse by allocating resources, managing activities, and coordinating with clients and regulatory bodies. S/he is also responsible for measuring and reporting the effectiveness of warehousing activities and employees' performance.					
	Personal Attributes					
	The job holder should be physically and medically fit to undertake a warehouse operation which includes long-standing hours and occasional material movement. S/he should be observant, diligent, and have the good mathematical ability. S/he should have good team management skills and should communicate effectively in English and vernacular language.					

Course Syllabus

Semester-II

Program: B. Voc. (LOGISTICS MANAGEMENT)				Semester: II		
Course: Core course II: Warehouse & Inventory Management				Code: VLM22102		
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
3	3	3	25	25	50	100
Course Objectives:						
<ol style="list-style-type: none"> 1. To provide basic knowledge about Warehouse and Inventory Management 2. To provide an insight on technology used in warehousing. 						
Course Outcomes:						
After learning the course students will be able to;						
<ol style="list-style-type: none"> 1. Understand the concept of Warehousing in business organization. 2. Develop knowledge about Material Handling Systems and its optimum utilization 3. Understand Warehouse Operations & related documentations 4. Understand the concept of inventory management in the warehouse. 5. Apply the concept of Manufacturing Planning and its changing Trends. 6. Apply business strategies for decision in Warehousing. 						
Detailed Syllabus:						
Unit	Description					Duration (45 Hrs)
1	Introduction to Warehousing Concept, Decision making, Operations, Need for warehousing, Issues affecting warehousing, Various warehousing facilities, Different types of warehouses, Case Studies					6
2	The Principles and Performance Measures of Material Handling Systems Introduction. Vehicle travel path(time), Handling time, vehicle utilization, no of loads completed, congestion. Fundamentals of various types of material handling systems, automated storage and retrieval systems Bar coding technology and applications RFID technology. Case Studies					8
3	Warehouse Operations Goods Receipt. Recordkeeping, Issue of Materials. Types of Booking – Process – Documents Required for Booking, GR Creation, E-way Bill & All Booking Documents. Warehouse Management Systems - Material Handling.					8
4	Introduction to Inventory Management Concept of Inventory & Inventory Management, Purpose of Inventory, Role of inventory, Types of inventory. Average Inventory - Holding (or Carrying) Costs - Ordering Costs - Setup (or Production Change) Costs - Shortage or Stock-out Costs. Case Studies					9
5	Manufacturing Planning Just in Time(JIT)–Working Process Inventories , Make or Buy Decisions , Concept of Goods, Types of Goods ,Concept of Stocks, Types of Stocks , Input and Outputs of MRP, Bill of Materials, Master Production schedules Case Study on MRP					7

6	<p>Decisions in Warehousing</p> <p>Introduction and Space Determination in Warehouse Planning, Warehouse Operations, and Layout Decisions, Handling Decisions, Layout Configuration Decisions,</p> <p>Case Studies on Layout Design.</p>	7
<p>Text Books:</p> <ol style="list-style-type: none"> 1. S. Chand and Co., <i>Stores Management and Logistics</i>, Martin Christopher, 2003. 2. Chapman and Hall, <i>Logistics – The Strategic Issues</i>, Martin Christopher, 2016. 3. Raghuram G., <i>Logistics and Supply Chain Management</i>, Pearson Education, 2015. <p>Reference Books:</p> <ol style="list-style-type: none"> 1. Lee Krajewski, Larry Ritzman, Manoj Malhotra, <i>Operations Management</i>, Pearson Education. 2. J.R. Tony Arnold, Stephen Chapman, <i>Introduction to Materials Management</i>, Ramakrishnan, Pearson. 3. Bose & D Chandra, <i>Inventory Management</i>, 1st Edition. 4. Sridhara Bhat, <i>Inventory Management</i>, 2nd Edition. 5. Bose & D Chandra, <i>Inventory Management</i>, 1st Edition 		

Program:	B. Voc. (Logistics Management)					Semester: II
Course:	Program Specific Elective Course II: Basics of Electrical & Electronics					Code: VLM22202
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE1	IE2	ETE	Total
3	3	3	25	25	50	100
Course Objectives:						
<ol style="list-style-type: none"> 1. The concepts of a capacitor and its capacitance 2. To build a strong conceptual understanding of single phase and polyphase AC circuits with phasor diagram representation. 3. To impart basic knowledge for conceptual understanding of DC and AC machines 4. To introduce student with the fundamental skills to understand the basic of resistor, capacitor and inductor components. 5. To acquire the basic knowledge of digital logic levels and application of digital electronics circuits. 						
Course Outcomes:						
After learning the course, students will be able to						
<ol style="list-style-type: none"> 1. Calculate series, parallel and composite capacitor as well as characteristics parameters. 2. Apply the knowledge of single phase and three phase circuits to determine unknown electrical quantities. 3. Demonstrate the constructional features and operational details of DC and AC machines 4. Comprehension different biasing techniques to operate resistor, capacitor and inductor in different modes. 5. Analyze output in different operating modes of different semiconductor devices. 6. Examine the structure of number systems and implement the functions using logic gates. 						
Detailed Syllabus:						
Unit	Description					Duration (45 Hrs)
1	Electrostatics: Electrostatic field, electric flux density, electric field strength absolute permittivity, relative permittivity and capacitance. Capacitor, capacitors in series and parallel, energy stored in capacitors, charging and discharging of capacitors (no derivation) and time constant					7
2	Single Phase AC Circuits: Generation of single phase sinusoidal A.C. voltages, AC quantities, phasor representation, Pure R, Pure L, and Pure C circuits, impedance, admittance, concept of active, reactive, apparent power and power factor.. Polyphase A.C. Circuits: Introduction to 3 phase supply and its necessity, balance three phase system, relation between line and phase quantities (with phasor diagram), power in three phase circuits for star and delta connection					7
3	DC and AC machines DC Machines: Construction, working principle of D.C. generator, emf equation of DC generator (derivation not expected), working principle of D.C. motor, types of D.C. motor, Back emf (Numerical), Industrial applications. AC Machines: Single phase transformers: Construction, operating principle, emf equation, voltage and current ratios. Losses, Efficiency and regulation, Autotransformer.					8
4	Fundamentals of Electronics: Basic Terminology including current, resistance, capacitance, inductance, E.M.F, Potential Difference power, energy. Ohm's law, Series-Parallel connection of resistance and capacitance. Energy stored in capacitor and inductor, Current and Voltage Division Rules, Kirchhoff's law, Ideal/ Practical Voltage/Current source..					7
5	Basics of Semiconductor: Semiconductor materials and its type: Intrinsic and Extrinsic semiconductor, N-type and P-type semiconductor, Energy bands: Valence Band and Conduction					8

	Band, carrier concentration, Fermi Level; PN Junction diode, Depletion Layer, Forward and Reverse Bias, V-I characteristic of PN Junction diode.	
6	Fundamentals of Digital Electronics: Number System: Introduction to number system, Conversion of number systems, Binary Code, 1's complement and 2's complement, Signed & unsigned numbers, Binary arithmetic, Binary subtraction using 2's complement, Introduction to logic gates, Truth Table, Boolean Algebra.	8

Text Books:

1. I. J. Nagrath and Kothari (PHI learning Pvt.Ltd). "Theory and problems of Basic Electrical Engineering , Eastern Economy Edition.
2. Ashfaq Husain. "Fundamentals of Electrical Engineering", 4 th Edition, Dhanpat Rai & Co.
3. V. N. Mittal and Arvind Mittal,. "Basic Electrical Engineering", 2 nd Edition, McGrawHill.
4. V.K. Mehta. "Basic Electrical Engineering", 1 st Revised Edition ,S. Chand & Co. Pvt. Ltd. NewDelhi.
5. R. L. Boylestad & Louis Nashlesky (2007), Electronic Devices & Circuit Theory, Pearson Education.
6. M. Moris Mano and Michael D. Ciletti, Digital Design, 5th Edition, , Pearson Education, New Delhi, , 2012

Reference Books:

1. D. C. Kulshreshta . "Basic Electrical Engineering " ,1 st Edition ,Tata McGraw hill.
2. B. L. Theraja and A. K. Theraja S. A textbook of Electrical Technology Vol I S. Chand & Co. Pvt. Ltd. New Delhi,1 st Edition.
3. B. L. Theraja and A. K. Theraja . A textbook of Electrical Technology Vol II , S. Chand & Co. Pvt. Ltd. New Delhi,1 st Edition
- 4 Edward Hughes. "Electrical Technology", 10 th Edition ,Pearson.
- 5 R.P. Jain, Modern Digital Electronics, Prentice Hall of India,New Delhi 4 th edition

Program: B. Voc. (Logistics Management)				Semester: II		
Course: Program Specific Elective Course II: Marketing Management & Customer Relationship Management				Code: Code: VLM22202		
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
3	3	3	25	25	50	100
Course Objectives:						
<ol style="list-style-type: none"> To outline key marketing concepts and its application of market management. To identify factors and processes essential for designing marketing strategy To analyze and examine the implementation of marketing concepts, CRM and strategy to Firms. 						
Course Outcomes:						
After learning the course, students will be able to						
<ol style="list-style-type: none"> Understand the concept of Marketing & Marketing Mix . Understand the concept Place Mix(Physical Distribution) in the business organizations. Develop in depth knowledge about Customer Relationship Marketing. Understand the basic concepts of Customer Relationship Management Apply ECRM skills relevant to the corporate world. Apply relevant skills for operational Customer relationship management. 						
Detailed Syllabus						
Unit	Description					Duration (45 Hrs)
1	Introduction to Marketing Management: Introduction to Marketing and Marketing Management, Marketing Concepts – Functions of Marketing.. Marketing Mix Product Decisions . Stages in Product Life Cycle. Case Study On Product Life Cycle.					8
2	Place/Physical Distribution Mix: Meaning of Place/Physical Distribution Mix, Types of Distribution, Level/Channel, factors which determine the choice of channels of distribution, Components, of Physical Distribution, Functions of Distribution Channel, Retailers and wholesalers,. Case Studies					8
3	Customer Relationship Marketing (CRM): Concept and definition of CRM, four main stages of CRM - Customer acquisition, Customer retention, Customer expansion, Customer reactivation, Customer relationship marketing, Benefits of Customer Relationship Marketing, Types of customer relationships, factors that impact customer relationships. Case studies					8
4	Customer Relationship Management (CRM): Concept of Customer relationship Management, Need for Customer Relationship Management, Steps to Customer Relationship Management, Types of CRM, Key cross functional CRM processes. Acquiring customers, customer’s loyalty and optimizing customer relationships, strategic frame work of CRM –origins, the role of CRM, Case studies					7
5	ECRM : Concept & Definition of Electronic Customer Relationship Management (ECRM), Features of ECRM, differences between CRM and ECRM, The benefits of ECRM, Different levels of ECRM. Tools used in ECRM.					7
6	IT System Front office and back office applications –sales force automation, call centre management, marketing automation campaign management, selecting a CRM solution. Organizing for CRM implementation, CRM change and project management. Establishing a CRM performance monitoring system – standards, metrics and key performance indicators, CRM budget and CRM return on investment.					7

Text Books:

1. Ballou, R.H., Business Logistics Management: Planning, Organizing, and Controlling the Supply Chain, 4th Ed., Prentice Hall, 1998.
2. Bowersox, D.J. and D.J., Closs, Logistical Management: The Integrated Supply Chain Process, McGraw Hill, 1996.
3. Philip Kotler, Jha & Koshy, Marketing Management, Pearson Education, New Delhi.

Reference Books:

1. V. S Ramaswami & S. Namakumary, *Marketing Management*, MacMillan Publishers, New Delhi.
2. Peelen E, D., *Customer relationship management*, Pearson Education 2010.

Program: B. Voc. (Logistics Management)				Semester: II		
Course: Multidisciplinary Course II: Business Accounting				Code: VLM22302		
Teaching Scheme			Evaluation Scheme			
Lecture	Hours	Credit	IE 1	IE 2	ETE	Total
2	2	2	20	20	40	80
Course Objectives:						
<ol style="list-style-type: none"> To understand the basic accounting concepts and conventions of accounting. To know how the transactions are entered in the Double entry book keeping system and various books of accounts. To Prepare the final accounts of an organization and to examine the financial data. 						
Course Outcomes:						
<ol style="list-style-type: none"> Understand the basic accounting concepts and Principles of Accounting. Develop in depth knowledge in accounting, system for maintenance of accounts & the financial statements Apply the various methods of depreciation in the real time experiences. Develop in depth knowledge regarding bill of exchange & CCD & its methods. 						
Detailed Syllabus:						
Unit	Description					Duration (24Hrs)
1	Introduction of Accounting: Origin, Meaning, Definition, Need, Importance, Functions and Limitations of Accounting Accounting principles, Generally accepted accounting principles, Postulates of Accounting Double entry system.					6
2	Recording Transactions & Final accounts of Sole Traders: Journal, Ledger, Trial Balance, Cash Book (single column, double column and three column), Bank Reconciliation Statement. Trading Accounts, Profit and Loss Account and Balance Sheet.					8
3	Accounting for Depreciation Meaning, Importance, Methods of providing depreciation (straight time, diminishing, annuity), Reserves and Provisions.					8
4	Bill of Exchange: Meaning – Definition – Importance, Promissory Note – Recording bill transaction (honoring, dishonoring, discounting) CCD Bill Raise – Verification of Bill –Analyzing Outstanding – Ledger Reconciliation - Follow-up for Payment – Payment Clearance.					8
Text Books:						
<ol style="list-style-type: none"> Jonathan Berk, Peter DeMarzo, and Ashok Thamp., <i>Financial Management</i>. I.M. Pandey, <i>Financial Management</i>, Vikas Publication. 						
Reference Books:						
<ol style="list-style-type: none"> Khan and Jain TATA, <i>Financial Management</i>, McGraw-Hill I.M. Pandey, <i>Financial Management</i>, Vikas Publication. S. Sudarsana Reddy, <i>Financial Management Principle and Practices</i>. Prasanna Chandra, <i>Financial Management</i>, TMH, 7th Edition. 						

Program: B. Voc. (Logistics Management)				Semester: II		
Course: Ability Enhancement Course II: Soft Skill				Code: VLM22402		
Teaching Scheme			Evaluation Scheme			
PR	Hours	Credit	IE 1	IE 2	TW	Total
2	2	1	-	-	50	50
Objectives:						
<ol style="list-style-type: none"> To introduce students to four skills of language To expose students to public speaking To equip students with fundamental skills for expressing thoughts in effective manner 						
Course Outcomes:						
After learning the course students will be able to;						
<ol style="list-style-type: none"> Understand the importance of listening and reading skills Write well developed paragraphs and instructions Develop skills required for public speaking Present themselves effectively in different contexts 						
Guidelines :						
Total : 6 Practical assignments to be conducted.						
Detailed Syllabus:						
Sr. No.	Description					
1	Introduction to Soft Skills with special reference to language skills Importance, need of soft skills, Soft Skills V/s hard skills					
2	Listening Skills Importance, Types and techniques for effective listening. Assignment: Listen and summarize the content.					
3	Reading Skills Tips for effective reading, Types of reading. Assignment: Read the given article/text and summarize in your own words					
4	Writing Skills 1- Paragraph Tips for effective writing, Cohesion and coherence in writing Assignment: Write a logical and well developed paragraph on the given topic.					
5	Writing Skills 2 – Writing instructions Writing clear, concise and compete instructions Assignment: Write instructions for processes or activities					
6	Speaking Skills 1 – Self Introductions Tips for effective public speaking Assignment: Self introductions and describing job profiles.					
7	Speaking Skills 2 – Group Discussions Assignment: Group Discussions and narrative incidents					
8	Speaking Skills 3 – Presentations Assignment: Presenting ideas and thoughts before an audience.					
9	Communication Skills Types of communication and barriers to communication Assignment: Role play					
Reference Books:						
<ol style="list-style-type: none"> Rao Prasad N D V, English Grammar and Composition, S. Chand and Co. Pvt. Ltd, 2017. Salaria R.S., and Kumar K.B., Effective Communication Skills, Khanna book publishing co. (P)Ltd, 2020. Patil Z.N., Walke B., Thorat A., and Merchant Z., English For Practical Purposes, Macmillan Publication,2016. Mishra S., and Muralikrishna C., Communication Skills for Engineers, Pearson India Publication,2011. Bhatia V., Business Communication, Khanna book publishing co. (P)Ltd, 2013. 						

Program: B. Voc. (Logistics Management)				Semester: II		
Course: Value added Course II: IT Tools				Code: VLM22502		
Teaching Scheme			Evaluation Scheme			
Practical	Hours	Credit	IE 1	IE 2	TW	Total
2	2	1	-	-	50	50
Course Objectives:						
<ol style="list-style-type: none"> 1. To understand use of computer-based system in communication and fundamentals of Internet 2. To learn and understand the MS office world using simple tools. 						
Course Outcomes:						
After learning the course, students will be able to						
<ol style="list-style-type: none"> 1. Demonstrate the computer components and how they are used for communication and networking. 2. Comprehend the use of MS office and Internet Communication 						
Guideline:						
Total : 6 experiments/assignments to be conducted						
Detailed Syllabus:						
Sr No	Description					
1	Study of Basic Computer fundamentals.					
2	Demonstrate and Study of different types of computer networks and internet.					
3	Create and manage professional documents using MS word.					
4	Create and manage data using MS excel.					
5	Create and manage presentations using powerpoint.					
6	Study of Internet Communication: Email, Social Media, etc.					
Text Books:						
<ol style="list-style-type: none"> 1. Kumar B., <i>Mastering MS Office: Concise Handbook with screenshots</i>, V&S Publishers, 2017. 2. Orchids, <i>Microsoft Office 2007</i>, MS Office Series, 2018 3. Jain S., Kartika Geeta, <i>Microsoft Office 2010 Training Guide</i>, BPB Publications 2015. 4. Kurose James F., and Ross Keith W., <i>A Computer Networking: A top-down approach featuring the internet</i>, Pearson Publication, 2017. 5. Thareja Reema, <i>Fundamentals of Computers</i>, Oxford University Press, 2019. 						
Reference Books:						
<ol style="list-style-type: none"> 1. Ed Tittel, and Muthukumaran B., <i>Computer Networking</i>, Schaum's Outlines, TATA Mcgraw Hill Publications, 2006. 2. Peter Norton, <i>Introduction to Computers</i>, Tata Mcgraw Hill Publication, 2005. 						

Program: B. Voc. (Logistics Management)			Semester: II			
Course: On Job Training (LSC/Q0102):			Code: VLM22602			
Teaching Scheme			Evaluation Scheme			
Practical	Hours	Credit	TW	PR	OR	Total
20	20	10	-	200	-	200
Guidelines: Students will take on-the-job training in the industry in the domain of Logistics as per the following job description and personal attributes.						
Course Objectives:						
<ol style="list-style-type: none"> 1. To expose students to the industry environment and enhance their technical skills while working in Private/public enterprises, government agencies, research labs, or any other organized technical club. 2. To apply knowledge and abilities relevant to engineering technology concepts, principles, and techniques to real-life industrial work/projects. 3. To develop higher-order thinking skills to work with people of diverse backgrounds and cultures and work effectively within cross-disciplined environments. 						
Course Outcomes:						
On the completion of the OJT, students will be able to –						
<ol style="list-style-type: none"> 1. To apply theoretical knowledge in real-life applications with new perspectives to problem-solving. 2. To practice communication and teamwork skills while building a professional network of prospective employment. 3. To write technical reports and document the project outcomes along with enhancing the technical presentations Skills 						
Job Role: Warehouse Supervisor						
	Job Description					
	The individual supervises day-to-day operations at a warehouse by allocating resources, managing activities, and coordinating with clients and regulatory bodies. He/ She is also responsible for measuring and reporting the effectiveness of warehousing activities and employees' performance					
	Job Specification					
	<p>The job holder should be physically and medically fit to undertake a warehouse operation which includes long-standing hours and occasional material movement. He/ She should be observant, diligent, and have good mathematical ability.</p> <p>He/ She should have good team management skills and should communicate effectively in English and vernacular language.</p> <p>He/ She must have good PC Knowledge of MS Word, Excel and Power point as well as basic Math Skills..in English and vernacular language.</p>					