Re-Accredited 'B++ 2.86 CGPA by NAAC
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વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી
યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.
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–: પરિપત્ર :–

વાણિજ્ય વિદ્યાશાખા હેઠળની સંલગ્ન તમામ કોલેજોનાં આચાર્યશ્રીઓને જણાવવાનું કે, શૈક્ષણિક વર્ષ ૨૦૨૫–૨૬ થી અમલમાં આવનાર B.Voc. in Industrial Management Sem.-3 અને 4 ના અભ્યાસક્રમ સંદર્ભે બિઝનેશ એન્ડ મેનેજમેન્ટ સ્ટડીઝ વિષયની અભ્યાસ સમિતિની તા.૧૩/૦૩/૨૦૨૫ની સભાના ઠરાવ ક્રમાંકઃ૦૪ થી કરેલ ભલામણ સ્વીકારી વાણિજ્ય વિદ્યાશાખાની તા.૦૧/૦૪/૨૦૨૫ની સભાનાં ઠરાવ ક્રમાંકઃ ૮ થી કરેલ ભલામણને એકેડેમિક કાઉન્સિલની તા.૦૫/૦૫/૨૦૨૫ની સભાનાં ઠરાવ ક્રમાંકઃ ૨૩ થી સ્વીકારી મંજૂર કરેલ છે. જેનો અમલ કરવા આથી જાણ કરવામાં આવે છે.

બિડાણઃ ઉપર મુજબ

ક્રમાંકઃઓથો./પરિપત્ર/સિલેબસ/૧૧૨૮૫/૨૦૨૫
તા.૦૨–૦૬–૨૦૨૫

કુલસચિવ

પ્રતિ,
૧) વાણિજ્ય વિદ્યાશાખા હેઠળની સંલગ્ન તમામ કોલેજોનાં આચાર્યશ્રીઓ.
.....આપશ્રીની કોલેજના સંબંધિત શિક્ષકોને જાણ કરી અમલ કરવા સારૂ.
૨) ડીનશ્રી, વાણિજ્ય વિદ્યાશાખા.
૩) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.
.....તરફ જાણ તેમજ અમલ સારૂ.

DETAILED SYLLABUS

BACHELOR OF VOCATIONAL STUDIES

B.Voc in Industrial Management

B.Voc Semester III & Semester IV

Framework of B.Voc in Industrial Management
Semester III & Semester IV

Semester	Discipline Specific Core Courses (DSCC)	Discipline Specific Electives (DSE)	Multi-Disciplinary Courses (MDC)	Ability Enhancement Courses (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	RP/OJT	Total Credits / Hours
III	(1) General Production Process - III (2) Human Resource Management – I (3) Supply Chain Management – I **For all above courses** **Practical** 04 Credits 120 Hours **Theory** 02 Credits 30 Hours	(4) Industrial Banking and Insurance **Theory** 02 Credits 30 Hours **Practical** 02 Credits 60 Hours	(5) Digital Marketing - I **Practical** 02 Credits 60 Hours	(6) English for Industry **Theory** 02 Credits 30 Hours	(7) Computing Skills – III **Practical** 02 Credits 60 Hours	(8) Bhartiya Knowledge System **Theory** 02 Credit 30 Hours	**18 Credit 540 Hours**	**30 Credit 690 Hours**
IV	(1) General Production Process - IV (2) Human Resource Management – II (3) Supply Chain Management – II **For all above courses** **Practical** 04 Credits 120 Hours **Theory** 02 Credits 30 Hours	(4) Entrepreneurship **Theory** 02 Credits 30 Hours **Practical** 02 Credits 60 Hours	(5) Digital Marketing- II **Practical** 02 Credits 60 Hours	(6) Correspondence for Industry **Theory** 02 Credits 30 Hours	(7) Business Soft Skills **Practical** 02 Credits 60 Hours	(8) Bhartiya Knowledge System **Theory** 02 Credit 30 Hours	**18 Credits 540 Hours**	**30 Credits 690 Hours**

Important Note

As per "*UGC Curriculum and Credit Framework for Undergraduate Programmes*"

One Credit for Theory means One hour of engagement per week

One Credit for Practical means Two hours of engagement per week

Teaching and Examination Scheme

Semester 3											
Teaching & Examination Scheme											
Sr.No.	Course	Credit Bifurcation		Total Credits	External Theory	External Practical	Internal Assessment	Total Marks	Min. Marks for Passing	Duration of Exams (Hrs.)	
		T	P							T	P
1.	DSCC -1	2	4	6	25	100	25	150	54	1	3
2.	DSCC -2	2	4	6	25	100	25	150	54	1	3
3.	DSCC - 3	2	4	6	25	100	25	150	54	1	-
4.	DSE	2	2	4	25	25	50	100	36	2	-
5.	MDC	-	2	2	-	25	25	50	18	-	1
6.	AEC	2	-	2	25	-	25	50	18	1	-
7.	SEC	-	2	2	-	25	25	50	18	-	1
8.	VAC	2	-	2	25	-	25	50	18	1	-
	Total	**12**	**18**	**30**	**125**	**400**	**225**	**750**	-		

Semester 4											
Teaching & Examination Scheme											
Sr.No.	Course	Credit Bifurcation		Total Credits	External Theory	External Practical	Internal Assessment	Total Marks	Min. Marks for Passing	Duration of Exams (Hrs.)	
		T	P							T	P
1.	DSCC -1	2	4	6	25	100	25	150	54	1	3
2.	DSCC -2	2	4	6	25	100	25	150	54	1	3
3.	DSCC - 3	2	4	6	25	100	25	150	54	1	-
4.	DSE	2	2	4	25	25	50	100	36	2	-
5.	MDC	-	2	2	-	25	25	50	18	1	-
6.	AEC	2	-	2	25	-	25	50	18	1	-
7.	SEC	-	2	2	-	25	25	50	18	-	1
8.	VAC	2	-	2	25	-	25	50	18	1	-
	Total	**12**	**18**	**30**	**100**	**425**	**225**	**750**	-		

Important Note Regarding Examination Paper Pattern

Students will be evaluated in theory subjects following paper pattern of Commerce Faculty directed in *VNSGU Circular Dated 09.02.2024 bearing no. S/Commerce/Circular/3151/2024.*

Notes:-

1. DSCC Proficiency Assessment:

- Students' proficiency in Discipline Specific Core Courses (DSCC) will be evaluated through a comprehensive assessment method by the **Industry Training Partner**.
- This assessment may include:
  - Viva voce
  - Practical demonstration

- Project work
- Assignments
- Or a combination of these methods.

2. Internal Assessment:

- Internal Assessment will be divided into two components:
- Internal Exam: 20 Marks
- Attendance: 5 Marks

3. Practical Assessments:

- Both Internal and External Practical Assessments will be conducted by the respective teaching faculty.
- Students will be evaluated based on their performance in assigned tasks during practical sessions.

The maximum score for each practical assessment is 25 marks.

4. Practical Credit:

Practical credit will be awarded for successful completion on either or combination of the following:

a) Practical or Field work
b) Project work (individual or group)
c) Internships
d) On-the-Job Training (OJT)

5. Passing Criteria:

A candidate must pass based on a combined score of External, Internal Theory, and Practical exams.

B.Voc in Industrial Management
Semester – III
General Production Process - III

Course	B.Voc in Industrial Management (Sem – III)
Course Title	**General Production Process - III**
Type of Course	**Discipline Specific Core Course (Major)**
Credit	06 (02 Theory + 04 Practical)
Teaching per Week	02 Hours Theory + 8 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 120 Hours Practical
Medium of Instruction	English
Type of Assessment	Theoretical + Practical
Course Objective	1. Understand Lean Manufacturing principles 2. Identify and Eliminate Waste 3. Apply Lean Tools and Techniques
Course Outcome	Understanding and applying lean manufacturing principles and tools to eliminate waste and optimize processes for continuous improvement and customer value.

Course Content

Unit 1. Lean Manufacturing (Weightage-60%)

Introduction to lean manufacturing, History and Evolution, Core Principles (e.g., customer value, waste elimination, continuous improvement), Lean vs Traditional Manufacturing, The 7 waste (muda) – Overproduction, Waiting, Transportation, Inventory, Motion, Over processing and Defects., Value Stream Mapping – Basic Concept.

Unit 2. Lean Tools and Techniques (Weightage-40%)

5S, Poka-Yoke (Mistake-Proofing), Kaizen, Kanban, Single Piece Flow & Cellular Manufacturing.

References

1. **Lean Thinking:** by James P. Womack and Daniel T. Jones
2. **The Toyota Way:** by Jeffrey Liker
3. **Seeing the Invisible: How to Spot the 7 Wastes and Create Operational Excellence** by Michel Baudin
4. **Learning to See: The Importance of Looking and How to Look Better** by Myron Augsburger
5. **Kaizen: The Key to Japan's Competitive Success** by Masaaki Imai

6. **Lean Enterprise Value Stream Mapping: Seeing the Whole to Understand the Parts** by Mike Rother and John Shook

Unit Wise Learning Outcomes

Unit No.	Course Outcomes
1.	Student will learn the concept and principals of lean manufacturing, they will be able to differentiate between traditional and lean manufacturing. They will further able to analyse the waste with Seven Waste and understanding the Value Stream Mapping technique.
2.	Students will learn and apply various Lean tools and techniques. They will be able to implement 5S, understand Poka-Yoke principles, and participate in Kaizen events. Furthermore, they will learn the concepts of Kanban, Single Piece Flow, and Cellular Manufacturing and their applications in improving manufacturing processes.

B.Voc in Industrial Management
Semester – III
Fundamentals of Human Resource Management - I

Course	B.Voc in Industrial Management (Sem – III)
Course Title	**Fundamentals of Human Resource Management - I**
Type of Course	**Discipline Specific Core Courses (Major)**
Credit	06 (02 Theory + 04 Practical)
Teaching per Week	02 Hours Theory + 08 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 120 Hours Practical
Medium of Instruction	English
Type of Assessment	Theory + Practical
Course Objective	1. Understanding the fundamental concepts of Human Resource Management (HRM). 2. Developing a comprehensive understanding of the hiring and onboarding process. 3. Acquire knowledge of compensation and benefits.
Course Outcome	Understanding and applying core HRM functions, effective hiring and onboarding practices, and strategic compensation and benefits programs to attract, develop, and retain talent for organizational success.

Course Content

Unit 1: Introduction to Human Resource Management (HRM) (Weightage-30%)

HRM – Meaning, Role of HRM in organisational success, HRM functions – Recruitment, Selection, Training, Development, Compensation, Benefits, Performance Management, Employee Relations.

Unit 2: Hiring and On boarding (Weightage-35%)

Job Analysis and Job Description – Meaning, Recruitment Statergies –Internal vs External Recruitment, Selection Methods – Interviews Assessment and Background Checks, On boarding process – Orientation, Training, Mentoring and Integration.

Unit 3: Compensation and Benefits (Weightage-35%)

Job Evaluation – Meaning, Job Evaluation Methods – Job Ranking, Job Classification, Point Factor Method, Compensation Structures – Pay Grades, Pay Ranges and Salary Surveys, Types of compensation – Base Pay, Incentive, bonuses and commissions, Benefit Program – Health Insurance, Retirement Plans, Life Insurance, Paid Time off.

References:

1. **Essentials of Human Resource Management** by Gary Dessler
2. **Work Rules!: Insights from Inside Google That Will Transform How You Live and Lead** by Laszlo Bock.
3. **Total Rewards** by Jeffery Pfeffer.

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will learn the fundamentals of Human Resource Management (HRM). They will be able to define HRM and explain its crucial role in organizational success. Furthermore, they will identify and describe the key functions of HRM, including recruitment, selection, training, development, compensation, benefits, performance management, and employee relations.
2	Students will learn the principles of effective hiring and on boarding. They will be able to understand the concepts of job analysis and job description. Furthermore, they will differentiate between internal and external recruitment strategies and identify effective selection methods, including interviews, assessments, and background checks. Finally, they will understand and describe the key components of an effective on boarding process.
3	Students will learn the principles of compensation and benefits management. They will be able to understand the meaning and purpose of job evaluation and describe different job evaluation methods. Furthermore, they will explain the concepts of compensation structures, including pay grades, pay ranges, and the use of salary surveys. Finally, they will identify and describe various types of compensation and common employee benefit programs.

B.Voc in Industrial Management
Semester – III
Supply Chain Management - I

Course	**B.Voc in Industrial Management (Sem – III)**
Course Title	**Supply Chain Management - I**
Type of Course	**Discipline Specific Core Course (Major)**
Credit	06 (02 Theory + 04 Practical)
Teaching per Week	02 Hours Theory + 08 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 120 Hours Practical
Medium of Instruction	English
Type of Assessment	Theory+ Practical
Course Objective	1. Understanding the basic concepts of Supply Chain Management. 2. Learn about the important functions like procurement and sourcing.
Course Outcome	Gaining foundational knowledge of supply chain management and its core functions, particularly procurement and sourcing, for effective operational efficiency.

Course Content

Unit 1: Introduction to Supply Chain Management (SCM) (Weightage-50%)
SCM - Definition, scope, and evolution, Key concepts: Supply chain network, value chain, flow of goods and information, Importance of SCM in achieving competitive advantage, SCM in the digital age: Role of technology and data analytics.

Unit 2: Procurement and Sourcing (Weightage-50%)

The Procurement Process - Needs identification, supplier selection, negotiation, contract management, Sourcing strategies: Single sourcing, multiple sourcing, global sourcing, Supplier relationships: Building and managing supplier relationships, Supplier evaluation and performance measurement, Ethical and sustainable procurement practices.

References

1. **Supply Chain Management: Strategy, Planning & Operation** by Sunil Chopra and Peter Meindl.
2. **Logistics and Supply Chain Management** by Christopher M. Bowersox, David J. Closs, and M. Bixby Cooper.
3. **Procurement and Supply Chain Management** by Kenneth Lysons and Brian Farrington.
4. **Strategic Sourcing: The New Supply Chain Challenge** by Robert B. Handfield.

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will learn the definition of Supply Chain Management (SCM) and explain its scope and evolution. They will understand key SCM concepts such as supply chain networks, value chains, and the flow of goods and information within a supply chain. They will analyze the importance of effective SCM in achieving competitive advantage for organizations. They will understand the role of technology and data analytics in modernizing and improving supply chain operations.
2	Students will understand the procurement process, including needs identification, supplier selection, negotiation, and contract management. They will analyze different sourcing strategies, such as single sourcing, multiple sourcing, and global sourcing. They will understand the importance of building and managing effective supplier relationships. They will learn how to evaluate supplier performance and identify key performance indicators (KPIs). They will understand the principles of ethical and sustainable procurement practices.

B.Voc in Industrial Management
Semester – III
Industrial Banking and Finance

Course	B.Voc in Industrial Management (Sem – III)
Course Title	**Industrial Banking and Finance**
Type of Course	**Discipline Specific Electives (DSE-2)**
Credit	04 (02 Theory + 02 Practical)
Teaching per Week	02 Hours Theory + 04 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 60 Hours Practical
Medium of Instruction	English
Type of Assessment	Theory + Practical
Course Objective	Understanding the different aspects related to finance, banking and insurance from the viewpoint of industries.
Course Outcome	Understanding the financial needs of industries, banking services for capital acquisition and risk management, and insurance products for safeguarding industrial assets and operations.

Course Content

Unit 1: Introduction to Industrial Finance (Weightage-20%)
Characteristics of Industrial Finance, Financial needs of different industrial sectors, Role of finance in the industrial lifecycle.

Unit 2: Banking Services for Industries (Weightage-40%)
Types of loans (term loans, working capital loans, project finance), Credit appraisal and risk assessment, Investment banking services (M&A, IPOs, debt restructuring).

Unit 3: Insurance Products for Industries (Weightage-40%)
Property and casualty insurance, Business interruption insurance, Liability insurance, Professional indemnity insurance, Marine cargo insurance

Reference

1. **Industrial Finance** by R.S. Rao
2. **Principles of Banking** by V.G. Kulkarni
3. **Insurance Principles and Practice** by M.N. Mishra

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will be able to define industrial finance and understand its characteristics. They will be able to identify the diverse financial needs of different industrial sectors throughout their lifecycle.
2	Students will be able to understand various types of loans offered to industries, including term loans, working capital loans, and project finance. They will be able to explain the credit appraisal and risk assessment process for industrial loans. Furthermore, students will gain knowledge of investment banking services such as mergers and acquisitions (M&A), initial public offerings (IPOs), and debt restructuring.
3	Students will be able to identify and describe key insurance products relevant to industries, including property and casualty insurance, business interruption insurance, liability insurance, professional indemnity insurance, and marine cargo insurance. They will understand the importance of these insurance products in mitigating risks and ensuring business continuity.

B.Voc in Industrial Management
Semester – III
Digital Marketing - I

Course	B.Voc in Industrial Management (Sem – III)
Course Title	**Digital Marketing - I**
Type of Course	**Multi Disciplinary Course (MDC)**
Credit	02
Teaching per Week	04 Hours Practical
Minimum weeks / Semester	60 Hours
Medium of Instruction	English
Type of Assessment	Practical
Course Objective	Developing a basic understanding regarding the Digital Marketing.
Course Outcome	Understanding the fundamentals of digital marketing and applying SEO techniques to enhance online visibility and drive traffic.

Course Content

Unit 1. Introduction to Digital Marketing (Weightage-50%)
What is Digital Marketing?, The Evolution of Digital Marketing, Importance of Digital Marketing in Today's Business World, Key Concepts and Terminology.

Unit 2. Search Engine Optimization (SEO) (Weightage-50%)
Fundamentals of SEO, On-Page and Off-Page SEO Techniques, Keyword Research and Analysis, Technical SEO, Google Search Console and Google Analytics Basics.

References

1. **Digital Marketing: Strategy, Implementation & Practice** by Dave Chaffey and Fiona Ellis.
2. **Contagious: Why Things Catch On** by Jonah Berger.
3. **Social Media Marketing All-in-One For Dummies** by Jan Zimmerman and Deborah Ng

Unit wise Learning Outcomes

Unit No.	Outcomes
1	Students will be able to define digital marketing, understand its evolution, and explain its significance in today's business world. They will also be able to identify and describe key concepts and terminology within the field of digital marketing.
2	Students will understand the fundamentals of SEO and be able to apply on-page and off-page SEO techniques. They will be able to conduct keyword research and analysis, implement technical SEO best practices, and utilize tools like Google Search Console and Google Analytics to track and analyze SEO performance.

B.Voc in Industrial Management
Semester – III
English for Industry

Course	B.Voc in Industrial Management (Semester – III)
Course Title	**English for Industry**
Type of Course	**Ability Enhancement Course (AEC)**
Credit	02
Teaching per Week	02 Hours Theory
Minimum weeks / Semester	30 Hours
Medium of Instruction	English
Type of Assessment	Theory
Course Objective	Developing reading and writing skills by using different techniques.
Course Outcome	Developing comprehensive reading skills encompassing active engagement, critical analysis, strategic comprehension, and enhanced reading speed for effective information processing.

Course Content

Unit 1: Active Reading Techniques (Weightage-25%)
Previewing and skimming texts, SQ3R method (Survey, Question, Read, Recite, Review), Note-taking and highlighting strategies, Mind mapping and concept mapping.

Unit 2: Critical Reading Skills (Weightage-25%)
Identifying main ideas and supporting arguments, Recognizing bias and identifying fallacies, Evaluating the credibility of sources, Analyzing data and interpreting graphs/charts.

Unit 3: Reading Comprehension Strategies (Weightage-25%)
Context clues and vocabulary building, Inferencing and making predictions, Summarizing and paraphrasing.

Unit 4: Improving Reading Speed (Weightage-25%)
Chunking and eye movement exercises, Using a pacer (finger, pen), Eliminating sub vocalization.

References:

1. **Reading Excellence:** By Michele Pautz
2. **How to Read a Book:** By Mortimer J. Adler
3. **The Elements of Style:** By Strunk & White
4. **On Writing Well:** By William Zinsser
5. **Business Communication: Process and Products** by Courtland L. Bovee, John V. Thill, and Barbara E. Schatzman

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will implement active reading techniques such as previewing, skimming, SQ3R, note-taking, and highlighting. They will critically analyse texts by identifying main ideas, supporting arguments, and biases, and evaluating the credibility of sources. They will improve reading comprehension by utilizing context clues, inferencing, prediction strategies, and techniques to enhance reading speed.
2	Students will compose effective business emails, memos, letters, reports, and proposals adhering to professional standards and audience expectations. They will develop persuasive writing skills by constructing strong arguments, utilizing persuasive language and rhetorical devices, and building credibility in written communication. They will adapt writing style to suit the needs and expectations of different audiences, including internal and external stakeholders.
3	Unit aims to equip learners with essential reading comprehension strategies. By mastering context clues and expanding vocabulary, students will enhance their ability to decipher unfamiliar words and understand complex texts. They will also develop skills in inferencing and making predictions, allowing them to draw logical conclusions and anticipate upcoming information. Furthermore, students will learn to effectively summarize and paraphrase, enabling them to condense and restate information in their own words, ensuring deeper understanding and retention.
4	This unit focuses on boosting reading speed through targeted techniques. Students will learn to optimize eye movements and process text in meaningful chunks, reducing fixation time and improving flow. Utilizing pacers like fingers or pens will train their eyes to move efficiently across the page. A crucial aspect is eliminating subvocalization, the internal voicing of words, which slows down reading. By mastering these methods, learners will significantly increase their reading speed while maintaining comprehension.

B.Voc in Industrial Management
Semester – III
Computing Skills - III

Course	B.Voc in Industrial Management (Semester – I)
Course Title	**Computing Skills - III**
Type of Course	**Skill Enhancement Course (SEC)**
Credit	02
Teaching per Week	04 Hours Practical
Minimum weeks / Semester	60 Hours
Medium of Instruction	English
Type of Assessment	Practical
Course Objective	1. Comprehensive understanding of Artificial Intelligence (AI) 2. Identify and understand the real world applications of AI.
Course Outcome	Gaining foundational knowledge of AI concepts and effectively applying practical AI tools to enhance productivity and efficiency in various work-related tasks.

Course Content

Unit 1: Introduction to Artificial Intelligence (AI) (Weightage-50%)

Definition and History of AI, Types of AI, Utility of AI, Pros and Cons of AI.

Understanding Ilustrations of AI – Google search, Chatbots, Recommendation System, Autonomous Vehicle, Language Translation.

Unit 2: Basics of AI tools applications in work (Weightage-50%)

Introduction to popular AI tools, Meta AI, Chat GPT and its usage, Google's Gemini, Writesonic (Writes anything), Remini (Edit Pictures), Pictory (Edit Videos), Slidesgo (Create PPT), Descript (Convert text into Audio), Cleanup.pictures (Remove unwanted object from Picture), Kickresume,Rezi.

References

1. **Artificial Intelligence: A Modern Approach** by Stuart Russell and Peter Norvig
2. **AI Superpowers: China, Silicon Valley, and the New World Order** by Kai-Fu Lee.

Unit wise Learning Outcomes

Unit No.	Outcomes
1.	Students will define Artificial Intelligence (AI) and trace its historical evolution. They will classify different types of AI systems. They will analyze the potential utility and limitations of AI in various domains. They will explain the concepts and applications of AI through real-world examples such as Google Search, chatbots, recommendation systems, autonomous vehicles, and language translation.
2	Students will identify and describe popular AI tools used in the workplace. They will demonstrate basic proficiency in using selected AI tools for tasks like content creation, image and video editing, presentations, audio generation, image enhancement, resume building, and more.They will evaluate the strengths and limitations of these AI tools in different work contexts.

B.Voc in Industrial Management
Semester – III
Indian Science and Technology (BKS)

Course	**B.Voc in Industrial Management (Sem – III)**
Course Title	**Indian Science and Technology (BKS)**
Type of Course	**Value Added Course (VAC)**
Credit	02
Teaching per Week	02 Hours
Minimum weeks / Semester	30 Hours
Medium of Instruction	English
Type of Assessment	Theory
Course Objective	1. To provide students with a comprehensive understanding of the historical development of science and technology in India. 2. To foster an appreciation for the ingenuity and innovation of ancient and traditional Indian technologies.
Course Outcome	Understanding and appreciating India's historical contributions to technology, encompassing metallurgy, textiles, water management, transportation, and ecological practices, showcasing a rich legacy of innovation and sustainable development.

Course Content

Unit 1: Fundamentals (Weightage-10%)

An overview of Indian contributions to Technology, Technological Innovations.

Unit 2: Metallurgy, Textile Chemistry and Pyro Technology

(Weightage-30%)

Copper/Bronze/Zinc – Inportant Mines (Zawar/Khetri Mines), Iron and Wootz steel technology, Textile and Dyeing – Indian Specialities (Kutchi, Embroidery, Cotton Textile), Ceramic Technology, Stone, Shell, Ivory, Faience and Glass Technology.

Unit 3: Water Management and Transportation (Weightage-30%)

Harappan and Traditional Water Management systems of Gujarat, Historical Sites – Sringevenpur, South Indian Water Management System, Western Ghats Cave – Kanheri etc.Communities involved in water management, Modes of Transportation and Reforms,

Grand Truck Road (Uttarpath & Dakshinpath), Development of Trading techniques, Boat and ship building.

Unit 4: Ecology and Environment (Weightage-30%)

Nakshatra Gyaan and Agriculture, Vernacular Architecture, Forest Management,

Agroforestry, Tanks, Lakes and Stepwells.

References:

1. "The Wonder That Was India" by A.L. Basham: A classic overview of Indian civilization, including its scientific and technological aspects.
2. "Indian Science and Technology in the Eighteenth Century" by Dharampal.
3. "A Concise History of Science in India" by D.M. Bose, S.N. Sen, and B.V. Subbarayappa: A comprehensive academic text.

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will be able to articulate the breadth and significance of India's historical technological contributions and innovations within a foundational context.
2	Demonstrate an understanding of the historical significance and unique characteristics of Indian crafts and material sciences.
3	Students will be able to Analyze the design, implementation, and socio-economic impact of historical Indian water management and transportation systems, including specific regional examples and the roles of involved communities.
4	Students will be able to analyze the sustainable principles of interconnected ancient Indian ecological practices, including agriculture, architecture, and water conservation, and evaluate their contemporary relevance.

B.Voc in Industrial Management
Semester – IV
General Production Process - IV

Course	B.Voc in Industrial Management (Sem – II)
Course Title	**General Production Process - IV**
Type of Course	**Discipline Specific Core Course (Major)**
Credit	06 (02 Theory + 04 Practical)
Teaching per Week	02 Hours Theory + 08 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 120 Hours Practical
Medium of Instruction	English
Type of Assessment	Theory + Practical
Course Objective	1. Understanding the sustainable manufacturing principles and its applicability to manufacturing. 2. Gaining insights into the preventive maintenance practices.
Course Outcome	Integrating sustainable manufacturing principles with predictive maintenance techniques to minimize environmental impact and optimize operational efficiency through data-driven approaches.

Course Content

Unit 1: Introduction to Sustainable Manufacturing (Weightage-50%)

Principles of Sustainable Manufacturing, Life Cycle Assessment (LCA), Environmental and Social Impacts of Manufacturing, Sustainable Manufacturing Practices (e.g., waste reduction, energy efficiency, green materials), Conservation Practices

Unit 2: Predictive / Preventive Maintenance (Weightage-50%)

Principles of Predictive Maintenance, Data Collection Methods (sensors, IoT), Data Analysis Techniques (machine learning, AI), Predictive Maintenance Tools and Technologies, Case Studies of Predictive Maintenance Implementation

References:

1. **Sustainable Manufacturing: Principles and Practices** by G. Seliger and M. P. Groover
2. **Industrial Ecology: An Introduction** by Robert U. Ayres and Leslie W. Ayres
3. **Predictive Maintenance: A Practical Technology Guide** by Paul D. Almond
4. **Reliability Engineering** by Charles E. Ebeling

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will define Sustainable Manufacturing and explain its core principles. They will understand the concepts of Life Cycle Assessment (LCA) and its role in evaluating the environmental impact of manufacturing processes. They will analyze the environmental and social impacts of traditional manufacturing practices. They will identify and describe sustainable manufacturing practices such as waste reduction, energy efficiency, and the use of green materials.They will understand the importance of conservation practices in sustainable manufacturing.
2	Students will understand the principles of Predictive Maintenance and its benefits compared to traditional maintenance approaches. They will identify common data collection methods used in Predictive Maintenance, including sensors and IoT technologies. They will explain the role of data analysis techniques, such as machine learning and AI, in predicting equipment failures. They will identify and describe various Predictive Maintenance tools and technologies. They will analyze case studies of successful Predictive Maintenance implementations in different industries.

B.Voc in Industrial Management
Semester – IV
Fundamentals of Human Resource Management - II

Course	**B.Voc in Industrial Management (Sem – IV)**
Course Title	**Fundamentals of Human Resource Management - II**
Type of Course	**Discipline Specific Core Courses (Major)**
Credit	06 (02 Theory + 04 Practical)
Teaching per Week	02 Hours Theory + 08 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 120 Hours Practical
Medium of Instruction	English
Type of Assessment	Theory + Practical
Course Objective	1. Developing an understanding regarding the performance management and discipline in an organisation. 2. Learning about the relations among employees and challenges that occur to sustain positive environment in an organisation.
Course Outcome	Fostering a high-performing and positive workplace through effective performance management, disciplinary procedures, and robust employee relations strategies, including conflict resolution and promoting a positive work environment.

Course Content

Unit 1 : Performance Management and Discipline (Weightage-50%)

Setting clear and measurable performance goals, Performance appraisal methods- 360 degree feedback, management by objectives (MBO), providing constructive feedback and coaching, addressing performance issues and implementing corrective action, Disciplinary procedures – Progressive discipline, documentation, employee rights, Maintaining a positive and productive work environment.

Unit 2 : Employee Relations (Weightage-50%)

Defining Employee Relations, Nature and Scope of Employee Relations, Importance of positive employee relations, Impact on organizational performance (productivity, morale, turnover), Creating a positive work environment - Organizational culture and values, Diversity and inclusion initiatives, Employee engagement strategies, Employee recognition programs, Work-life balance initiatives, Conflict Resolution and Mediation - Identifying and addressing workplace conflicts, Negotiation and mediation techniques, Conflict resolution policies and procedures

References:

1. **Performance Management: Ensuring Business Success** by Peter Cappelli.
2. **Building Trust: In Business, Politics, Families, and Communities** by James C. Hunter

Unit wise Learning Outcomes

Unit No.	Outcomes
1	Students will be able to understand and apply effective performance management principles, including setting clear and measurable performance goals, conducting performance appraisals using various methods (e.g., 360-degree feedback, MBO), providing constructive feedback and coaching, and addressing performance issues through appropriate disciplinary procedures while ensuring employee rights and maintaining a positive and productive work environment.
2	Students will be able to understand the importance of positive employee relations in achieving organizational success. They will be able to identify factors that contribute to a positive work environment, such as organizational culture and values, diversity and inclusion initiatives, employee engagement strategies, and work-life balance initiatives. Furthermore, students will learn to recognize and address workplace conflicts effectively through negotiation, mediation, and the implementation of appropriate conflict resolution policies and procedures.

B.Voc in Industrial Management
Semester – IV
Supply Chain Management - II

Course	B.Voc in Industrial Management (Sem – IV)
Course Title	**Supply Chain Management – II**
Type of Course	**Discipline Specific Core Course (Major)**
Credit	06 (02 Theory + 04 Practical)
Teaching per Week	02 Hours Theory + 08 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 120 Hours Practical
Medium of Instruction	English
Type of Assessment	Theoretical + Practical
Course Objective	Developing a broad understanding with regards to Inventory Management and Supply Chain logistics.
Course Outcome	Optimizing inventory levels and streamlining supply chain logistics through effective management techniques, transportation strategies, and sustainable practices for efficient and cost-effective operations.

Course Content

Unit 1: Inventory Management (Weightage-50%)

Importance of effective inventory management, Inventory costs: Holding costs, ordering costs, stockout costs, Inventory control techniques - Economic Order Quantity (EOQ) model, ABC analysis (Pareto principle), Just-In-Time (JIT) inventory system, Safety stock and reorder points, LIFO and FIFO methods, Inventory management software and technologies.

Unit 2. Supply Chain Logistics (Weightage-50%)

Transportation Modes – Road, Rail, Sea, and Multimodal Transport, Logistics networks and warehouse management, Third-party logistics (3PL) providers, Supply chain visibility and tracking, Logistics and sustainability: Environmental impact and green logistics.

References

1. **Inventory Management: Principles and Practice** by Ronald H. Ballou.
2. **Supply Chain Management: Strategy, Planning & Operation** by Sunil Chopra and Peter Meindl.
3. **Logistics and Supply Chain Management** by Christopher M. Bowersox, David J. Closs, and M. Bixby Cooper

Unit wise Learning Outcomes

Unit No.	Outcomes
1	Students will understand the importance of effective inventory management in achieving organizational goals. They will be able to calculate inventory costs (holding, ordering, and stockout costs) and apply inventory control techniques such as EOQ, ABC analysis, and JIT. Furthermore, students will learn about safety stock, reorder points, and the impact of LIFO and FIFO methods on inventory valuation. Finally, they will gain an overview of inventory management software and technologies.
2	Students will understand the various transportation modes (road, rail, sea, and multimodal) and their associated costs and benefits. They will learn about logistics networks and warehouse management principles. Students will also gain knowledge of third-party logistics (3PL) providers and their role in supply chain operations. Additionally, they will understand the importance of supply chain visibility and tracking, and explore the environmental impact of logistics operations and the principles of green logistics.

B.Voc in Industrial Management
Semester – IV
Entrepreneurship

Course	B.Voc in Industrial Management (Sem – IV)
Course Title	**Entrepreneurship**
Type of Course	**Discipline Specific Electives (Minor)**
Credit	04 (02 Theory + 02 Practical)
Teaching per Week	02 Hours Theory + 04 Hours Practical
Minimum weeks / Semester	30 Hours Theory + 60 Hours Practical
Medium of Instruction	English
Type of Assessment	Theoretical + Practical
Course Objective	Understand core entrepreneurial concepts, types, mind-set, economic impact, ecosystems, and dispel common myths.
Course Outcome	Developing the entrepreneurial mindset and practical skills necessary to identify, validate, plan, market, and build a successful business venture.

Course Content

Unit 1: Introduction to Entrepreneurship (Weightage-20%)

Defining Entrepreneurship, Types of entrepreneurs (e.g., lifestyle, social, scalable), The entrepreneurial mindset: risk-taking, innovation, resilience, The Role of Entrepreneurship in the Economy, Entrepreneurial Ecosystems, Entrepreneurial Myths and Realities.

Unit 2: Identifying and Validating Business Idea (Weightage-20%)
Idea Generation Techniques, Market Research and Analysis, Idea Validation, Feasibility Analysis.

Unit3: Business Planning and Strategy (Weightage-20%)
Developing a Business Plan, Strategic Planning, Financial Management, Legal and Regulatory Considerations

Unit 4: Marketing and Sales Fundamental (Weightage-20%)
Marketing Principles, Sales Techniques, Customer Acquisition and Retention, Market Research for Marketing and Sales.

Unit 5: Building Strong Team and Network (Weightage-20%)
Team Building, Networking Strategies, Communication and Collaboration, Building Strategic Partnerships.

References

1. **"The Lean Startup"** by Eric Ries.
2. **"Zero to One: Notes on Startups, or How to Build the Future"** by Peter Thiel
3. **"Testing Business Ideas"** by David J. Bland, Alexander Osterwalder
4. **"The Five Dysfunctions of a Team"** by Patrick Lencioni.

Unit wise Learning Outcomes

Unit No.	Outcomes
1	This unit provides a foundational understanding of entrepreneurship, clarifying its definition and exploring the diverse types of entrepreneurs. Students will learn to recognize and cultivate the entrepreneurial mindset, focusing on key attributes like risk-taking, innovation, and resilience. Furthermore, the unit examines the critical role of entrepreneurship in economic development and explores the dynamics of entrepreneurial ecosystems, while also debunking common myths surrounding entrepreneurship.
2	This unit focuses on the critical process of transforming initial ideas into viable business opportunities. Students will learn various techniques for generating innovative ideas and conduct thorough market research to assess potential demand. The unit emphasizes the importance of idea validation through testing and feedback, ensuring the concept resonates with the target audience. Finally, students will perform a feasibility analysis to determine the practical viability and potential for success of their business ideas.
3	This unit equips learners with the skills to develop comprehensive business plans and strategic frameworks, including financial management and navigating legal and regulatory requirements. It focuses on translating ideas into actionable plans for sustainable business growth.
4	This unit covers the essential marketing and sales fundamentals, focusing on applying core principles and techniques to acquire and retain customers. It emphasizes the importance of market research in developing effective marketing and sales strategies.
5	This unit focuses on developing the skills needed to build effective teams and networks, emphasizing communication, collaboration, and strategic partnerships. It aims to equip learners with the tools to foster strong relationships crucial for business success.

B.Voc in Industrial Management
Semester – IV
Digital Marketing - II

Course	**B.Voc in Industrial Management (Sem – III)**
Course Title	**Digital Marketing - II**
Type of Course	**Multi Disciplinary Course (MDC)**
Credit	02
Teaching per Week	04 Hours Practical
Minimum weeks / Semester	60 Hours
Medium of Instruction	English
Type of Assessment	Practical
Course Objective	Developing a basic understanding regarding the Digital Marketing.
Course Outcome	Mastering the fundamentals of search engine marketing (SEM) and social media marketing to effectively drive targeted traffic, enhance brand visibility, and achieve marketing objectives through paid advertising and social media engagement.

Course Content

Unit 1. Search Engine Marketing (SEM) (Weightage-50%)

Pay-Per-Click (PPC) Advertising, Google Ads Fundamentals, Creating and Managing Ad Campaigns, Keyword Bidding and Quality Score, Tracking and Analyzing PPC Campaigns.

Unit 2. Social Media Marketing (Weightage-50%)

Social Media Platforms and Their Target Audiences, Social Media Marketing Strategies, Content Creation and Scheduling, Social Media Listening and Engagement, Social Media Analytics.

References

1. **The Art of SEO** by Eric Enge, Stephan Spencer, and Jessie Stricchiola.
2. **Search Engine Optimization Starter Guide** (Google)
3. **Google Ads Fundamentals** (Google Skillshop)
4. **Advanced Google Ads** (Google Skillshop)
5. **Social Media Marketing All-in-One For Dummies** by Jan Zimmerman and Deborah Ng

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will understand the principles of Pay-Per-Click (PPC) advertising and be able to use Google Ads to create, manage, and analyze effective ad campaigns. They will learn about keyword bidding, quality score, and other key factors that impact PPC campaign performance.
2	Students will be able to identify and analyze the target audiences of different social media platforms and develop effective social media marketing strategies. They will be able to create and schedule engaging content, monitor social media conversations, and analyze social media performance using relevant metrics.

B.Voc in Industrial Management
Semester – IV
Correspondence for Industry

Course	B.Voc in Industrial Management (Semester – III)
Course Title	**English for Industry**
Type of Course	**Ability Enhancement Course (AEC)**
Credit	02
Teaching per Week	02 Hours
Minimum weeks / Semester	30 Hours
Medium of Instruction	English
Type of Assessment	Theory
Course Objective	Developing reading and writing skills by using different techniques.
Course Outcome	Developing effective business communication skills through mastering various writing formats, persuasive techniques, and audience-tailored content creation.

Course Content

Unit 1: Business Writing Formats (Weightage-40%)

Professional emails (formatting, tone, etiquette), Memos and letters (format, purpose, audience), Reports (structure, data analysis, conclusions), Proposals (problem statement, solutions, budget).

Unit 2: Persuasive Writing Techniques (Weightage-30%)

Developing strong arguments and supporting evidence, Using persuasive language and rhetorical devices, Building credibility and establishing trust.

Unit 3: Writing for Different Audiences (Weightage-30%)

Tailoring writing style to different audiences (internal, external, clients), Understanding and addressing audience needs and expectations.

References:

1. **The Elements of Style:** By Strunk & White
2. **On Writing Well:** By William Zinsser
3. **Business Communication: Process and Products** by Courtland L. Bovee, John V. Thill, and Barbara E. Schatzman

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will be able to Produce clear, concise, and professional business documents including emails, memos, letters, reports, and proposals tailored to specific audiences and purposes.
2	Students will be able to Construct compelling arguments using persuasive language and credible evidence to build trust and influence audiences
3	Students will be able to Adapt writing style and content to effectively communicate with diverse audiences by understanding and addressing their specific needs and expectations.

B.Voc in Industrial Management
Semester – IV
Business Soft Skills

Course	B.Voc in Industrial Management (Sem – I)
Course Title	**Business Soft Skills**
Type of Course	**Skill Enhancement Course (SEC)**
Credit	02
Teaching per Week	04 Hours Practical
Minimum weeks / Semester	60 Hours
Medium of Instruction	English
Type of Assessment	Practical
Course Objective	1. To prepare the students as future entrepreneurs. 2. To develop among the students soft skills necessary to be employment ready.
Course Outcome	The students would understand the importance of being goal-oriented, having a positive attitude and the importance of time and how to manage it properly.

Course Content

Unit 1: Goal Setting (Weightage-25%)

Importance of Goal Setting, SMART Goals, Types of Goals, Benefits, How to set Goals.

Unit 2: Positive Attitude (Weightage-25%)

Define positive attitude, Technique of Visualization, Technique of Affirmation

Unit 3: Time Management (Weightage-25%)

Objectives and significance of Time Management, Steps of Effective Time Management, Procrastination and ways to overcome.

Unit 4: Leadership (Weightage-25%)

Understanding Leadership and its Importance, Traits and Models of Leadership, Basic Leadership Skills (Motivation, Teamwork, Negotiation, Networking)

References:

1. Ashokan M.S. 2015 *Karmayogi: A Biography of E. Sreedharan.* London, UK: Penguin
2. Kalam, A.P.J. 2003 *Ignited Minds: Unleashing the Power within India.* New Delhi: Penguin Books India
3. Norman Vincent Peale 2016 *The Power of Positive Thinking* Grapevine India Publishers

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will learn the importance of goal setting, the concept of SMART goals, and different types of goals, their benefits, and effective strategies for setting and achieving them. They will develop skills in goal setting to achieve personal and professional success.
2	Students will learn the definition and importance of a positive attitude, and effective techniques for visualization and affirmation to cultivate a positive mindset. They will develop skills in maintaining a positive outlook, leading to increased motivation, resilience, and overall well-being.
3	Students will learn the objectives and significance of time management, effective steps for time management, including techniques to overcome procrastination. They will develop skills in time management to improve productivity, reduce stress, and enhance overall efficiency.
4	Students will learn the concept of leadership, its importance, and various leadership traits and models, developing essential leadership skills such as motivation, teamwork, negotiation, and networking. They will gain insights into effective leadership practices and their impact on individuals and organizations.

B.Voc in Industrial Management
Semester – IV
NSS Activity

Course	B.Voc in Industrial Management (Sem – I)
Course Title	**Bhartiya Knowledge System (Indian Economics and Business Model)**
Type of Course	**Value Added Course (VAC)**
Credit	02
Activity per Week	02 Hours
Minimum weeks / Semester	30 Hours
Medium of Instruction	NA
Type of Assessment	Theoretical
Course Objective	To analyze the historical evolution and unique characteristics of the Indian economy, from ancient texts to its current global standing, through the lens of traditional and modern economic thought.
Course Outcome	Students will be able to critically evaluate India's economic history and its distinctive business model, understanding the interplay of cultural, social, and economic factors.

Course Content

Unit 1:- History of Indian Economy (Weightage – 60%)

History of Indian Economy Thoughts: Context from Dharmashashtras, Shukraniti, Mahabharata and Arthshashtra, Kautilya's Economic thoughts in specific, India and Global GDP: Ancient India, Beyond Capitalism and Communalism, Dharmic, Caste as Social Capital, Black Money and Tax Heaven. Agriculture: Ancient India, Manufacturing: Ancient India, Education in India, Wealth in India, Governance and Business in India, Where India stands globally.

Unit 2:- Indian Business Model: Based on 10 Point Formula (Weightage – 40%)

Family Base, High Level of Savings, Self-Employment, Highly Entrepreneurial Nature, Non-corporate sector as the core of the economy, Community orientation and High Social Capital, Faith and Relationship in Economic Affairs, A society Driven economy, Driven by Norms and Values.

References:

1) Kanagasbapathi:"Indian Models of Economy, Business and Management. 'Third Edition, Prentice Hall India Ltd. Delhi.

2) Lotus and Stones: Garuda Prakashan (31 October 2020); Garuda Prakashan Pvt. Ltd.

3) Dwivedi D.N., Essentials of Business Economics, Vikas Publications, Latest Edition.

4) Inida Uninc by Prof. R. Vaidyanathan, Westland Ltd. Publication.

5) Economic Sutras by Prof. Satish Y. Deodhar, IIMA Book series.

6) Black Money Tax Heaven by Prof. R. Vaidyanathan, Westland Ltd. Publication.

Unit Wise Learning Outcomes

Unit No.	Outcomes
1	Students will be able to articulate the historical development of the Indian economy, including its philosophical underpinnings, key sectors, and global position, from ancient times to the present.
2	Students will be able to explain and analyse the unique characteristics of the Indian business model as defined by its ten key formula points, including its reliance on social capital and traditional values.