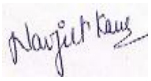
Department of MBA

Details of Lesson Plan

S.No.	Particulars	Details
1.	Course Name	Production Management
2.	Course Code	MBA-206
3.	Academic Year	2024-25
4.	Semester	2nd
5.	Number of Lesson plans	48
6.	Faculty Assigned	Dr. Navjeet Kaur



Faculty Signature

Lesson Plan No. 0	Course Name: Production Management Topic: Introduction to the Course	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Provide an introduction to the course – Production Management
Teaching Aids (if any)	a. Power Point Presentation
Teaching Development	1. **Introduction** (05 minutes) - Ask questions What do you mean by Production Management? - Introduce the concept of Production Management. 2. **Development** (30 minutes) a) Introduction - Talk about the COs of the Course - List down the units of the Course b) Overview of the Course - Describe about the Unit I – Introduction to Operations Management - Briefly summarize Unit II – Facility Location and Layout - Provide an overview of Unit III – Production Planning and Control - Outline the Unit IV – Material and Store Management - Encapsulate the Unit V – Inventory and Quality Management - Briefly sum up about the relevance of the course - Provide the list of text books and reference books Exercise (5 minutes) – Think-Pair-Share
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg Production / Operations Management, Case Study Solutions by S.N. Chary 3. Homework Write about the benefits of Production Management.

	Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions **What is the significance of Production Management?** **How Production Management contributes in overall business success?** 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 1	Course Name: Production Management Topic: Introduction to Operations Management: Objectives and Components	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Describe the concept of Operations Management b. Interpret the objectives of Operations Management c. Explain the components of Operations Management
Teaching Aids (if any)	a. Power Point Presentation b. Video https://www.youtube.com/watch?v=l-MnHBREzG8
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by Operations? What do understand by the term Management? What are the key strategic objectives of operations management? - Introduce the concept of Operations Management. - List the objectives of operations management. 2. **Development** (30 minutes) a) Introduction - Describe the concept of Operations Management - Define Operations Management b) Objectives and Components - Interpret the Objectives of Operations Management • Ensure that the organisation's production systems can meet customer demand • Maximise the efficiency of the organisation's production systems • Minimise the cost of producing goods and services • Improve the quality of the goods and services made by the organisation • Increase the flexibility of the organisation's production systems • Reduce the risk of disruptions to the organisation's production systems • Improve communication and coordination among all parties involved in operating an organisation's production systems - Explain the Components of Operations Management

	• Forecasting • Total Quality Management • Material Requirement Planning • Just in Time • Inventory Management Exercise (5 minutes) – Summarising
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://www.edureka.co/blog/nature-of-operations-management/ https://commercemates.com/what-is-operations-management/ 3. Homework Identify how does operations management differ between manufacturing and service industries. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How does operations management contribute to an organization's competitive advantage? What is the role of operations management in integrating different functional areas within an organization? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 2	Course Name: Production Management Topic: Introduction to Operations Management: Nature and Scope	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Describe the concept of Operations Management b. Interpret the nature of Operations Management c. Explain the scope of Operations Management
Teaching Aids (if any)	a. Power Point Presentation b. Video
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the key functions of operations management? How does operations management impact productivity? - Talk about key functions of Operations Management. - Give an overview about the impact of operations management on productivity. 2. **Development** (30 minutes) a) Introduction - Briefly describe the nature and scope of Operations management b) Nature and Scope - Interpret the nature of Operations Management • Dynamic • Transformational Process • Continuous Process • Administration - Explain the scope of Operations Management • Increase productivity • Raises revenue • Achievement of Organisational Goals • Improve customer satisfaction • Reduce investment need • Enhance goodwill • Improve innovation • Facility layout planning • Workforce planning and management • Inventory management • Scheduling • Quality control

	• Transportation and logistics • Maintenance • Project management Exercise (5 minutes) – Think-Pair-Share
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://www.edureka.co/blog/nature-of-operations-management/ https://commercemates.com/what-is-operations-management/ 3. Homework Write a note on the role of operations management in organizational efficiency. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What defines the dynamic nature of operations management? How does operations management transform inputs into outputs? Why operations management is considered as a continuous process? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 3	Course Name: Production Management Topic: Introduction to Operations Management: Importance and Functions	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Articulate the importance of Operations Management b. Explain the functions of Operations Management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions Why Operations Management is important? What are the various functions of Operations Management? - Talk about why Operations Management is important. - List down the various functions of Operations Management. 2. **Development** (30 minutes) a) Introduction - Give the recap of the concept of Operations Management b) Importance and Functions - Articulate the Importance of Operations Management • Helps in achievement of objectives • Improves Employee productivity • Enhance Goodwill • Optimum utilization of resources • Motivates Employees - Explain the Functions of Operations Management • Finance • Operation • Strategy • Product Design • Maintaining Quality Exercise (5 minutes) – One Minute Paper

Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://commercemates.com/what-is-operations-management/ https://theintactone.com/2018/02/21/om-u1-topic-1-nature-and-scope-of-production-and-operation-management/#google_vignette 3. Homework Write a note on the role of technology and innovation in modern operations management. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How do operations managers ensure and maintain product/service quality? What methodologies are used for continuous improvement in operations? Why operations management is essential for customer satisfaction? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 4	Course Name: Production Management Topic: Introduction to Operations Management: Relationship with other functional areas	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Discuss the relationship of operations management with other functional areas
Teaching Aids (if any)	a. Power Point Presentation
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the other functional areas with which Operations Management is interrelated? How operations management is related to other functional areas? - List down the other functional areas with which Operations Management is interrelated. - Talk about the relationship of operations management with other functional areas. 2. **Development** (30 minutes) a) Introduction - Briefly describe the other areas that possesses a relationship with Operations Management b) Operations Management and other functional areas - Discuss the relationship of operations management with other functional areas • Operations Management and Finance • Operations Management and Information Technology • Operations Management and Supply Chain Management • Operations Management and R&D • Operations Management and Strategic Management • Operations Management and Legal Compliance Exercise (5 minutes) – Conduct a Poll

Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://theintactone.com/2018/02/21/om-u1-topic-4-relationship-of-operations-management-with-other-functional-areas/#google_vignette 3. Homework Identify how does operations management serve as a central nexus connecting different organizational functions? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How do operations management and HR collaborate to ensure workforce productivity? What financial metrics are most critical for operational decision-making? How does marketing trend identification impact operational process design? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 5	Course Name: Production Management Topic: Evolution from manufacturing to operations management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Describe the concept of Production Management b. Discuss the concept of Operations Management c. Articulate the evolution from Manufacturing to Operations Management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by Production Management? What do understand by the term Operations Management? - Introduce the concept of Production Management - Introduce the concept of Operations Management 2. **Development** (30 minutes) a) Introduction - Define Production Management - Define Operations Management b) Evolution - Discuss the evolution from Manufacturing to Operations Management • The Industrial Revolution • Post-Civil War Period • Scientific Management • Human Relations and Behaviourism • Operations Research • The Service Revolution Exercise (5 minutes) – Value Line

Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://www.studocu.com/row/document/kaduna-state-university/operation-management/historical-evolution-of-production-and-operation-management/7763316 3. Homework Compare the traditional manufacturing management approaches with modern operations management philosophies. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How did the transition from manufacturing management to operations management occur during the 20th century? What key historical events triggered the shift from production-focused approaches to broader operational perspectives? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 6	Course Name: Production Management Topic: Emerging Trends in Operations Management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Articulate the emerging trends in operations management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the major shifts taken place in Operations Management? - List down the major shifts taken place in Operations Management. 2. **Development** (30 minutes) a) Introduction - Briefly describe about the major shifts taken place in Operations Management b) Emerging Trends - Articulate the emerging trends in operations management • Digital Transformation • Sustainability and Green Operations • Resilient Supply chains • Agile and Lean Operations • Data-driven Decision-Making • Human-Centric Operations • Customization and Personalization • Remote operations and Automation Exercise (5 minutes) – Quiz (Visible)
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://theintactone.com/2018/02/21/om-u1-topic-6-recent-trends-in-operations-management/

	3. Homework Identify the potential of Industry 4.0 in revolutionizing manufacturing and service operations. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How are Artificial Intelligence (AI) and Machine Learning (ML) reshaping operations management strategies? What challenges do organizations face in implementing sustainable and green operational practices? What skills are critical for operations managers in the emerging digital ecosystem? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 7	Course Name: Production Management Topic: Types of Production/Operation Systems	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Describe the concept of operation system b. Interpret the types of production/Operation System
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the primary types of production systems in modern manufacturing? How do different production systems impact organizational efficiency? - List down the types of Operations Management and talk about their impact on organisational efficiency. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of Operation System b) Types of Operations System - Interpret the types of Production/Operation System • Job Shop Production Characteristics: · High customization · Low volume, high variety · Highly skilled labor · Varied processing routes · Irregular workloads • Batch Production Characteristics: · Moderate customization · Moderate volume, moderate variety · Setup times between batches · Standardized processes · Improved efficiency compared to job shops • Mass production Characteristics: · Low customization · High volume, low variety

	· Continuous flow production · Specialized machinery · Economies of scale Exercise (5 minutes) – Quiz (Visible)
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://themba.institute/management-of-machines-and-materials/types-of-production-systems/ https://theintactone.com/2019/06/16/pom-u1-topic-2-types-of-production-systems/#google_vignette 3. Homework Discuss the relationship between production systems and organizational competitiveness. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the key challenges in implementing job shop production systems? How has mass production evolved with technological advancements? What strategic advantages does batch production offer organizations? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 8	Course Name: Production Management Topic: Types of Production/Operation Systems Contd……..	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Describe the concept of operation system b. Interpret the types of production/Operation System
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the primary types of production systems in modern manufacturing? How do different production systems impact organizational efficiency? - List down the types of Operations Management and talk about their impact on organisational efficiency. 2. **Development** (30 minutes) a) Introduction - Summarise the concept of Operation System b) Types of Operations System - Interpret the types of Production/Operation System • Cellular Manufacturing Characteristics: · Grouping similar products or processes · Faster setup times · Improved resource utilization · Enhanced flexibility compared to mass production • Lean Manufacturing Characteristics: · Waste reduction · Emphasis on value-added activities · JIT inventory management · Kaizen (continuous improvement) · Cross-functional teams • Flexible Manufacturing System Characteristics: · High automation · Versatile machinery

	· Quick changeovers · Reduced labor requirements · High initial investment Exercise (5 minutes) – Just a Minute (JAM)
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://themba.institute/management-of-machines-and-materials/types-of-production-systems/ https://theintactone.com/2019/06/16/pom-u1-topic-2-types-of-production-systems/#google_vignette 3. Homework Identify how do lean, cellular, and flexible manufacturing systems complement each other? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What defines the core principles of lean manufacturing? How do cellular manufacturing systems optimize production flow? How do flexible manufacturing systems leverage advanced technologies? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 9	Course Name: Production Management Topic: Types of Production/Operation Systems Contd……..	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Describe the concept of operation system b. Interpret the types of production/Operation System
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the primary types of production systems in modern manufacturing? How do different production systems impact organizational efficiency? - List down the types of Operations Management and talk about their impact on organisational efficiency. 2. **Development** (30 minutes) a) Introduction - Give a recap of the concept of Operation System and previously discussed types of operation system b) Types of Operations System - Interpret the types of Production/Operation System • Continuous Process Production Characteristics: · Uninterrupted production · High volume, low variety · Continuous flow processes · Rigorous quality control · High capital investment • Just-in-Time Production Characteristics: · Minimized inventory · Demand-driven production · Reduced lead times · Efficient use of resources · Close supplier relationships • Make-to-Order and Engineer-to-Order Characteristics: · High customization

	· Products built to order · Longer lead times · Detailed customer specifications · Variability in production Exercise (5 minutes) – Quiz (Oral)
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-1) https://themba.institute/management-of-machines-and-materials/types-of-production-systems/ https://theintactone.com/2019/06/16/pom-u1-topic-2-types-of-production-systems/#google_vignette 3. Homework Differentiate the JIT, MTO and Continuous Process Production Systems considering their benefits and limitations. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How does JIT eliminate waste in production processes? How do make-to-order systems enhance customer customization? What industries most effectively utilize continuous production approaches? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 10	Course Name: Production Management Topic: Facility Location	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of Facility Location b. Elaborate the Objectives of Facility Location c. Describe the need for facility location planning d. Interpret the procedures and Techniques for selecting facility location e. Discuss the Strategic Importance of Facility location
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by facility location? What is the significance of facility location decision? - Talk about facility location and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of facility location b) Facility location - Elaborate the Objectives of Facility Location • Revenue Potential from that Site • Availability of Resources • Tax advantages • Reducing Cost and Production Time • Convenient Transportation Facilities • Suitable Environment for Employees • Meet the Maximum Demands of Customers • Maximum Space Utilization - Describe the need of facility location planning • When a new plant is to be established • Expansion, Diversification and Decentralization of Manufacturing Activities • Non-Renewal of Lease of Land or other Assets • Doing away with undesirable location - Interpret the procedures and techniques for selecting facility location • Decide on the criteria for evaluating location alternatives

	• Identify important factors • Develop location alternatives • Evaluate the alternatives • Make a decision and select the location - Discuss the strategic importance of facility location • Adequate supply of raw materials • Availability of skilled and qualified workforce • Competitive advantage • Reduce transportation expenditure • Improved efficiency Exercise (5 minutes) – Summarising
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-10) https://csbapp.uncw.edu/janickit/ops370/modules/Module7.pdf https://theinvestorsbook.com/location-decision.html 3. Homework Identify how do well-positioned facilities support business growth and expansion. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How can facility location provide competitive advantages? What analytical techniques are used in evaluating facility location alternatives? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 11	Course Name: Production Management Topic: Facility Location Contd….	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the factors affecting Facility Location Decision b. Elaborate the Facility Location Decision Process
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the primary considerations in facility location planning? What strategic factors determine optimal facility placement? - List down the primary considerations in facility location planning. - Talk about the factors determining optimal facility placement. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of optimal facility placement b) Facility location – Factors Affecting - Explain the factors affecting facility location decision • Product and Industry • Availability of resources • Proximity to consumers • Climate conditions • Proximity to Market • Regulatory and Policy issues • Labour Supply • Free trade Zones • Infrastructure • Taxes - Elaborate the facility location decision process • Investigation • Identification • Evaluation • Selection Exercise (5 minutes) – One Minute Paper

Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-10) https://csbapp.uncw.edu/janickit/ops370/modules/Module7.pdf https://theinvestorsbook.com/location-decision.html 3. Homework Identify the strategic factors determining optimal facility placement. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How do transportation infrastructure and labor availability affect location choices? What risk factors should organizations evaluate when selecting facility locations? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 12	Course Name: Production Management Topic: Facility Layout	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of facility layout b. Discuss the objectives of facility layout decision c. Elaborate the strategic importance of facility layout d. Interpret the factors affecting facility layout decision
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by facility layout? Why facility layout is significant for a manufacturing plant? - Briefly describe about facility layout. - Talk about the significance of facility layout. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of facility layout. b) Facility layout - Discuss the Objectives of facility layout • To ensure optimum utilization of resources • To achieve economies of scale • To minimize production delays • To ensure less wastage and scrap • To promote effective PPC • To minimize accidents • To reduce manufacturing cycle and processing time • To ensure better quality products • To provide better customer services • To provide safety to men/women at work • To employ efficient work methods • To provide better working conditions • To reduce manufacturing and maintenance costs • To improve morale of employees • To promote specialization - Elaborate the strategic importance of facility layout • Economies in Handling • Effective Use of Available Area

	• Minimization of Production Delays • Improved Quality Control • Minimum Equipment Investment • Avoidance of Bottlenecks • Better Production Control • Better Supervision • Improved Utilization of Labour • Improved Employee Morale • Avoidance of Unnecessary and Costly Changes - Interpret the factors affecting facility layout • Policies of Management • Location of Plant • Nature of Product • Availability of Floor Space • Type of Industry • Nature of Manufacturing Process • Volume of production Exercise (5 minutes) – Poll
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-13) https://www.spanco.com/blog/designing-an-effective-manufacturing-facility-layout/ 3. Homework Identify how do emerging technologies influence modern facility layout strategies? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How do principles like minimum movement and space utilization influence layout design? What are the core objectives of strategic facility design? 2. Conduct Discussion

	Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 13	Course Name: Production Management Topic: Facility Layout contd….	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the principles of facility layout b. Discuss the types of facility layout c. Interpret the steps for designing a manufacturing facility plan d. Elaborate the techniques of facility location installation
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What are the various types of facility layout? What are the essentials for designing a manufacturing facility plan? - Give an overview of types of facility layout. - List down the essentials for designing a manufacturing facility plan. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of facility layout. b) Facility layout - Explain the principles of facility layout • Principle of Overall Integration • Principle of Minimum Distance • Principle of Flow • Principle of Cubic Space Utilization • Principle of Satisfaction and Safety • Principle of Flexibility - Discuss the types of facility layout • Plant Layout • Process Layout • Product Layout • Combination Layout • Fixed position Layout - Interpret the steps for designing a manufacturing facility plan • Collect background information • Make a plan • Build a rough layout

	• Choose your equipment • Refine your layout • Review workflows • Simulate activities • Consider future needs • Confirm your alignment - Elaborate the techniques of facility location installation • Techniques used in making Facility Location Decision- · Location Rating Factor Technique. · Break-Even Analysis · Centre of Gravity Technique. · Transportation Model • Techniques used in making Facility Layout Decision-: · Block diagramming. · Systematic Layout Planning. Exercise (5 minutes) – Value Line
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-13) https://www.spanco.com/blog/designing-an-effective-manufacturing-facility-layout/ 3. Homework How do different layout approaches impact production efficiency? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What cost considerations drive layout design decisions? How does layout design contribute to employee comfort and productivity? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 14	Course Name: Production Management Topic: Capacity Planning	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of capacity planning b. Describe the benefits of capacity planning c. Discuss the factors affecting capacity planning d. Interpret the importance of capacity planning
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by capacity planning? Why it is essential for an organization? - Briefly describe the capacity planning. - Talk about its significance for an organisation. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of capacity planning. b) Capacity Planning - Describe the benefits of capacity planning • Reduces costs • Prevents Stock-Outs • Reduces Production Lead Time • Eliminates Excess Capacity • Helps with Supply Chain Management • Helps with Resource Management - Discuss the factors affecting capacity planning • Production facility • Product line or matrix • Production technology • Human capital • Operational structure • External structure - Interpret the importance of capacity planning • Impacts ability to meet future demands • Affects operating costs • Major determinant of initial costs • Involves long-term commitment

	• Affects competitiveness • Affects ease of management • Globalization adds complexity • Impacts long range planning Exercise (5 minutes) – Think-Pair-Share
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-12) https://www.projectmanager.com/training/3-capacity-planning-tips-teams 3. Homework "Capacity planning minimize operational inefficiencies" Justify the statement. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the core objectives of effective capacity planning? What key resources are considered in comprehensive capacity planning? How do organizations determine their production capacity requirements? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 15	Course Name: Production Management Topic: Capacity Planning Decisions	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of capacity planning decisions b. Describe the types of capacity planning c. Discuss the process of capacity planning
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by capacity planning decision? What are the various types of capacity planning? - Briefly describe the capacity planning decision. - List the various types of capacity planning. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of capacity planning decisions. b) Capacity Planning Decisions - Describe the types of capacity planning • Project capacity planning • Process capacity planning • Production capacity planning • Team capacity planning • Tool capacity planning • Sales capacity planning • Agile capacity planning - Discuss the process of capacity planning • Capacity analysis • Capacity forecasting • Capacity modelling • Capacity scheduling • Capacity tracking • Capacity reporting Exercise (5 minutes) – Caselet Discussion

Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-12) https://www.projectmanager.com/training/3-capacity-planning-tips-teams 3. Homework Identify the potential consequences of inadequate capacity planning. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What role do historical data and trend analysis play in capacity decisions? What metrics help evaluate the effectiveness of capacity planning decisions? How do capacity decisions impact operational efficiency? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 30	Course Name: Production Management Topic: Integrated System of Material Management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of integrated system of material management b. Describe the scope of integrated system of material management c. Discuss the functions of integrated system of material management d. Infer the components of integrated system of material management e. Explain the objectives of integrated system of material management f. Interpret the benefits of integrated system of material management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by integrated system of material management? What is the significance of integrated system of material management? - Talk about integrated system of material management and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of integrated system of material management b) Integrated System of Material Management - Describe the scope of integrated system of material management • Materials Planning/Materials Requirement Planning • Purchasing • Receiving & Inspection • Storekeeping & Warehousing • Inventory Control • Materials Handling and Transportation, including Logistics & Physical Distribution Management • Scrap & Surplus Control and Disposal • Cost Reduction Techniques like Value Analysis, Standardization, Variety Reduction etc. • Forecasting & Market Analysis

	- Discuss the functions of integrated system of material management • Decide on the purchase of materials • Ensure the centralization of power • Coordinate all functions of the departments • Ensure quick and accurate decision-making • Administer data analysis by Electronic Data Processing (EDP) and use of computing technology • Emphasize on the opportunity for growth - Infer the components of integrated system of material management • **Procurement & Sourcing** – Ensures the right materials are acquired at the right time and cost. • **Inventory Management** – Controls stock levels to prevent overstocking or shortages. • **Warehousing & Storage** – Organizes materials efficiently for easy access and minimal wastage. • **Logistics & Distribution** – Streamlines transportation and delivery processes. • **Quality Control** – Ensures that materials meet industry and company standards. • **Data Processing & Technology Integration** – Uses **ERP, Electronic Data Processing (EDP), AI, and IoT** for real-time tracking, automation, and analysis. • **Supplier & Vendor Management** – Strengthens relationships with suppliers for better pricing and reliability. - Explain the objectives of integrated system of material management • **Improve Coordination:** Ensures seamless interaction between different departments. • **Enhance Decision-Making:** Uses real-time data and analytics to optimize material flow. • **Reduce Costs:** Prevents wastage, over-purchasing, and inefficiencies. • **Increase Productivity:** Automates manual tasks for faster operations. • **Ensure Quality & Compliance:** Helps maintain material standards and regulatory compliance. - Interpret benefits of integrated system of material management • **Eliminates Duplication** – Reduces redundancy in purchasing and handling. • **Enhances Efficiency** – Streamlines operations for faster material movement. • **Optimizes Inventory** – Maintains the right stock levels based on demand forecasts.

	• **Supports Growth** – Scales easily with business expansion. • **Improves Supplier Relations** – Creates a structured vendor management system. Exercise (5 minutes) – Caselet
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-26) 3. Homework How can an integrated material management system provide opportunities for business growth? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is an Integrated Material Management System, and why is it important? How does an integrated system improve the efficiency of material management? What are the key components of an integrated material management system? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 31	Course Name: Production Management Topic: Material Requirement Planning	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of material requirement planning b. Describe the components of material requirement planning c. Discuss the features of material requirement planning d. Explain the steps of material requirement planning e. Infer the types of data considered by material requirement planning f. Interpret the advantages and disadvantages of planning
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by material requirement planning? What is the significance of material requirement planning? - Talk about material requirement planning and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of material requirement planning b) Material Requirement Planning - Describe the components of MRP • Material Plan • Inventory • Reporting • Purchase Orders • Work Orders - Discuss the features of MRP • Master production schedule • Bill of Material (BOM) • Inventory status file - Explain the steps of MRP • Estimating demand and the materials required to meet it. • Check demand against inventory and allocate resources. • Production scheduling. • Monitor the process. - Infer the types of data considered by MRP • Name of the final product that's being created

	• What and when info • The shelf life of stored materials. • Inventory status records • Bills of materials • Planning data - Interpret the advantages and disadvantages of MRP • Advantages · Assurance that materials and components will be available when needed · Minimized inventory levels and costs associated · Optimized inventory management · Reduced customer lead times · Increased manufacturing efficiency · Increased labor productivity · Increased overall customer satisfaction • Disadvantages · Heavy reliance on input data accuracy (garbage in, garbage out) · MRP systems can often be difficult and expensive to implement · Lack of flexibility when it comes to the production schedule · Introduces the temptation to hold more inventory than needed Exercise (5 minutes) – One Minute paper
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-23) 3. Homework Find out some real-world examples of successful MRP implementation. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer.

	What are the main steps involved in MRP? What is a Bill of Materials (BOM), and how does it relate to MRP? How does MRP handle lead time in material procurement? What is the role of the Master Production Schedule (MPS) in MRP? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 32	Course Name: Production Management Topic: Purchasing System	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of purchasing b. Describe the importance of purchasing c. Discuss the objectives of purchasing d. Explain the functions of purchasing department e. Infer the purchasing cycle
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by purchasing? What is the significance of purchasing for a manufacturing organization? - Talk about purchasing and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of purchasing system b) Purchasing System - Describe the importance of purchasing • Cost reduction and budget control • Ensuring continuous production • Quality assurance • Supplier relationship management • Inventory optimization • Competitive advantage • Compliance and risk management - Discuss the objectives of purchasing • Pay reasonably low prices. • Keep inventories low • Develop satisfactory sources of supply • Secure good vendor performance including prompt deliveries and acceptable quality. • Locate new material or product as required. • Develop good procedures • Top management informed • Coordination and cooperation with other departments

	- Explain the functions of purchasing department • Responsibilities often fully delegated to the purchasing function • Responsibilities often shared with functions other than purchasing function • Responsibilities often divorced from purchasing but of particular interest to purchasing - Infer the purchasing cycle • Recognition of need (Purchase requisition & bill of material) • Description of requirement • Selection of sources (registered suppliers who are approved by the company) • Determination of price and availability (vendor catalogues and price list and negotiations) • Placing the order (legal purchase order) • Order acknowledgement • Follow up and expediting (Extension of delivery, Cancellation of orders and penalty) • Checking the invoices and approval Exercise (5 minutes) – Quiz
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-20) 3. Homework Identify the ethical considerations in the purchasing process. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is a purchasing system, and why is it important in material management? What are the key objectives of a purchasing system? What are the main steps involved in the purchasing process? How does purchasing contribute to cost reduction and inventory optimization?

	2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 33	Course Name: Production Management Topic: Vendor Analysis	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of vendor analysis b. Describe the stages of vendor analysis c. Discuss the vendor analysis criteria d. Infer the vendor analysis techniques
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by vendor analysis? What is the significance of vendor analysis for material requirement department? - Talk about vendor analysis and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of vendor analysis b) Vendor Analysis - Describe the stages of vendor analysis • Sources of Supplier • Development of approved list of suppliers • Evaluation • Selection of the suppliers - Discuss the vendor analysis criteria • Price • Discounts received • Maintenance of specifications • Promptness of delivery • Freight and delivery charges • Installation costs • Adjustment policies • Cost reduction suggestions • Inventory plans • Financial position • Service • Market information • Cooperation

	• Management competence • Credit terms • Disposition of rejects • Employee training - Infer the vendor analysis techniques • Categorical Plan • The weighted Point plan • Critical incident Method • Checklist System • Cost ratio Plan Exercise (5 minutes) – Think-Pair-Share
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-20) 3. Homework Identify the key differences between **new vendor evaluation** and **existing vendor performance review**. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How does vendor analysis impact purchasing decisions? What are the main criteria used to evaluate a vendor? How does vendor analysis contribute to cost savings and efficiency? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 34	Course Name: Production Management Topic: Store Management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of store management b. Describe the purpose of store management c. Discuss the importance of store management d. Infer the functions of store management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by store management? What is the significance of store management? - Talk about store management and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of store management b) Store Management - Describe the purpose of store management • Inventory management • Staff management • Customer service • Sales maximization • Cost control - Discuss the importance of store management • Efficient inventory control • Cost reduction and waste minimization • Smooth production flow • Better space utilization • Quality assurance • Risk management and security • Record keeping • Better supplier and procurement management - Infer the functions of store management • Receipt • Storage • Retrieval • Issue

	• Records • House Keeping • Control • Surplus Management • Verification and Packaging Exercise (5 minutes) – One minute Paper
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-21) 3. Homework How can store management **reduce material wastage and pilferage**? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is store management, and why is it important in material management? What are the key functions of store management? How does store management contribute to cost control and operational efficiency? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 35	Course Name: Production Management Topic: Store Management contd…..	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the process of store management b. Describe the key responsibilities of store management c. Discuss the types of store management d. Infer the software used for store management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What can be the types of store management? What are the essential responsibilities of store management? - Talk about types of store management. - Talk about key responsibilities of store management. 2. **Development** (30 minutes) a) Introduction - Recap of the previous lecture. b) Store Management - Explain the process of store management • Planning • Organising • Staffing • Directing • Controlling • Evaluating • Adjusting - Describe the key responsibilities of store management • Inventory control • Storage organisation • Stock issuing • Record keeping • Stock auditing - Discuss the types of store management • Centralised • Decentralised • Just-in-time • Vendor-managed inventory

	- Infer the software used for store management • Inventory management software • POS software • Sales analysis tool • Payroll system Exercise (5 minutes) – Quiz
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-21) https://timespro.com/blog/what-is-store-management-its-purpose-importance-and-how-to-excel https://timespro.com/blog/mastering-store-management-essential-principles-and-best-practices 3. Homework How does store management help in preventing **overstocking and stockouts**? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the essential documents maintained in store management? What are the challenges in **manual vs. digital store record-keeping**? How does **real-time inventory tracking** improve store operations? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 36	Course Name: Production Management Topic: Types of Store	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the types of stores
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What can be the types of stores? - List down the various types of stores. 2. **Development** (30 minutes) a) Introduction - Name the various types of stores. b) Types of Stores - Explain the process of store management • Department stores • Specialty stores • Chain stores • Discount stores • Boutiques • Supermarkets • Convenience stores • Hypermarkets • Warehouse stores • E-commerce stores • Drug stores • Outlet stores • Home improvement stores • Pop-up stores Exercise (5 minutes) – Quiz
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading

	Production / Operations Management, Case Study Solution by S.N. Chary (Ch-21) https://www.geeksforgeeks.org/types-of-stores/ 3. Homework How can **automation and technology** improve the efficiency of various store types? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How does a **departmental store** function within an organization? How does an **e-commerce fulfillment store** differ from a traditional warehouse? How do **centralized and decentralized stores** differ? Why is it important to choose the right type of store for material management? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 37	Course Name: Production Management Topic: Store Layout	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of store layout b. Discuss the types of store layout
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by store layout? Why store layout is significant? - Talk about store layout and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of store layout b) Store Layout - Discuss the types of store layout • Grid store layout • Herringbone store layout • Loop or racetrack • Free-flow layout • Boutique store layout • Straight or spine layout • Diagonal store layout • Angular store layout • Geometric store layout • Multiple or mixed layout Exercise (5 minutes) – One minute Paper
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading

	Production / Operations Management, Case Study Solution by S.N. Chary (Ch-21) https://www.shopify.com/in/retail/the-ultimate-guide-to-retail-store-layouts# 3. Homework How can technology (digital signage, mobile apps) be integrated into the store layout? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. How does the store layout enhance customer experience and ease of navigation? What are the key factors considered when designing the store layout? How does the layout influence customer behavior and purchasing decisions? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 38	Course Name: Production Management Topic: Standard Codification and Variety Reduction	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of codification b. Describe the characteristics of codification c. Discuss the objectives of codification d. Interpret the methods of codification e. Discuss the concept of variety reduction f. Explain the importance of variety reduction
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean codification? What is the significance of the codification in material handling? - Talk about standard codification and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of standard codification and variety reduction b) Standard Codification and Variety Reduction - Describe the characteristics of codification • Code should be Simple. • Code should be unique. • Coding should be compact, concise and consistent. • Code should be sufficiently flexible to meet future demands - Discuss the objectives of codification • Bringing all similar items together • Classifying an item according to its characteristics. • Give a unique code number to each item to avoid duplication and ambiguity. • Establish a common language for the identification of an item • Specify item as per national and international standard. - Interpret the methods of codification • Alphabetical codification

	• Numerical codification • Mnemonic codification • Combined alphabetical & numerical codification • Decimal codification • British/Brisch codification • Kodak codification • Colour codification - Explain the importance of variety reduction • Personalized Attention • Reduction in Inventory Carrying Cost • Reduction in Procurement Cost Exercise (5 minutes) – Caselet
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading https://egyankosh.ac.in/bitstream/123456789/11627/1/Unit-14.pdf https://hmhub.in/wp-content/uploads/2020/02/Unit-19-STANDARDISATIONCODIFICATION-AND-VARIETY-REDUCTION.pdf 3. Homework Identify the common challenges in maintaining a codification system. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is the primary purpose of codification in your context (e.g., legal, business, knowledge management)? What are the key benefits of implementing codification? What challenges might arise during the codification process? How does codification improve consistency and standardization? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 39	Course Name: Production Management Topic: Inventory Management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of inventory management b. Describe the types of inventories c. Discuss the objectives of inventory management d. Infer the benefits of inventory management e. Interpret the advantages and disadvantages of inventory management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by inventories? What do you mean by inventory management? - Talk about inventories and inventory management. 2. **Development** (30 minutes) a) Introduction - Introduce the concept of inventories and inventory management b) Inventory Management - Describe the types of inventories • Raw Material inventories • In process inventories • Finished Goods - Discuss the objectives of inventory management • Operating Objectives • Financial Objectives - Infer the benefits of inventory management • Accurate Order fulfilment • Better inventory visibility • Better inventory planning and ordering • Improved customer satisfaction • Optimized financial decisions • Improve organisation with Warehouse - Interpret the advantages and disadvantages of inventory management • Advantages · Delivery in time · Possibility of discount in bulk purchase

	· Efficiently handle unforeseen circumstances · No idling of workers and machines • Disadvantages · More space required · Chances of damage · Increased chances of obsolesce · Increased overhead charges Exercise (5 minutes) – Summarising
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-19) https://adynamics.com.my/inventory-management/ 3. Homework Identify the role of AI and machine learning in inventory forecasting. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the key objectives of inventory management? How does inventory management contribute to a company's profitability? What are the different types of inventories? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 40	Course Name: Production Management Topic: Inventory Management – Cost and Process	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the process of inventory management b. Discuss the various types of inventory costs
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What can be the different types of costs that incur to handle the inventories? - List down the various types of inventory costs. 2. **Development** (30 minutes) a) Introduction - Recap the previous lecture b) Inventory Management – Process and Inventory Costs - Explain the process of inventory management • Determination of Optimum Inventory Levels • Determination of Degree Control • Planning and Designing of the Inventory System • Planning of the Inventory Control Organisation - Discuss the various types of inventory costs • Ordering cost • Carrying cost • Understocking cost • Overstocking cost Exercise (5 minutes) – Just a Minute (JAM)
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production and Operations Management by Ajay K Garg (Ch-19) Production / Operations Management, Case Study Solution by S.N. Chary (Ch-21)

	3. Homework Identify how do demand forecasting techniques help in minimizing unnecessary inventory costs? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the different types of inventory costs? Why is it important for businesses to manage inventory costs? How do inventory costs impact a company's financial performance? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 41	Course Name: Production Management Topic: Techniques of Inventory Control	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the techniques of inventory control
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What can be the different techniques of inventory control? - List down the various techniques of inventory control. 2. **Development** (30 minutes) a) Introduction - Introduce the various techniques of inventory control b) Inventory Control Techniques - Explain the techniques of inventory control • ABC analysis • VED analysis • SDE analysis • FSN analysis • HML analysis • SOS analysis • XYZ analysis • Demand forecasting • Bulk shipment • Minimum order quantity • Just in Time • Safety Stick inventory • FIFO • LIFO • Reorder point formula • EOQ Exercise (5 minutes) – Quiz
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading

	Production / Operations Management, Case Study Solution by S.N. Chary (Ch-22) https://egyankosh.ac.in/bitstream/123456789/80818/3/Unit-5.pdf https://adynamics.com.my/inventory-management/ 3. Homework What is the role of technology, such as RFID and barcode scanning, in modern inventory control? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the key differences between perpetual and periodic inventory systems? How does the ABC analysis technique help in inventory control? What are the key factors that influence reorder point determination? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 42	Course Name: Production Management Topic: EOQ	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of EOQ b. Describe the assumptions of EOQ c. Interpret the benefits of EOQ d. Discuss the numerical questions of EOQ
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by Economic Order Quality? - Talk about Economic Order Quantity and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of EOQ b) EOQ - Describe the assumptions of EOQ • Demand is constant and known. • Ordering and holding costs are constant. • The entire order is delivered instantly (no lead time). • No stockouts occur. - Interpret the benefits of EOQ • Reduces total inventory costs. • Prevents overstocking or understocking. • Helps in better cash flow management. - Discuss the numerical questions of EOQ Exercise (5 minutes) – Summarising
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-22) https://adynamics.com.my/inventory-management/

	3. Homework Revise the questions discussed in the class. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is Economic Order Quantity (EOQ)? Why is EOQ important in inventory management? What are the key components of the EOQ formula? What assumptions are made in the EOQ model? How does EOQ help in reducing total inventory costs? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 43	Course Name: Production Management Topic: Just in Time	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of JIT b. Describe features of JIT c. Discuss the process of JIT d. Interpret the benefits of JIT e. Infer the challenges and risks in JIT f. Describe the function of JIT g. Discuss the principles of JIT manufacturing
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by Just in Time? Why JIT is significant for operational efficiency? - Talk about JIT and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of JIT b) JIT - Describe the features of JIT • **Minimal Inventory Levels** – JIT ensures that raw materials, components, or finished products arrive just in time for production or sale, reducing the need for excessive inventory storage. • **Demand-Driven System** – Inventory orders are based on actual customer demand rather than forecasts. • **Strong Supplier Relationships** – Companies must collaborate closely with suppliers to ensure timely deliveries. • **Waste Reduction** – By eliminating excess inventory, JIT minimizes waste in storage, handling, and obsolete stock. • **Continuous Improvement** – JIT often integrates with lean manufacturing practices to enhance process efficiency. - Discuss the process of JIT • **Customer Demand is Identified** → Orders or production schedules are based on real-time demand.

	• **Materials are Ordered from Suppliers** → The company places an order for materials only when needed. • **Materials Arrive Just in Time for Production** → Suppliers deliver exactly the right quantity at the right time. • **Production Begins Immediately** → With no delays, production starts using the received materials. • **Products are Delivered to Customers** → Finished goods are shipped to customers without excessive storage. - Interpret the benefits of JIT • **Lower Inventory Costs** – Reduces warehousing, storage, and insurance costs. • **Less Waste** – Prevents overproduction and obsolete stock. • **Improved Cash Flow** – Money is not tied up in excess inventory. • **Higher Efficiency** – Streamlines operations and reduces lead time. • **Better Quality Control** – Frequent orders mean continuous quality monitoring. - Infer the challenges and risks in JIT • **Supplier Reliability is Critical** – Any delay in supply can halt production. • **Higher Dependency on Accurate Demand Forecasting** – Unexpected demand spikes may lead to stockouts. • **Not Suitable for All Industries** – Works best in industries with stable demand and reliable suppliers. • **Supply Chain Disruptions** – Natural disasters, labor strikes, or logistics issues can severely impact JIT operations. - Describe the functions of JIT • Zero inventory • Zero Lead Time • Zero failure - Discuss the principles of JIT manufacturing • Total Quality Management • Production Management • Supplier Management • Inventory Management • Human Resource Management Exercise (5 minutes) – One minute paper

Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-36) 3. Homework What strategies can companies use to mitigate the risks of JIT disruptions? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the main objectives of JIT? How does JIT differ from traditional inventory management? What are the key principles of JIT? What industries commonly use JIT? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 44	Course Name: Production Management Topic: Quality Management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of quality management b. Describe objectives of quality management c. Discuss the principles of quality management d. Interpret the functions of quality management e. Infer the factors affecting quality management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by quality? What do you mean by quality management? - Talk about quality and quality management. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of quality management b) Quality Management - Describe the objectives of quality management • Customer satisfaction • Compliance with standards and regulations • Continuous improvement • Defect reduction and waste minimization • Process standardisation and consistency • Employee engagement and training • Enhancing business reputation • Cost reduction and profitability - Discuss the principles of quality management • Customer Focus • Leadership • Engagement of People • Process approach • Continuous Improvement • Evidence-based decision making • Relationship Management - Interpret the functions of quality management • Quality planning • Quality control

	• Quality assurance • Quality improvement • Customer satisfaction management • Compliance and regulatory management - Infer the factors affecting quality management • Internal factors • External factors Exercise (5 minutes) – Quiz
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-9,10) 3. Homework What factors affect the success of Quality Management in an organization? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What are the key objectives of Quality Management? What are the four main functions of Quality Management? How does Quality Management benefit an organization? What is the difference between Quality Assurance and Quality Control? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 45	Course Name: Production Management Topic: Total Quality Management	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of total quality management b. Describe objectives of total quality management c. Discuss the elements of total quality management d. Interpret the benefits and limitations of total quality management e. Infer the tools and techniques of total quality management
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by total quality management? What is the significance of TQM? - Talk about total quality management and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of total quality management b) Total Quality Management - Describe the objectives of total quality management • TQM emphasizes upon collective effort of all functional department and people for improvement in quality of goods and services in order to achieve higher customer satisfaction. • The aim of TQM is to look for maximum satisfaction to the consumer by providing goods and services which are best in quality (i.e zero defects) • TQM aims at educating and training the managers and employees since they are considered to be the integral part of the TQM process. • TQM not only focus upon quality but also on productivity as it aims for Zero defect production which not only makes employees responsible for quality improvement but also leads to higher productivity. • TQM aims at enhanced communication in the organization as every employee is encouraged to express their suggestion for quality improvement, cost reduction and elimination of wastage. It also calls for rewarding those who have active participation. - Discuss the elements of total quality management

	• A sustained management commitment to quality. • Total Focus on the Customer. • Preventing rather than detecting Defects. • Universal Quality Responsibility • Quality Measurement • Continuous Improvement • Root Cause Corrective Actions • Employees Involvement and Empowerment • Focus upon Team Synergy • Thinking Statistically • Benchmarking • Training • Supplier Teaming - Interpret the benefits and limitations of total quality management - Infer the tools and techniques of total quality management • PDCA • Six-sigma • Lean Manufacturing Exercise (5 minutes) – Summarising
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-11) http://www.fmtvaranasi.edu.in/sites/default/files/TQM.pdf 3. Homework Why is TQM considered a continuous improvement process rather than a one-time effort? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What does TQM mean to you, and how does it impact an organization? How does TQM differ from traditional quality control methods? Why is TQM considered a continuous improvement process rather than a one-time effort?

	How does TQM contribute to improving customer satisfaction? What strategies can organizations use to better understand and meet customer expectations? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 46	Course Name: Production Management Topic: Six Sigma	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of six sigma b. Describe methodologies of six sigma c. Discuss the principles of six sigma d. Interpret the six sigmas e. Infer the benefits of six sigma f. Explain the six sigma certifications g. Discuss about lean six sigma
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by customer satisfaction? What do you mean be capability of the business? Is customer satisfaction related to business capability? - Talk about customer satisfaction and business capability. - Talk about the relationship between customer satisfaction and business capability. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of six sigma b) Six Sigma - Describe the methodologies of six sigma • DMAIC • DMADV - Discuss the principles of six sigma • Consistent and practical approach for profitable results • Stronger inter-team collaborations • Eliminate variation to improve process • Data accuracy to find the root cause of the problem • Focus on positive customer experience - Interpret the six sigmas • Vision • Benchmark • Goal • Statistical measurement • Robust methodology

	• Business strategy - Infer the benefits associated with six sigma • Increased value to the customers and shareholders. • Improved reliability and predictability of products and services. • Significant reduction in defects. • Institutionalization of a "process" mindset. • Increased competitive advantage - Explain the certifications of six sigma - Discuss about lean six sigma Exercise (5 minutes) – Just a minute (JAM)
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-11) https://innocentrix.com/files/presentationintrosixsigma.pdf 3. Homework What do the different Six Sigma belt levels (White, Yellow, Green, Black, and Master Black Belt) represent? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is Six Sigma, and what are its primary objectives? What are the key principles of Six Sigma? What is the difference between Six Sigma and Lean? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 47	Course Name: Production Management Topic: Kanban	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of kanban b. Describe the principles of kanban c. Discuss the kanban best practices d. Infer the benefits of kanban e. Interpret the elements of kanban
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by visualization of work? What is the significance of work visualization? - Talk about work visualization and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of kanban b) Kanban - Describe the principles of kanban • Change management principles • Service delivery principles - Discuss the kanban best practices • Visualize the workflow • Limit work in progress • Manage flow • Make process policies explicit • Implement feedback loops • Improve collaboratively - Infer the benefits of kanban • Increased visibility of the flow • Improved delivery speed • Alignment between goals and execution • Improved predictability • Improved ability to manage scale and dependencies • Increased customer satisfaction - Interpret the elements of kanban • Kanban board • Kanban card

	• Columns • Swimlanes • Cycle time • Lead time • Throughput • Work in progress • WIP limits • Classes of services • Kanban cadences • Kanban software Exercise (5 minutes) – One minute paper
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-11) https://asana.com/resources/what-is-kanban 3. Homework Identify the common challenges in implementing Kanban. Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is **Kanban**, and what is its purpose? What are the **core principles** of Kanban? How does Kanban differ from other Agile methodologies like Scrum? What are the **key components** of a Kanban board? What is a **Work In Progress (WIP) limit**, and why is it important? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents

Lesson Plan No. 48	Course Name: Production Management Topic: Kaizen	Course No.: MBA-206

Objectives	At the end of the lesson the student shall be able to: a. Explain the concept of kaizen b. Describe the principles of kaizen c. Discuss the process of kaizen d. Infer the 5S framework of kaizen e. Interpret the advantages and disadvantages of kaizen
Teaching Aids (if any)	a. Power Point Presentation b. White Board
Teaching Development	1. **Introduction** (10 minutes) - Ask questions What do you mean by continuous improvement? What is the significance of continuous improvement? - Talk about work continuous improvement and its significance. 2. **Development** (30 minutes) a) Introduction - Introduce the formal concept of kaizen b) Kaizen - Describe the principles of kaizen • Let go of assumptions. • Be proactive about solving problems. • Don't accept the status quo. • Let go of perfectionism and take an attitude of iterative, adaptive change. • Look for solutions as you find mistakes. • Create an environment in which everyone feels empowered to contribute. • Don't accept the obvious issue; instead, ask "why" five times to get to the root cause. • Cull information and opinions from multiple people. • Use creativity to find low-cost, small improvements. • Never stop improving. - Discuss the process of kaizen • Get employees involved • Gather a list of problems • Encourage solutions, then choose an idea • Test the solution • Regularly measure and analyse the results

	• If successful, adopt the solution • Repeat on an ongoing basis - Infer the 5S framework of kaizen • **SEIRI** - SEIRI stands for Sort Out. • **SEITION** - Seition means to Organize. • **SEISO** - The word "SEISO" means shine the workplace. • **SEIKETSU-SEIKETSU** refers to Standardization. • **SHITSUKE or Self Discipline** - Employees need to respect organization's policies and adhere to rules and regulations. - Interpret the advantages and disadvantages of kaizen Exercise (5 minutes) – Quiz
Closure	1. Summarize the Lesson Learning Outcomes and get affirmation from students on these. 2. Suggested Reading Production / Operations Management, Case Study Solution by S.N. Chary (Ch-11) https://www.techtarget.com/searcherp/definition/kaizen-or-continuous-improvement 3. Homework How does Kaizen support sustainability and long-term improvement? Spend 5 minutes to wrap up and consolidate the learnings
Evaluation	1. Reflective Questions (What, Why, Who?). Allow students to answer. What is **Kaizen**, and what does the term mean in Japanese? What are the core **principles of Kaizen**? How does Kaizen contribute to **continuous improvement**? What are the **5S principles** in Kaizen? 2. Conduct Discussion Spend 5 minutes to evaluate student assimilation of the lesson contents