

**JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA**

**PGDM (M); TRIMESTER II; ACADEMIC YEAR 2018-19**

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| Course Code and title | **OM 202:** **Operations Management** |
| Credits | 3 |
| Term and Year | II Term, 2018 -19 |
| Course Requirement(s) |  |
| Course Schedule (day and time of class) | As per timetable |
| Classroom # (Location) | As per timetable |
| Course Instructor | Dr. Nitin Sachdeva / Prof. M S Kumar (VF) / Dr. Susmita Paul (VF) |
| Course Instructor Email | [nitin.sachdeva@jaipuria.ac.in](mailto:nitin.sachdeva@jaipuria.ac.in) |
| Course Instructor Phone (Office) | 0120-4638300 Ext 378 |
| Student Consultation Hours |  |
| Office location | Second Floor / First Floor |

**Course Overview**

This course aims at making students aware of importance of Operations Management (OM) in the current business scenario in India. The latest concepts in OM, especially relevant to the post-liberalization and globalization era, have assumed importance. This course introduces OM to the students from the point of view of an entrepreneur to instill a spirit of entrepreneurship in them. The Indian domestic companies are facing a direct threat from the foreign MNCs. These companies have to evolve a strategic approach to their operations for growth and survival. This course, thus, introduces the students with the latest concepts in a localized environment. The course is designed to help the students to understand the emerging business issues facing management so that students can effectively manage operations in the organizations. The course aims to analyze how operations add value to the business, change the way work is done, remain in the core of all the activities and the structure of an organization.

The course starts with an introduction and overview of OM practices in India and its need in our management studies. Second module covers the various concepts relating to the product and process design and the importance of service sector, which is surpassing production sector by growing demand, activities and participation. The module on Demand Forecasting covers the importance of demand in various planning decisions. The module on Facility Location Planning gives emphasis on factors on facility location planning. Facility Capacity & Layout Planning shows how Strategic Capacity Planning is a Key to Competitiveness. It also discusses the models in service facility planning. Inventory Management module puts stress on calculation of marginal ordering and carrying costs of inventory. Module on Quality Management covers Quality aspects and Quality Control Tools and concept of six sigma. Just-in-time (JIT) and Lean manufacturing have become essential part of the Indian domestic companies and SCM is to develop understanding of supply chain and ways through which it can contribute to competitive advantage.

**Course Learning Outcomes (CLOs):**

At the end of the course, the students should be able to:

CLO 1: Explain concepts in Operations Management. **(K)**

CLO 2: Identify local and global challenges in Operations Management. **(K)**

CLO 3: Apply Operations Management tools and techniques to suggest viable solutions to operations management problems. **(K&S)**

**Books and References**

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| **Text Book**  Operations & Supply Management, Chase R., Shankar R. and Jacobs F., TMH, New Delhi, 12th edition.  **References**   * Operations Management by Norman Gaither and Greg Frazier, CENGAGE Learning, Edition 9. * Operations Management along the supply chain by Russell and Taylor, Wiley India Edition, 2012. * Service Operations Management-Improving Service Delivery: Robert Johnston and Graham Clark, Pearson 2e. * Service Operations Management: James Fitzsimmons & Mona Fitzsimmons, TMH   Magazines: Business World, Business India, Economic Times  **On line resources**   * <http://nptel.iitk.ac.in>, * <http://learnerstv.com> |

**Session Plan**

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| **S. No.** | **Topic/Sub Topic** | **Session Details** | |
| **Module 1: *Introduction & Overview*** | | | |
| 1 | Introduction  **(**Course overview, Need of the course, Expectations, Evaluation),  Contemporary Issues in Operations Management | **Text Book** | Chapter 1, Page 3 - 22 |
| **Pedagogy** | Agreement on learning and free flowing discussion on identification of Operations Management activities and contemporary issues |
| **CLO** | 1, 2 |
| **SLO** | At the end of the session the student will be able to identify the relevance of Operations Management in Business decisions. |
| **KSA**  **VED** | Knowledge  Essential |
| 2. | Transformation Process | **Text Book** | Chapter 2, Page 28 - 52 |
| **Pedagogy** | Lecture and discussion |
| **CLO** | 1,2 |
| **SLO** | At the end of the session the student will be able to explain transformation processes and Operations Strategy for Business Excellence. |
| **KSA**  **VED** | Knowledge  Essential |
| 3 | Operation Strategy | **Text Book** | Chapter 2, Page 28 - 52 |
| **Pedagogy** | Lecture and discussion |
| **CLO** | 1,2 |
| **SLO** | At the end of the session the student will be able to explain transformation processes and Operations Strategy for Business Excellence. |
| **KSA**  **VED** | Knowledge  Essential |
| ***Module 2: Product and Service Operations Management*** | | | |
| 4 | Product Design Process, Economic Analysis of Product Development Process | **Text Book** | Chapter 4, Page 107 – 142. |
| **Pedagogy** | Lecture and discussion |
| **CLO** | 1,2 |
| **SLO** | At the end of the session the student will be able to explain concepts and process of new product design and economic analysis. |
| **KSA**  **VED** | Knowledge  ***Vital*** |
| 5 | Service Characteristics, Service Classification, Service Capacity, Service Processes, Service Blueprinting. | **Text Book** | Chapter 6, Page 187 - 221 |
| **Pedagogy** | Lecture, discussion and class exercise. |
| **CLO** | 1,2. |
| **SLO** | At the end of the session student will be able to explain nuances of services, characteristics of services, blueprinting of services and capacity management in service sector. |
| **KSA**  **VED** | Knowledge  Essential |
| 6 | Process Analysis  *Case: - Kristen’s Cookie Company (A)*  *(Operations Management by Chase, Shankar, Jacobs, Aquilano, Edition 12, pp 219).*  *Or*  *Case: - Pizza USA: An Exercise in Translating Customer Requirements into Process Design Requirements***.**  *(Operations and Supply Chain Management by Chase, Shankar and Jacobs. Edition 14e, pp. 268).* | **Text Book** | Chapter 6, page 187 – 221 and Chapter 8  page299 - 321 |
| **Pedagogy** | Case discussion |
| **CLO** | 1,2,3 |
| **SLO** | At the end of the session the student will be able to explain importance of process analysis in operations management and will be able to apply these concepts in real life situation. |
| **KSA**  **VED** | Skill  Essential |
| ***Module 3: Demand Forecasting and Capacity Planning*** | | | |
| 7,8 | Demand Forecasting | **Text Book** | Chapter 18, page 544 – 596 |
| **Pedagogy** | Lecture and discussion |
| **CLO** | 1,3 |
| **SLO** | At the end of the session the student will be able to explain importance of demand forecasting in business decisions. |
| **KSA**  **VED** | ***Vital***  Essential |
| 9 | Capacity Planning | **Text Book** | Chapter 5 and Chapter 5A, page 143 – 186. |
| **Pedagogy** | Lecture and class exercise |
| **CLO** | 1,3 |
| **SLO** | At the end of the session the student will be able to apply capacity planning and learning curve concepts in business situations. |
| **KSA**  **VED** | Knowledge, Skill  ***Vital*** |
| ***Module 4: Facility Location and Layout Planning*** | | | |
| 10 | Facility Location Planning, Factor & Location Ratings along with numerical for Centroid Method and factor rating method. | **Text Book** | Chapter11, page 449 – 472. |
| **Pedagogy** | Lecture and class exercise |
| **CLO** | 1,2,3 |
| **SLO** | At the end of the session the student will explain importance of location decisions and will be able to apply concepts in business situations. |
| **KSA**  **VED** | Knowledge, Skill  Essential |
| 11 | Product Layout – Production Line Balancing. | **Text Book** | Chapter 7A, page 261- 298. |
| **Pedagogy** | Lecture and class exercise |
| **CLO** | 1,2,3 |
| **SLO** | At the end of the session the student will explain importance of layout decisions and will be able to apply concepts in business situations in manufacturing organizations. |
| **KSA**  **VED** | Knowledge, Skill  Essential |
| 12 | Service Layout: Process Layouts  ***Case: - Soteriou’s Souvlaki***  *(Operations Management by Chase, Shankar, Jacobs, Aquilano, Edition 12, pp. 295)* | **Text Book** | Chapter 7A, page 261 – 298. |
| **Pedagogy** | Lecture and Discussion |
| **CLO** | 2,3 |
| **SLO** | At the end of the session the student will explain importance of layout decisions and will be able to apply concepts in business situations in service organizations. |
| **KSA**  **VED** | Knowledge, Skill  ***Vital*** |
| 13 | **Guest Session / Review session/ Industry Visit** | **Text Book** | NA |
| **Pedagogy** | Discussion |
| **CLO** | 1,2,3 |
| **SLO** | Review and assimilation of learnings in earlier sessions. |
| **KSA**  **VED** | Knowledge, Attitude  Essential |
| 14 | Operations scheduling in Manufacturing and Service Industry. | **Text Book** | Chapter 18, page 687 – 724. |
| **Pedagogy** | Lecture and class exercise. |
| **CLO** | 1,3 |
| **SLO** | At the end of the session the student will explain the importance of scheduling in operations management. |
| **KSA**  **VED** | Knowledge, Skill  ***Vital*** |
| ***Module 5: Inventory Management*** | | | |
| 15 | Introduction to Inventory management, Types of inventory, Selective Inventory Control: ABC, VED, FSN Analysis.  Q and P Models  Economic Order Quantity model with safety stock calculations. | **Text Book** | Chapter 17, page 639 – 686. |
| **Pedagogy** | Lecture and class exercise. |
| **CLO** | 1,3 |
| **SLO** | At the end of the session the student will explain importance of inventory management in business operations. |
| **KSA**  **VED** | Knowledge, Skill  ***Vital*** |
| 16 | Inventory Management Practices  ***Case: - Green Garden Products***  *(Operations Management by Norman Gaither and Greg Frazier, pp 578)* | **Text Book** | Chapter 17, page 639 – 686. |
| **Pedagogy** | Case discussion |
| **CLO** | 1,3 |
| **SLO** | At the end of the session the student will be able to calculate inventory levels and will be able to take inventory decisions in business situations. |
| **KSA**  **VED** | Knowledge, Skill  Essential |
| 17 | **Guest Session / Review session / Industry Visit** | **Text Book** | NA |
| **Pedagogy** | Discussion |
| **CLO** | 1,2,3 |
| **SLO** | Review and assimilation of learnings in earlier sessions. |
| **KSA**  **VED** | Knowledge, Attitude  Essential |
| ***Module 6: Quality Management*** | | | |
| 18 | Various Dimensions of Quality,  Quality and Costs in manufacturing and service industries | **Text Book** | Chapter 9, page 355 –416. |
| **Pedagogy** | Class discussion and student presentations |
| **CLO** | 1 |
| **SLO** | At the end of the session the student will be able to explain importance of quality management in business. |
| **KSA**  **VED** | Knowledge  ***Vital*** |
| 19 | Quality improvement techniques, Kaizen, Six sigma, 5 “S”, QC Circles, Seven QC tools etc. | **Text Book** | Chapter 9, page 355 –416. |
| **Pedagogy** | Class discussion and student presentations |
| **CLO** | 1 |
| **SLO** | At the end of the session the student will be able to explain importance of quality management in business. |
| **KSA**  **VED** | Knowledge  ***Vital*** |
| ***Module 7: Supply Chain and Lean Management*** | | | |
| 20 | Supply Chain Management  *Case: E-Choupal: Transforming the Rural India.*  *Operations and Supply Chain Management by Chase, Shankar and Jacobs. Edition 14e, pp. 492* | **Text Book** | Chapter 10, page 417 – 448. |
| **Pedagogy** | Class discussion and student presentations |
| **CLO** | 1,3 |
| **SLO** | At the end of the session the student will be able to explain importance of Supply Chain Management in business. |
| **KSA**  **VED** | Knowledge  ***Vital*** |
| 21 | Lean Manufacturing (JIT) | **Text Book** | Chapter 12, page 473 – 497. |
| **Pedagogy** | Class discussion and student presentations |
| **CLO** | 1,2 |
| **SLO** | At the end of the session the student will be able to explain importance of Supply Chain Management in business management. |
| **KSA**  **VED** | Knowledge  Essential |
| 22,23,24 | Project Presentations by Student Groups | **Text Book** | NA |
| **Pedagogy** | Discussion |
| **CLO** | 2,3 |
| **SLO** | Review and assimilation of learnings in earlier sessions. |
| **KSA**  **VED** | Skill  Essential |

**7. Assessment Tasks**

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| --- | --- | --- | --- |
| **Assessment Component** | **Description** | **Weight** | **CLOs** |
| Quizzes | There will be Two Quizzes.  Third Quiz is optional, in which case, two best quizzes shall be considered. | 20 Marks | CLO 1, CLO 2 |
| Class Participation and Case Discussion | Class Participation  Students in Groups will be required to make presentation on analysis of cases/case-lets. | 10 Marks | CLO3 |
| Project Report & Presentation | It will be on group basis (group of 4 to 6 students). Project will involve application of course contents on topics like Process analysis, Location decision, Layout designing, Manpower scheduling, TQM, Supply Chain Management etc. A live project s suggested for students. | 15 + 15 = 30 Marks | CLO3 |
| End Term Examination | It will be based on the total course. This will consist of case study, application-based situation questions along with conceptual review. | 40 Marks | CLO3 |

**8. Rubrics for Assessment Tasks**

***Rubrics for CLOs***

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| --- | --- | --- | --- | --- |
| **CRITERIA** | **LEVEL 1 BEGINING** | **LEVEL 2 AVERAGE** | **LEVEL 3 ACCOMPLISHED** | **LEVEL 4 EXCELLENT** |
| **CLO 1**:  Explain concepts in operations management. **(K)** | Know the concepts of operations management used in business | Understand importance of operations management in business. | Able to assess connect of operations management concepts with business | Able to link operations management concepts for given business situation |
| **CLO 2:**  Identify local and global challenges in operations management. **(K)** | Know the global challenges in operations management area | Understand the importance of operations management concepts. | Able to different alternatives for operations management challenges | Able to evaluate alternatives and suggest most appropriate alternative |
| **CLO 3:**  Apply tools and techniques to suggest viable, sustainable solutions to operations management problems. **(S)** | Know the available tool/ technique for business problem in operations management area | Know advantages and limitations for each operations management tool/technique. | Able to suggest a suitable operations management tool/technique for business improvement | Able to apply selected tool/ technique for given business problem identified. |

***Rubrics for Quiz***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Poor**  **Below 30%** | **Fair**  **30 – 60%** | **Good**  **60 – 80%** | **Excellent**  **80% and Above** |
| Clarity of Concepts and ability to apply them | Only up to 30% answers are correct. Most of the concepts are not clear and student is unable to understand the same. | Between 30 – 60% answers are correct. Many of the concepts are clear and understood by student. | Between 60 – 80% answers are correct. Majority of concepts are clear and understood by student. | 80% or more answers are correct. Most of concepts are clear and understood by the student. |

***Rubrics for Class Participation & Case studies***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Poor**  **Below 30%** | **Fair**  **30%-60%** | **Good**  **60%-80%** | **Excellent**  **80% and Above** |
| Initiative and Identification of the relevant issues and information pertaining to OM area  (**40%)** | Issues inadequately explained. Incomplete information identified | Issues explained, but some finer points are missing. Information identified up to average extent | Issues well explained, Relevant appropriate information identified | Issues are well explained and appropriate information is analysed |
| Analysis of information as per the identified issues.  **(60%)** | No analysis on the presented information | Basic analysis performed on available information | Basic & advanced data analysis on available information | Complete and appropriate Analysis of available information with Interpretation for decision making |

***Rubrics for Project Report***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Poor**  **Below 30%** | **Fair**  **30%-60%** | **Good**  **60%-80%** | **Excellent**  **80% and Above** |
| Identification of relevant objectives and collection or summarisation of information  **(30%)** | Objectives inadequately defined, incomplete information identification | Objectives defined but some finer points missing  Information identified up to average extent | Objectives well defined, Relevant and appropriate information identified | Objectives well defined, Appropriate information collection from different sources  Additional information identified |
| Analysis of information as per the identified objectives **(40%)** | No analysis only presenting the information | Basic analysis performed on available information | Basic & advanced data analysis on available information | Complete and appropriate Analysis done for the available information  Able to use Interpretation for decision making |
| Assignment Report structure  **(30%)** | Language is poor, formatting is poor,  Observations, conclusions and recommendations are not there | Language is occasionally poor, occasionally format is not good  Results are there but no recommendations | Is adequately Impressive and format is followed  Results & recommendations are also given | Recommendations are relevant, contemporary and feasible. |

***Rubrics for Project Presentation***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Poor**  **Below 30%** | **Fair**  **30%-60%** | **Good**  **60%-80%** | **Excellent**  **80% and Above** |
| Quality of presentation | Most group members could not convey clearly what they had to share  No demonstrated coordination  The group was not able to clearly defend the presentation. | Group members conveyed in not proper manner  The group explained the components of presentation to a limited extent; members appeared disjointed and clear reasoning missing | Group members conveyed clearly  The arguments were not well developed  The group explained the components of presentation to a limited extent; members appeared disjointed and clear reasoning missing | Group members conveyed clearly  The arguments were well developed  The group was able to clearly defend all the components and the justifications offered were satisfactory. |

***Rubrics for End Term Exam.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Poor**  **Below 30%** | **Fair**  **30%-60%** | **Good**  **60%-80%** | **Excellent**  **80% and Above** |
| Clarity of concepts and ability to apply them | Only up to 30% answers are correct. Most of the concepts are not clear and student is unable to understand the same. | Between 30 – 60% answers are correct. Many of the concepts are clear and understood by student and able to solve the problems given | Between 60 – 80% answers are correct. Majority of concepts are clear and understood by student and also provide the answers in business language. | 80% or more answers are correct. Most of concepts are clear and understood by the student, provide answers in business language and may also be able to indicate the additional information required for better decision making |