



Course: **Manufacturing 101: A Practical Guide to Setting up a Manufacturing and Production Operations within an Industry**

Guided Learning Hours: **24**

Pre-requisite: **None**

Abstract

Manufacturing 101 is an introductory course on the operations requirement to consistently produce goods for sale. Learners will be introduced to the key concepts, principles and methods of manufacturing systems and operational practices. The elements of a manufacturing system and the operational practices required will be discussed with production techniques applied in classroom activities. At the end of this introductory course, learners will achieve the necessary knowledge and skills to set up a manufacturing and production operations within an industry context.

Target Audience

Entrepreneurs who need to set up a production process and wish to deepen their understanding of manufacturing systems and practices. Existing business owners who wish to further improve their production processes and operations.

Learning outcomes

On completion of this course, learner will be able to:

Describe the transformation process:

- 1. Identify the elements required to transform raw material to a final product**
- 2. Identify potential 'bottlenecks' in the production process.**

Evaluate the incoming (raw) material requirements:

- 3. Identify the constraints of the source material and supplier.**
- 4. Analyse and set up the logistics for the incoming material to the production process.**
- 5. Identify procurement and supplier requirements.**

Determine the requirements of the production process:

6. Describe the conversion process of incoming material to product.
7. Identify equipment, technology, resources, and quality control requirement.
8. Identify equipment maintenance and spare parts requirement.
9. Evaluate alternative production and quality management systems.
10. Analyse space and capacity requirement.
11. Identify packaging requirements.
12. Identifying logistics constraints based on location.
13. Discuss outsourcing and subcontracting alternatives.

Determine Warehousing and Storage requirements:

14. Identify storage capacity requirements for incoming material, work in progress and finish products.
15. Discuss the key considerations for effective inventory control.

Determine the alignment between Marketing and Product delivery:

16. Identify key marketing strategies.
17. Align production schedule and marketing commitments.
18. Identify outgoing logistics requirements.
19. Identify invoicing and payment systems.
20. Discuss warranty considerations and goods return policy

Course Content Outline

Session 1

- Elements required to transform raw material to a final product
- Bottlenecks in the production process.
- Constraints of the source material and supplier.
- Logistics for the incoming material to the production process.

Session 2

- Procurement and supplier requirements.

Session 3

- Conversation process of incoming material to product.
- Equipment, technology, resources, and quality control requirement.

Session 4

- Equipment maintenance and spare parts requirement.
- Alternative production and quality management systems.

Session 5

- Space and capacity requirement.
- Packaging requirements

Session 6

- Logistics constraints based on location.
- Outsourcing and subcontracting alternatives.

Session 7

- Storage capacity requirements for incoming material, work in progress and finish products.
- Key considerations for effective inventory control

Session 8

- Key marketing strategies.
- Production schedule and marketing commitments.
- Outgoing logistics requirements.
- Invoicing and payment systems.
- Warranty considerations and goods return policy

Assessment Criteria

In order to achieve Learning Outcome...	The Learner must...
<p>Describe the transformation process:</p> <ol style="list-style-type: none"> 1. Identify the elements required to transform raw material to a final product 2. Identify potential ‘bottlenecks’ in the production process. 	<ol style="list-style-type: none"> 1. List the elements in a selected transformation process and identify areas that could limit the production process.
<p>Evaluate the incoming (raw) material requirements:</p> <ol style="list-style-type: none"> 3. Identify the constraints of the source material and supplier. 4. Analyse and set up the logistics for the incoming material to the production process. 5. Identify procurement and supplier requirements. 	<ol style="list-style-type: none"> 1. Prepare a list of incoming material and potential suppliers for a selected production process. 2. Prepare a listing of the transportation requirements and logistics considerations to enable the incoming material to reach the production process. 3. List out key contractual obligations of the main supplier and quality requirements.
<p>Determine the requirements of the production process:</p> <ol style="list-style-type: none"> 6. Describe the conversation process of incoming material to product. 7. Identify equipment, technology, resources, and quality control requirement. 8. Identify equipment maintenance and spare parts requirement. 9. Evaluate alternative production and quality management systems. 10. Analyse space and capacity requirement. 11. Identify packaging requirements. 12. Identifying logistics constraints based on location. 13. Discuss outsourcing and subcontracting alternatives. 	<ol style="list-style-type: none"> 1. Make a list of equipment, technology, resources, and quality control requirement for a selected production process. 2. Prepare a listing of the transportation requirements and logistics considerations to enable the finished products to reach the customer. 3. List out potential activities that can be outsourced or subcontracted.
<p>Determine Warehousing and Storage requirements:</p> <ol style="list-style-type: none"> 14. Identify storage capacity requirements for incoming material, work in progress and finish products. 15. Discuss the key considerations for effective inventory control. 	<ol style="list-style-type: none"> 1. Estimate the storage requirements for a selected production process.
<p>Determine the alignment between Marketing and Product delivery:</p>	<ol style="list-style-type: none"> 1. Select a marketing strategy for an identified product.

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| <ol style="list-style-type: none">16. Identify key marketing strategies.17. Align production schedule and marketing commitments.18. Identify outgoing logistics requirements.19. Identify invoicing and payment systems.20. Discuss warranty considerations and goods return policy | |
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Essential Learning Resources:

Manual

Course Handout

Additional Reading

[Production Management \(ddegjust.ac.in\)](http://ddegjust.ac.in)

Websites

- [Operations Management - Meaning, Functions, Roles, Examples \(wallstreetmojo.com\)](http://wallstreetmojo.com)
- [Operations Management - Overview, Responsibilities, Skills Required \(corporatefinanceinstitute.com\)](http://corporatefinanceinstitute.com)