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**PRESCRIPTION: 632 OPERATIONS MANAGEMENT**

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This prescription replaces *232 Operations Management*.

**ELECTIVE PRESCRIPTION**

**LEVEL** 6

**CREDIT** 20

**VERSION** 1

**INTRODUCED** 2007

**AIM** Students will understand functions of operations management and apply techniques to ensure efficient and effective production of goods and services.

**PREREQUISITES** Recommended *530 Organisation and Management* or equivalent knowledge and skills.

**ASSESSMENT WEIGHTINGS**

Learning outcomes	Assessment weighting %
1. Students will appraise the nature of operations management in a given situation.	15
2. Students will explain quality management, and apply quality management techniques to improve operations in a given situation.	25
3. Students will select and justify appropriate facilities to ensure efficient provision of a product.	12
4. Students will discuss the role of project management, and apply appropriate project management techniques in a given situation.	8
5. Students will discuss performance management and determine appropriate performance measures for an operations system(s).	10
6. Students will understand capacity management, apply techniques relating to resource planning, and recommend appropriate actions in a given situation.	15
7. Students will apply an understanding of supply chain management, inventory management and materials management to given situations.	15
<b>TOTAL</b>	<b>100</b>

All learning outcomes must be evidenced; a 10% aggregate variance is allowed.

## ASSESSMENT NOTES

1. Assessment materials should reflect relevant and current legislation, standards, regulations and acknowledged good industry/business practices.
2. Learning outcome three: The term 'product' encompasses goods and services.
3. Integrating assessment of various learning outcomes is viewed as beneficial to the subject matter.

## LEARNING OUTCOME ONE

Students will appraise the nature of operations management in a given situation.

### *Key elements*

- a) Operations management:
  - role:
    - relationship to other main organisational functions
    - importance
  - types, at least one of:
    - job
    - batch
    - mass
    - continuous
  - environmental factors:
    - strategic options, at least one of:
      - cost
      - quality
      - responsiveness.

## LEARNING OUTCOME TWO

Students will explain quality management, and apply quality management techniques to improve operations in a given situation.

### *Key elements*

- a) Quality management:
  - definition(s) of quality, at least one of but not limited to:
    - fitness for purpose
    - compliance
    - value
  - importance, at least one of but not limited to:
    - costs
    - benefits
    - productivity
    - quality management features
  - approach(es), at least one (for example, TQM).

- b) Quality management techniques:
  - the seven tools, including Statistical Process Control and at least one other
  - benchmarking.

### **LEARNING OUTCOME THREE**

Students will select and justify appropriate facilities to ensure efficient provision of a product.

#### *Key elements*

- a) Facility location, at least one technique.
  
- b) Design:
  - product:
    - multi-disciplinary approach
    - development process
  - layout, at least one of:
    - process
    - repetitive
    - product
  - job.

### **LEARNING OUTCOME FOUR**

Students will discuss the role of project management, and apply appropriate project management techniques in a given situation.

#### *Key elements*

- a) Project management:
  - role:
    - project manager
    - project
  - techniques:
    - work breakdown structure
    - network analysis (for example, PERT/CPM):
      - completion date
      - float/slack
      - critical path.

### **LEARNING OUTCOME FIVE**

Students will discuss performance management and determine appropriate performance measures for an operations system(s).

#### *Key elements*

- a) Performance management:
  - management controls
  - strategic objectives.

- b) Performance measure(s), at least one but not limited to:
- standard times
  - costs
  - quality
  - productivity.

## LEARNING OUTCOME SIX

Students will understand capacity management, apply techniques relating to resource planning, and recommend appropriate actions in a given situation.

### *Key elements*

- a) Capacity management:
- capacity calculation:
    - design
    - effective
    - utilisation
  - strategies, at least one of:
    - influencing the demand
    - level
    - chase
    - sub-contract
    - casual labour.
- b) Techniques:
- forecasting:
    - models, at least one of:
      - simple moving average
      - weighted moving average
      - regression
      - exponential smoothing
    - errors, at least one of:
      - MAD
      - MSE
      - MFE
      - MAPE
  - production planning, including Master Production Schedule and at least one of:
    - MRP
    - EDD
    - Johnson's rule
    - services:
      - activity scheduling.

## LEARNING OUTCOME SEVEN

Students will apply an understanding of supply chain management, inventory management and materials management to given situations.

### *Key elements*

- a) Supply chain management:
  - planning
  - purchasing
  - processing
  - distribution.
  
- b) Inventory management:
  - order quantity:
    - fixed period
    - variable period
    - fixed quantity
    - production.
  
- c) Materials management, including but not limited to:
  - Kanban
  - JIT.