COURSE OUTLINE
and
SET OF COURSE

Course: ADVANCE OPERATIONS MANAGEMENT
Code/credits: ED 552 / 3 SKS

MANAGEMENT DEPARTMENT
FACULTY OF ECONOMICS
DIPONEGORO UNIVERSITY
SEMARANG
### AN OUTLINE TEACHING PROGRAM

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Code/Credit</td>
<td>EM 552/3</td>
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<tr>
<td>Brief Description</td>
<td>The course discusses various aspect of advance concept of operations management.</td>
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<tr>
<td>General</td>
<td>After completing the course student able to describe or explain various advance concept of operations management relevant with competitive advantage, managing quality and continuity of companies.</td>
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<tr>
<td>Instructional Objectives</td>
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<tr>
<td>No</td>
<td>Special Instructional Objectives</td>
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</table>
| 1. | When you complete this session, you should be able to: Identify or Define:                     | Operations Strategy in a Global Environment | a. Developing Missions and Strategies  
 b. Achieving Competitive Advantage Through Operations  
 c. Ten Strategic OM Decisions  
 d. Issues in Operations Strategy  
 e. Strategy Development and Implementation  
| 2  | When you complete this subject, you should be able to: Identify or Define:                     | Capacity Planning                     | a. Capacity  
 b. Capacity Planning  
 c. Breakeven Analysis  
 d. Applying Decision Trees to Capacity Decisions  
 e. Strategy Driven Investments | 150 minutes | A. p. 275 – 289  
 B. p 386 – 401- |
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<tr>
<th>3</th>
<th>When you complete this session, you should be able to:</th>
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<tr>
<td>Identify or Define:</td>
<td>Aggregate Planning</td>
</tr>
<tr>
<td>* Aggregate planning</td>
<td>a. The Planning Process</td>
</tr>
<tr>
<td>* Tactical scheduling</td>
<td>b. The Nature of Aggregate Planning</td>
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<tr>
<td>* Graphic technique for aggregate planning</td>
<td>c. Aggregate Planning Strategies</td>
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<tr>
<td>* Mathematical techniques for aggregate planning</td>
<td>d. Methods for Aggregate Planning</td>
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<tr>
<td>Describe or Explain:</td>
<td>e. Aggregate Planning In Services</td>
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<tr>
<td>* How to do aggregate planning</td>
<td>f. Yield Management</td>
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<tr>
<td>* How service firms develop aggregate plans</td>
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<th>When you complete this session, you should be able to:</th>
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<tr>
<td>Identify or Define:</td>
<td>Material Requirements Planning (MRP)</td>
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<tr>
<td>* Planning bills and kits</td>
<td>a. Dependent Inventory Model</td>
</tr>
<tr>
<td>* Phantom bills</td>
<td>b. Lot-Sizing Techniques</td>
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<tr>
<td>* Low-level coding</td>
<td>c. Extensions in MRP</td>
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<tr>
<td>* Lot sizing</td>
<td>d. MRP IN Services</td>
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<tr>
<td>Describe or Explain:</td>
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<tr>
<td>* Material requirements planning</td>
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<td>* Distribution requirements planning</td>
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<tr>
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<td>A. p 488 - 510</td>
<td>B. p. 512 - 533</td>
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<td>A. p 519 - 540</td>
<td>B. p 582 - 607</td>
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<td>When you complete this session, you should be able to:</td>
<td>Quality Management</td>
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<td>5</td>
<td>Identify or Define:</td>
<td>a. Quality and Strategy</td>
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<td></td>
<td>♦ Quality</td>
<td>b. Defining Quality</td>
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<td>♦ Implications of Quality</td>
<td>c. Cost of Quality</td>
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<td>♦ Cost of Quality (COQ)</td>
<td>d. International Quality Standards</td>
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<td>♦ International Quality Standards</td>
<td>e. Basic concepts of Demings, Juran, and Crosby on quality</td>
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<td>♦ Demings, Juran, and Crosby</td>
<td>150 minutes</td>
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<td>When you complete this session, you should be able to:</td>
<td>Total Quality Management</td>
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<tr>
<td></td>
<td>Explain:</td>
<td>b. Concepts of TQM</td>
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<td>♦ Total Quality Management (TQM)</td>
<td>150 minutes</td>
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<td>♦ Concepts of TQM</td>
<td>A. p. 193 – 197</td>
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<td>B. p 186 - 200</td>
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<td>7</td>
<td>When you complete this session, you should be able to:</td>
<td>Tools of TQM</td>
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<td>Explain:</td>
<td>b. House of Quality</td>
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<td>♦ Quality Function Deployment</td>
<td>c. Taguchi technique</td>
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<td></td>
<td>♦ Taguchi technique</td>
<td>d. Quality loss function</td>
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<td>♦ Quality loss function</td>
<td>e. Pareto charts</td>
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<td>♦ Pareto charts</td>
<td>f. Process charts</td>
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<td></td>
<td>♦ Process charts</td>
<td>g. Cause-and-effect diagrams</td>
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<td>♦ Cause-and-effect diagrams</td>
<td>150 minutes</td>
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<tr>
<td></td>
<td></td>
<td>A. p 197 – 207.</td>
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<td>B. p 106 - 108</td>
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</tbody>
</table>
| 8  | When you complete this session, you should be able to **Identify or Define:**  
|    | ♦ Natural and assignable causes of variation  
|    | ♦ Process control  
|    | ♦ Acceptance sampling  
|    | ♦ OC curve  
|    | ♦ Producer’s and consumer’s risk  
|    | ♦ The role of statistical quality control  
|    | Statistical Process Control  
|    | a. Statistical Process Control (SPC)  
|    | b. Process Capability  
|    | c. Acceptance Sampling  
|    | d. The role of statistical quality control  
|    | 150 minutes  
|    | A. p 214 – 231  
|    | B. p 300 - 314  
| 9  | When you complete this session, you should be able to:  
|    | **Identify or Define:**  
|    | ♦ Supply-chain management  
|    | ♦ Purchasing  
|    | ♦ Outsourcing  
|    | ♦ E-procurement  
|    | ♦ Materials management  
|    | ♦ Keiretsu  
|    | ♦ Virtual companies  
|    | **Describe or Explain:**  
|    | ♦ Supply-Chain Strategies  
|    | ♦ Purchasing strategies  
|    | ♦ Approaches to negotiations  
|    | Supply-Chain Management  
|    | a. The Strategic Importance of Supply-Chain  
|    | b. Supply-Chain Strategies  
|    | c. Managing the Supply Chain  
|    | d. Materials/Logistics Management  
|    | e. Benchmarking Supply-Chain Management  
|    | 150 minutes  
|    | A. p 411 - 427  
|    | B. p 362 - 379
| 10 | When you complete this session, you should be able to:  
**Describe or Explain:**  
- How to improve maintenance  
- TPM principles  
- Eight major pillars of TPM  
- TPM implementation | **Total Productive Maintenance** | a. Origins of TPM  
b. TPM principles  
c. Eight major pillars of TPM  
d. TPM Implementation  
e. TPM Benefits | 150 minutes | A. p 630 - 631  
D. ©Imants  
http://www.managmentsupport.com |
|---|---|---|---|---|
| 11 | When you complete this session, you should be able to:  
**Identify or Define:**  
- Types of waste  
- Variability  
- Kanban  
**Describe or Explain:**  
- Just-in-Time (JIT) philosophy  
- Pull systems  
- Push systems  
- The goals of JIT partnerships  
- Lean Production | **Just-in-Time and Lean Production Systems** | a. Just-In-Time and Lean Production  
b. Suppliers  
c. JIT Layout  
d. Inventory  
e. Scheduling  
f. Quality  
g. Employee Empowerment  
h. Lean Production | 150 minutes | A. p 593 - 613  
B. p 256 - 302 |
| 12 | When you complete this session, you should be able to:  
* Identify or Define:  
  Balanced and Unbalanced Capacity  
  Bottleneck and Nonbottleneck Capacity-constrained resource (CCR)  
* Describe or Explain:  
  Theory of Constraint  
  Drum, Buffer, Rope System  
  Comparing Synchronous Manufacturing to MRP | Synchronous Manufacturing and the Theory of Constraints  
| a. Goldratt's Rules  
  b. Goldratt's *Goal of the Firm*  
  c. Performance Measurement  
  d. Capacity and Flow issues  
  e. Synchronous Manufacturing | 150 minutes | B. P 670 - 695.  
| 13 | When you complete this session, you should be able to:  
* Describe or Explain:  
  - Principles of Reengineering  
  - The Reengineering Process  
  - Process Redesign  
  - Integrating Reengineering and Process Improvement | Business Process Reengineering (BPR)  
| a. Principles of Reengineering  
  b. The Reengineering Process  
  c. Process Redesign  
  d. Integrating Reengineering and Process Improvement | 150 minutes | B. p. 338 - 341 |
| 14. When you complete this session, you should be able to Identify or Define: |
|-------------------|-------------------|-------------------|-------------------|
|                   | The Management of Technology | a. Function of Technology | 150 minutes |
|                   |                   | b. Contribution of Research and Development | |
|                   |                   | c. The Motivation to Change Technology | |
|                   |                   | d. Decision Variables in Technology Management | |
|                   |                   | e. Managing Technology Transfer | |
|                   |                   | f. Managing Project Implementation | |
|                   |                   | g. Designing Innovative Systems | |
SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 1

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this session, they able to describe the purpose or rationale for organization’s existence and the action plan to achieve the mission. They also able to explain the main decisions of operations management in a global environment.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   
   Identify or Define:
   ◦ Mission
   ◦ Strategy
   ◦ Ten Decisions of OM
   ◦ Multinational Corporations

B. Main Subject: Operations Strategy in a Global Environment

C. Sub Subject:
   a. Developing Missions and Strategies
   b. Achieving Competitive Advantage Through Operations
   c. Ten Strategic OM Decisions
   d. Issues In Operations Strategy
   e. Strategy Development and Implementation
   f. Global Operations Strategy Options
### D. Course Activities

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<th>Lecture Activities</th>
<th>Student Activities</th>
<th>Media</th>
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<td>Introduction</td>
<td>1. Explain scope of course</td>
<td>1. Listening</td>
<td>LCD, Computer, and whiteboard</td>
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<tr>
<td></td>
<td>2. Explain benefit of course</td>
<td>2. Taking a note</td>
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<td></td>
<td>3. Explain the competence of GIO and SIO</td>
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<tr>
<td>Lecturing</td>
<td>1. Developing Missions and Strategies</td>
<td>1. Listening</td>
<td>LCD, Computer dan whiteboard</td>
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<tr>
<td></td>
<td>2. Achieving Competitive Advantage Through Operations</td>
<td>2. Taking a note</td>
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<td></td>
<td>3. Ten Strategic OM Decisions</td>
<td>3. Give a question</td>
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<td></td>
<td>4. Issues In Operations Strategy</td>
<td>4. Discussion</td>
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<td></td>
<td>5. Strategy Development and Implementation</td>
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<td>6. Global Operations Strategy Options</td>
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<td></td>
<td>Strategy Options</td>
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<tr>
<td>Summary</td>
<td>1. Summarizing the material</td>
<td>1. Listening</td>
<td>Computer, LCD dan whiteboard</td>
</tr>
<tr>
<td></td>
<td>2. Give a question</td>
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<td>3. Explain the next topic</td>
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### E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.
F. Assignment:

A. Prepare next subject

G. References:


SET OF COURSE

COURSE TITLE : ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS : 3 x 50 minutes
NUMBER OF MEETING : 2

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe how companies decides the “throughput” a facility can hold, receive, store or produce in a period of time.

2. Specific Instructional Objective (SIO)
   When you complete this subject, you should be able to :

   Identify or Define:
   ✦ Capacity
   ✦ Design Capacity
   ✦ Effective Capacity
   ✦ Utilization

   Explain:
   ✦ Capacity Considerations
   ✦ Net Present Value Analysis
   ✦ Breakeven Analysis
   ✦ Financial Considerations
   ✦ Strategy-Driven Investments

B. Main Subject : Capacity Planning

C. SubSubject :
   a. Capacity
   b. Capacity Planning
   c. Breakeven Analysis
d. Applying Decisions Trees To Capacity Decisions

e. Strategy Driven Investments

### D. Course Activities

<table>
<thead>
<tr>
<th>Steps</th>
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</table>
| Introduction| 1. Explain subject of the session.  
2. Explain benefit of learning Capacity Planning.  
3. Explain General Instructional Objective and Specific Instructional Objective. | 1. Listening  
2. Taking a note | LCD, Computer, dan whiteboard |
| Lecturing   | 1. Capacity  
2. Capacity Planning  
3. Breakeven Analysis  
4. Applying Decisions Trees To Capacity Decisions  
5. Strategy Driven Investments | 1. Listening  
2. Taking a note  
3. Give a question  
4. Discussion | LCD, Computer dan whiteboard |
| Summary     | 1. Summarizing the material  
2. Give a question  
3. Explain the next topic | 1. Listening | Computer, LCD dan whiteboard |
E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

F. Assignment:

1. Reading next material

G. References:

A. Jay Heizer & Barry Render, Operations Management, Prentice Hall, p. 275 – 289

SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 3

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe on determining the quantity and timing of production for the intermediate future, often from 3 to 18 months ahead.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   
   Identify or Define:
   ♦ Aggregate planning
   ♦ Tactical scheduling
   ♦ Graphic technique for aggregate planning
   ♦ Mathematical techniques for aggregate planning

   Describe or Explain:
   ♦ How to do aggregate planning
   ♦ How service firms develop aggregate plans

B. Main Subject: Aggregate Planning
C. SubSubject:
   a. The Planning Process
   b. The Nature of Aggregate Planning
   c. Aggregate Planning Strategies
   d. Methods for Aggregate Planning
   e. Aggregate Planning In Services
   f. Yield Management
## D. Course Activities

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<td>2. Explain benefit of learning Aggregate Planning</td>
<td>2. Taking a note</td>
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<td>3. Explain General Instruction Objective and Specific Instruction Objective.</td>
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<td>5. Aggregate Planning In Services</td>
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<td>3. Explain the next topic</td>
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E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

F. Assignment:

2. Reading next material

G. References:


SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 4

A. Objective

3. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe material
   requirement planning needed by companies.

4. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:

   Identify or Define:
   ♦ Planning bills and kits
   ♦ Phantom bills
   ♦ Low-level coding
   ♦ Lot sizing

   Describe or Explain:
   ♦ Material requirements planning
   ♦ Distribution requirements planning

B. Main Subject: Material Requirements Planning (MRP)

C. Sub-Subject:
   a. Dependent Inventory Model
   b. Lot-Sizing Techniques
   c. Extensions in MRP
   d. MRP IN Services
D. Course Activities

<table>
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</table>
| Introduction | 1. Explain subject of the session.  
2. Explain benefit of learning Material Requirement Planning.  
3. Explain General Instructional Objective and Specific Instructional Objective. | 1. Listening  
2. Taking a note | LCD, Computer, dan whiteboard |
| Lecturing    | 1. Dependent Inventory Model  
2. Lot-Sizing Techniques  
3. Extensions in MRP  
4. MRP IN Services | 1. Listening  
2. Taking a note  
3. Give a question  
4. Discussion | LCD, Computer dan whiteboard |
| Summary      | 1. Summarizing the material  
2. Give a question  
3. Explain the next topic | 1. Listening | Computer, LCD dan whiteboard |

E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.
F. Assignment:
1. Assignment to be discussed in laboratory class
2. Reading next material

G. References:
B. Richard B Chase, F. Robert Jacobs & Nicholas J. Aquilano, Operations Management
SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 5

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe the effect of quality to firms and basic concept of quality.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   Identify or Define:
   ◆ Quality
   ◆ Implications of Quality
   ◆ Cost of Quality (COQ)
   ◆ International Quality Standards
   ◆ Demings, Juran, and Crosby

B. Main Subject: Quality Management

C. Sub-Subject:
   a. Quality and Strategy
   b. Defining Quality
   c. Cost of Quality
   d. International Quality Standards
   e. Basic concepts of Demings, Juran, and Crosby on quality
### D. Course Activities

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<td>3. Explain General Instructional Objective and Specific Instructional Objective.</td>
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<td>1. Quality and Strategy</td>
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<td>3. Cost of Quality</td>
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<td>4. International Quality Standards</td>
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E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

F. Assignment:
1. Reading next material

G. References:
B. Richard B Chase, F. Robert Jacobs & Nicholas J. Aquilano, Operations Management
SET OF COURSE

COURSE TITLE : ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS : 3 x 50 minutes
NUMBER OF MEETING : 6

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe the effect of
   quality to firms and basic concept of quality.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   Explain:
   - Total Quality Management (TQM)
   - Concepts of TQM

B. Main Subject : Total Quality Management

C. Sub-Subject :
   a. Achieving Total Quality Management
   b. Concepts of TQM

D. Course Activities

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<td></td>
<td>2. Explain benefit of learning Total Quality</td>
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### E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

### F. Assignment:

1. Reading next material

### G. References:


SET OF COURSE

COURSE TITLE : ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS : 3 x 50 minutes
NUMBER OF MEETING : 7

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe tools of Total
   Quality Management.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to :
   Explain:
   ♦ Quality Function Deployment
   ♦ Taguchi technique
   ♦ Quality loss function
   ♦ Pareto charts
   ♦ Process charts
   ♦ Cause-and-effect diagrams

B. Main Subject : Tools of Total Quality Management

C. Sub-Subject :
   a. Quality Function Deployment
   b. House of Quality
   c. Taguchi technique
   d. Quality loss function
   e. Pareto charts
   f. Process charts
   g. Cause-and-effect diagrams
### D. Course Activities

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<td>3. Explain General Instructional Objective and Specific Instructional Objective.</td>
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<td>2. House of Quality</td>
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<td>3. Taguchi technique</td>
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<td>4. Quality loss function</td>
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<td>5. Pareto charts</td>
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<td>6. Process charts</td>
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<td>7. Cause-and-effect diagrams</td>
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### E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.
F. Assignment:
1. Assignment to be discussed in laboratory class
2. Reading next material

G. References:
A. Jay Heizer & Barry Render, Operations Management, Prentice Hall, p. 197 – 207
SET OF COURSE

COURSE TITLE : ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS : 3 x 50 minutes
NUMBER OF MEETING : 8

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe managing quality by statistical method.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to Identify or Define:
   ♦ Natural and assignable causes of variation
   ♦ Process control
   ♦ Acceptance sampling
   ♦ OC curve
   ♦ Producer’s and consumer’s risk
   ♦ The role of statistical quality control

B. Main Subject : Statistical Process Control

C. Sub-Subject :
   a. Statistical Process Control (SPC)
   b. Process Capability
   c. Acceptance Sampling
   d. The role of statistical quality control
### D. Course Activities

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<td>3. Explain General Instructional Objective and Specific Instructional Objective.</td>
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### E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

### F. Assignment:

1. Assignment to be discussed in laboratory class
2. Reading next material

G. References:


SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 9

A. Objective

3. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe flows of material
   from supplier to customer.

4. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:

Identify or Define:
- Supply-chain management
- Purchasing
- Outsourcing
- E-procurement
- Materials management
- Keiretsu
- Virtual companies

Describe or Explain:
- Supply-Chain Strategies
- Purchasing strategies
- Approaches to negotiations

B. Main Subject: Supply-Chain Management
C. Sub-Subject:
   a. The Strategic Importance of Supply-Chain
   b. Supply-Chain Strategies
   c. Managing the Supply Chain
   d. Materials/Logistics Management
   e. Benchmarking Supply-Chain Management

D. Course Activities

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</table>
| Introduction | 1. Explain subject of the session.  
               2. Explain benefit of learning Supply Chain Management.  
               3. Explain General Instructional Objective and Specific Instructional Objective. | 1. Listening  
               2. Taking a note | LCD, Computer, dan whiteboard |
| Lecturing | 1. The Strategic Importance of Supply-Chain  
               2. Supply-Chain Strategies  
               3. Managing the Supply Chain  
               4. Materials/Logistics Management  
               5. Benchmarking Supply-Chain Management | 1. Listening  
               2. Taking a note  
               3. Give a question  
               4. Discussion | LCD, Computer, dan whiteboard |
| Summary   | 1. Summarizing the material  
               2. Give a question | 1. Listening | Computer, LCD dan |
3. Explain the next topic

| Whiteboard |

E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

F. Assignment:

1. Reading next material

G. References:

A. Jay Heizer & Barry Render, Operations Management, Prentice Hall, p. 411 - 427

SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 10

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe maintenance concept using total involvement.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   
   Describe or Explain:
   - How to improve maintenance
   - TPM principles
   - Eight major pillars of TPM
   - TPM implementation

B. Main Subject: Total Productive Maintenance

C. Sub-Subject:
   a. Origins of TPM
   b. TPM principles
   c. Eight major pillars of TPM
   d. TPM Implementation
   e. TPM Benefits

D. Course Activities

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<td>2. Taking a note</td>
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</table>


2. Explain benefit of learning Total Productive Maintenance.
3. Explain General Instructional Objective and Specific Instructional Objective.

| Lecturing | 1. Origins of TPM  
2. TPM principles  
3. Eight major pillars of TPM  
4. TPM Implementation  
5. TPM Benefits | 1. Listening  
2. Taking a note  
3. Give a question  
4. Discussion | LCD, Computer dan whiteboard |

| Summary | 1. Summarizing the material  
2. Give a question  
3. Explain the next topic | 1. Listening | Computer, LCD dan whiteboard |

**E. Evaluation:**

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

**F. Assignment:**

1. Reading next material

**G. References:**

A. Jay Heizer & Barry Render, Operations Management, Prentice Hall, p. 630 - 631

B. ©Imants [http://www.managementsupport.com](http://www.managementsupport.com)
SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT

COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 11

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe eliminate waste to achieve competitive advantage.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   Identify or Define:
   - Types of waste
   - Variability
   - Kanban
   Describe or Explain:
   - Just-in-Time (JIT) philosophy
   - Pull systems
   - Push systems
   - The goals of JIT partnerships
   - Lean Production

B. Main Subject: Just-in-Time and Lean Production Systems

C. Sub-Subject:
   a. Just-In-Time and Lean Production
   b. Suppliers
   c. JIT Layout
   d. Inventory
   e. Scheduling
   f. Quality
   g. Employee Empowerment
   h. Lean Production
### D. Course Activities

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| Introduction | 1. Explain subject of the session.  
2. Explain benefit of learning Just in Time and Lean Production.  
3. Explain General Instructional Objective and Specific Instructional Objective. | 1. Listening  
2. Taking a note | LCD, Computer, dan whiteboard |
| Lecturing | 1. Just-In-Time and Lean Production  
2. Suppliers  
3. JIT Layout  
4. Inventory  
5. Scheduling  
6. Quality  
7. Employee Empowerment  
8. Lean Production | 1. Listening  
2. Taking a note  
3. Give a question  
4. Discussion | LCD, Computer, dan whiteboard |
| Summary   | 1. Summarizing the material  
2. Give a question  
3. Explain the next topic | 1. Listening | Computer, LCD dan whiteboard |

### E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.
F. Assignment:
1. Reading next material

G. References:
A. Jay Heizer & Barry Render, Operations Management, Prentice Hall, p. 593 – 613
B. Richard B Chase, F. Robert Jacobs & Nicholas J. Aquilano, Operations Management
SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 12

A. Objective

1. General Instructional Objective (GIO)
   When the student completes this topic, they are able to describe Synchronising
   process flow of the firms.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to:
   Identify or Define:
   Balanced and Unbalanced Capacity
   Bottleneck and Nonbottleneck
   Capacity-constrained resource (CCR)
   Describe or Explain:
   Theory of Constraint
   Drum, Buffer, Rope System
   Comparing Synchronous Manufacturing to MRP

B. Main Subject: Synchronous Manufacturing and the Theory of Constraints

C. Sub-Subject:
   a. Goldratt’s Rules
   b. Goldratt’s Goal of the Firm
   c. Performance Measurement
   d. Capacity and Flow issues
   e. Synchronous Manufacturing
### D. Course Activities

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<td>2. Explain benefit of learning Synchronous Manufacturing and the Theory of Constraints.</td>
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<td>3. Explain General Instruction Objective and Specific Instructional Objective.</td>
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<tr>
<td>Lecturing</td>
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<td>1. Listening</td>
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<td>2. Goldratt’s <em>Goal of the Firm</em></td>
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Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.
F. Assignment:
1. Reading next material

G. References:


SET OF COURSE

COURSE TITLE : ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS : 3 x 50 minutes
NUMBER OF MEETING : 13

A. Objective

General Instructional Objective (GIO)
When the student complete this topic, they able to describe the firms effort to be competitive.

Specific Instructional Objective (SIO)
When you complete this session, you should be able to:

Describe or Explain:
- Principles of Reengineering
- The Reengineering Process
- Process Redesign
- Integrating Reengineering and Process Improvement

B. Main Subject : Business Process Reengineering (BPR)

C. Sub-Subject :

  a. Principles of Reengineering
  b. The Reengineering Process
  c. Process Redesign
  d. Integrating Reengineering and Process Improvement

D. Course Activities

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<td>2. Taking a note</td>
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</table>
2. Explain benefit of Business Process Reengineering.
3. Explain General Instructional Objective and Specific Instructional Objective.

| Lecturing                        | 1. Principles of Reengineering  | 1. Listening  |
|                                 | 2. The Reengineering Process    | 2. Taking a note |
|                                 | 4. Integrating Reengineering and Process Improvement | 4. Discussion |

| Summary                          | 1. Summarizing the material     | 1. Listening  |
|                                 | 2. Give a question              |               |
|                                 | 3. Explain the next topic       |               |

**E. Evaluation:**

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

**F. Assignment:**

Reading next material

**G. References:**

SET OF COURSE

COURSE TITLE: ADVANCE OPERATIONS MANAGEMENT
COURSE CODE/CREDIT: EM 552 / 3
CREDIT HOURS: 3 x 50 minutes
NUMBER OF MEETING: 14

A. Objective

1. General Instructional Objective (GIO)
   When the student complete this topic, they able to describe the firms on managing technology.

2. Specific Instructional Objective (SIO)
   When you complete this session, you should be able to

   Identify or Define:
   - The Characteristic and levels of research and development projects
   - The incentives and impediments to technological change
   - List the Decision variables in technology management

   Describe or Explain:
   Several techniques of managing technology transfer
   Differentiate methods of project management in terms of when they should be used.

B. Main Subject: The Management of Technology

C. Sub-Subject:
   - Function of Technology
   - Contribution of Research and Development
   - The Motivation to Change Technology
   - Decision Variables in Technology Management
   - Managing Technology Transfer
   - Managing Project Implementation
   - Designing Innovative Systems
### D. Course Activities

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                      3. Explain General Instructional Objective and Specific Instructional Objective. | 1. Listening  
                      2. Taking a note | LCD, Computer, dan whiteboard |
| Lecturing  | 1. Function of Technology  
                      2. Contribution of Research and Development  
                      3. The Motivation to Change Technology  
                      4. Decision Variables in Technology Management  
                      5. Managing Technology Transfer  
                      6. Managing Project Implementation  
                      7. Designing Innovative Systems | 1. Listening  
                      2. Taking a note  
                      3. Give a question  
                      4. Discussion | LCD, Computer dan whiteboard |
| Summary    | 1. Summarizing the material  
                      2. Give a question  
                      3. Explain the next topic | 1. Listening | Computer, LCD dan whiteboard |
E. Evaluation:

Giving questions or case study for small groups discussion and class discussion to evaluate understandability of student concerning the course material.

F. Assignment:

1. Reading next material

G. References: