COLLEGE OF BUSINESS AND ECONOMICS - UNIVERSITY OF RWANDA

DEPARTMENT OF MANAGEMENT- SCHOOL OF BUSINESS

PCM 3232: PRODUCTION AND OPERATIONS MANAGEMENT

Module Description

1. **Module Code: PCM 3232**
2. **Module Title: Production and Operations Management**
3. **A. Year:** 3 B. **Semester:** 2
4. **Credits:** 10
5. **Administering School**: Business
6. **Department:** Management
7. **First Year of presentation:** 2015/2016
8. **Pre-requisite**: none **co-requisite**: none
9. **ALLOCATION OF STUDY AND TEACHING HOURS**

Total student hours _____100_____	**Student Hours**	**Staff Hours**
Lectures	48	48
Seminars/workshops	8	8
Practical classes/laboratory	-	-
Structured exercises/Tutorials	10	
Set Reading etc	10	
Self-directed study	10	
Assignments – preparation and writing	9	
Examination – revision and attendance	5	
TOTAL	**100**	

10. BRIEF DESCRIPTION OF AIMS

Production and Operations Management (POM) shows how goods and services are generated in manufacturing and service giving organizations an optimal manner to satisfy customers and gain competitive advantage. It emphasizes an integrated approach, globalization , innovation and high productivity and effectiveness in manufacturing and service industries. At the end of this module, students are supposed to develop appropriate operations goals, plans and strategies and be familiar with tools required to support strategic POM decisions including product/process selection, design and development, product mix and plant location and layout to generate the required products and/or services effectively.

11. LEARNING OUTCOMES

11.1. Knowledge and Understanding

Having successfully completed the module, students should be able to demonstrate knowledge and understanding off:

i. The nature, significance and dynamics of manufacturing and service organizations and their contributions to the national and global economy,
ii. The conceptual or theoretical framework of POM from the systems (input-processing-output).
iii. Operations objectives and strategies and their alignment to business and corporate strategies, demand forecasting, capacity requirements planning, aggregate planning, materials requirement planning, operations planning and scheduling to ensure the right quantity/volume of items/services are produced at the right time.
iv. Job design, measurement and compensation in a manner that will motivate and consider the human factor in POM.
v. Supply Chain Management concept and tools.
vi. Be conversant with product management concepts and techniques to manage the production/operations processes of a project/program effectively
vii. Management philosophy/approach and tools to enhance the quality of production/manufacturing processes and the competitiveness of the organization including Total Quality Management, Six-Sigma, Lean Manufacturing, Business Process Reengineering , Enterprise Resource Planning Systems and Total Preventive Maintenance.
viii. how to monitor and evaluate the effectiveness of production and operations management using dash boards, flow charts and other relevant methods and take appropriate remedial actions.

11.2. Cognitive/Intellectual skills/ICT/Application of Knowledge

Having successfully completed the module, students should be able to demonstrate the following intellectual skills and application of knowledge:

ix. To show how best to design, supply and run production and service operations/ processes
x. In concise treatment of many decisions in designing, planning and managing the operations in a business
xi. Demonstrate ability to think critically and analytically when solving problems in operations management
xii. Adapt a multi-dimensional perspective of the contextual variables faced in the strategic management of production and operations in an organization.

11.3. Communication /ICT/Numeracy/Analytical Techniques/Practical Skills

Having successfully completed the module, students should be able to:

xiii. Employ effectively skills or tools of resolving operations-related problems including the use of decision trees, break-even analysis , linear programming and forecasting.
xiv. Prepare aggregate production and operations plan, master production schedule, materials requirements plans, capacity requirements plan, production plans and schedules
xv. Apply productivity measures in the measurement of organizational performance

xvi. Analyze and interpret the financial and economic effects of operations

11.4. General Transferable Skills

Having successfully completed the module, students should be able to:

xvii. Differentiate product design and process selection of manufacturing and services
xviii. Forecast and prepare of production and operations plans and schedules
xix. Monitoring and evaluation of POM using dash boards and other methods.

12. INDICATIVE CONTENT

a. **Operations Concept, Strategy and Competitiveness**: Concepts and Tools, Functions, Production Systems, Transformation Processes, Differences between Services and Goods Production, Operations as Service, Historical Development of Operations Management, Current Issues and Operations Strategy.

b. **Product Design and Process Selection:** Operations Issues in Product Life Cycle, Product Development Process, Manufacturing Process Technology, Nature of Services, Operational Classification of Services, Designing Service Organizations, Contrasting Service Designs.

c. **Operations and Value Chain:** Supply Chain Management including Inventory Planning and Control, Plant Layout and Location, Developing Quality Specifications, Total Quality Management and Six Sigma.

d. **Planning and Controlling of Operations:** Demand Forecasting, Material Requirement Planning, Resource Planning, Capacity Requirement Planning, Aggregate Planning, Master Production Schedule , Materials Requirement Planning and Monitoring and Evaluation

13. LEARNING AND TEACHING STRATEGY

1. The module will be organized through lectures, seminars and tutorials. Lectures will be of 4 hours per week and seminars/tutorials will be 1 hour per week.
2. Each week students will be required to participate in discussion threads. These threads are to help students put material into more personal contexts and maximize learning.
3. Analyzing and interpreting case studies
4. Preparation and Presentation of a term paper on the operations of a manufacturing or service providing firm.

14. ASSESSMENT STRATEGY

The Assessment can take many forms such as group discussions, Assignments, Quizzes, objective questions, Continuous Assessment Tests, Practical Exercises, Presentations, to name a few. The Assessment differs from Module to module and is dependent on the module and its learning outcomes. The Module team headed by the Module Leader, come together and prepare a Module Handbook detailing the module, its learning outcomes, indicative content, the type of Assessments and its weightage, before the start of the module.

15. ASSESSMENT PATTERN

Types of Assessment	Weight (%)	Learning outcomes covered
I. In-Course Assessments	**50%**	Refer the learning outcomes from the number i to xix.
II. Final examination	**50%**	Refer the learning outcomes from the number x to xix
Total	**100%**	

16. STRATEGY FOR FEEDBACK AND STUDENT SUPPORT DURING MODULE

1. Tutorial classes where students can ask questions and be lead through solutions as required
2. Marked summative assessments handed back to students, with comments.
3. Opportunities to consult faculty member and /or tutorial assistant during office hours.
4. Interactive lecturing style, with opportunities for questions, and requirement to work on simple problems

17. INDICATIVE RESOURCES:

a. Core Textbooks

i. Adam, E., & Ebert, R. (2010). *Production and operations management: Concepts, models, and behaviour*. Englewood Cliffs, N.J.: Prentice-Hall.

ii. Brennan, L. (2011). *Operations management*. New York: McGraw-Hill.

b. Background Textbooks (Other Textbooks)

iii. Krajewski, L., & Ritzman, L. (2010). *Operations management* (9th ed.). Upper Saddle River, N.J.: Prentice Hall.

iv. Klassen, R. (2006). *Cases in operations management: Building customer value through world-class operations*. Thousand Oaks, CA: Sage Publications.

v. Chase, R., & Aquilano, N. (2004). *Operations management for competitive advantage* (10th ed.). Boston, Mass.: McGraw-Hill.

vi. Krajewski, L., & Ritzman, L. (2002). *Operations management: Strategy and analysis* (6th ed.). Upper Saddle River, NJ: Prentice Hall.

vii. Adam, E., & Ebert, R. (1978). *Production and operations management: Concepts, models, and behavior*. Englewood Cliffs, N.J.: Prentice-Hall.

viii. Chary, S. (1995). *Theory and problems in production and operations management*. New Delhi: Tata McGraw-Hill

c. Academic Journals and Business Publications:

1. Harvard Business Review
2. International Journal of Quality and Reliability Management
3. Journal of Operations Management
4. International journal of Operations and Productions Management

18. TEACHING TEAM

Mr. Servilien Semucyo, module leader and full time staff- Email: sehmum@gmail.com ; phone: 0783357188

16. UNIT APPROVAL

Unit	Names /Designation	Signature	Date
Department of Procurement	Stany Banzimana **Head of Department**	.....	.....
School of Business	Dr. Jonas Barayandema **Acting Dean**	.....	.....
College of Business and Economics	Prof. Murty S. Kopparthi **Acting Principal**	……	……
Teaching and Learning Enhancement	Dr. Marvin Elie Mbassana **Acting Director**	……..	……..
Library	Ms. Odette Gahongayire **Acting Director**	……..	…….
ICT	Mr. Vedaste Karemera **Director**	……..	……...