Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav School of Management

Choice Based Credit System (CBCS) in Light of NEP-2020
BBA (Operations) V SEMESTER (2022-2026)

BBA501 BASICS OF OPERATIONS MANAGEMENT

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BBA501	MAJ	Basics of Operations Management	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **MAJ**-Minor
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE

This course is aimed at introducing students to the basic concepts, theories and practices of production and operations functions. It focuses on the problems that frequently confront production/operations managers.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections, A and B. Section A will carry 36 Marks and consist of 5 questions, out of which students will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES

CO1 Comprehend the elements of operations management and various transformation processes to enhance productivity and competitiveness.
CO2 Develop the understanding for Facilities Location and the factors that affect the selection of facilities location.
CO3 Analyze the facilities requirement and accordingly design Layouts.
CO4 Define and examine the materials management function starting from demand management through Inventory Management.
CO5 Apply various Statistical Quality Control tools including the analysis of various Quality costs, and quality circles.

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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BBA501	MAJ	Basics of Operations Management	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **MAJ-** Minor
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE CONTENT

UNIT I: Introduction

1. Nature and Scope of Production/Operations Management,
2. POM Relationship with other Systems in the Organisation
3. Factors that affect System and Concept of Production and Operation Management.
4. Different types of Production/Operation Systems, Role, and Responsibilities of Production/Operations Manager.
5. Basic differences between Manufacturing and Service operations.

UNIT II: Facilities Location

1. Importance of location decision and needs for it.
2. Factors affecting plant location decision.
3. Basic location decision models – Break-Even Method, Factor Rating Method
4. Weighted Factor Rating Method, Load Distance Method
5. Centre of Gravity Model

UNIT III: Facilities Layout

1. Concept of Plant Layout
2. Objectives of Plant Layout
3. Principles of Plant Layout
4. Basic classification of Layouts – Process Layout, Product Layout, Layout by Fixed Position
5. Group Layout/ Cellular Manufacturing

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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BBA501	MAJ	Basics of Operations Management	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **MAJ**- Minor
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT IV: Material and Inventory Management

1. An overview of Material Management, Material Planning, and Inventory Control,
2. Concept and fundamentals of Material requirement planning (MRP)
3. Inventory Models(Classical EOQ, Model with Shortages), JIT,
4. Budgeting and Material Planning, Purchase Management,
5. Store Management, Safety Management, Case Study.

UNIT V: Quality in Prod. & Ops Management

1. Definition, History of Quality, Quality Management
2. Concepts of Quality Assurance, Acceptance Sampling
3. Statistical Process Control
4. Control Charts: Control Limits, Central Tendency and Dispersion, $\bar{X}$chart and r-chart.
5. Total Quality Management, QMS and ISO Standards, Case Study.

SUGGESTED READINGS

1. Chary, S.N., (2012). ***Production and Operations Management.*** McGraw Hills Education Pvt. Ltd.,5th edition.
2. Kumar, S. and Suresh, N. (2009). ***Operations Management.*** New Age International Publishers.
3. Ashwathappa, K (2007). ***Production and Operation Management.*** Himalaya Publishing House.
4. Paneerselvam, R. (2013). ***Production and Operations Management.*** PHI Learning Private limited.

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BBAO502 INTRODUCTION TO PRODUCTIVITY MANAGEMENT

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BBAO502	MAJ	Introduction to Productivity Management	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **MAJ –** Major
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE
To equip students with the updated knowledge of productivity and to develop their functional expertise in measuring the work and productivity in a business organization.

EXAMINATION SCHEME
The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections, A and B. Section A will carry 36 Marks and consist of 5 questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES
CO1 To understand the meaning, scope, and importance of Productivity Management Concepts
CO2 To know the application of tools used for achieving efficiency and increasing productivity.
CO3 To evaluate the charts related to productivity.
CO4 To identify the significance of advanced concepts of work measurement.
CO5 To analyze the conceptuality of Job evaluation

COURSE CONTENT

UNIT I: Introduction
1. Productivity concepts – Definition, Types
2. Dynamic Concept of Productivity
3. Craig and Harris Model, Taylor-Devis Model
4. APC model of productivity
5. Factors affecting Productivity and Its Corrective Measures

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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BBAO502	MAJ	Introduction to Productivity Management	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **MAJ –** Major
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT II: Work Study: Method Study

1. Work Study Concepts, Scope, and Applications,
2. Types of Work Study
3. Need for Method Study
4. Flow Process Chart, Multiple Activity Chart,
5. SIMO Chart, Travel Chart.

UNIT III: Work Study: Work Measurement

1. Motion Study -Principles Of Motion Economy
2. Techniques of Work Measurement
3. Time study: Observed time to Standard Time
4. Numerical / Case Studies

UNIT IV: Basics of Human Factors and Ergonomics

1. Techniques of Work Measurement including Estimating
2. Time Study –Routing Concepts, Stopwatch Study,
3. Predetermined Time Standards, Synthetic Estimates of Work Times
4. Computation of Standard Time – Elements – Types of Elements
5. Allowance, PMTS Systems (Concepts Only) Activity Sampling

UNIT V: Job Evaluation

1. Concepts need for and importance of job evaluation
2. Traditional vs Modern Job Evaluation
3. Other Methods of Job Evaluation
4. Case Studies/Numerical

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BBAO502	MAJ	Introduction to Productivity Management	60	20	20	-	-	3	-	-	3

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **MAJ –** Major
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

SUGGESTED READINGS

1. Carl G. Thor (Latest).***Handbook for Productivity Measurement and Improvement Productivity***. Press: India
2. Harrington, H.J. (Latest).***Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity and Competitiveness***. McGraw-Hill: New Delhi
3. Kanawaty, G. (Latest). ***Introduction to Work Study***. Geneva: International Labour Office.
4. Vrat, P., Sardana, G.D. and Sahay, B.S., (1998). ***Productivity Management – Systems Approach***. Narosa Publications: New Delhi
5. Rastogi, P.N., (1995).***Re-Engineering and Re-Inventing The Enterprise*** .Wheeler publications: New Delhi
6. Samantha, D.J., (1990). ***Productivity Engineering and Management.*** Tata McGraw Hill.

Chairperson	Chairperson	Controller of Examination	Joint Registrar
Board of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore	Faculty of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore	Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore	Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

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BBAO503 FUNDAMENTALS OF QUALITY MANAGEMENT

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BBAO503	DSE	Fundamentals of Quality Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE

To acquaint the students with the conceptualization of Total Quality (TQ) from design assurance to processes' assurance to service assurance and to develop the functional expertise in the area of Total Quality Management.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections, A and B. Section A will carry 36 Marks and consist of 5 questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES

CO1 To understand the TQM Concepts
CO2 To know how to implement TPM in an organization for achieving efficiency and quality superiority.
CO3 To measure and evaluate the contributions of different Quality gurus.
CO4 To identify the significance of Six Sigma in Quality management.
CO5 To acquire knowledge about different Quality Awards.

COURSE CONTENT

UNIT I: Introduction

1. Quality – Concept, Evolution
2. Dimensions of Quality
3. Quality Management – Elements and its Principles
4. Quality Assurance – Need, Elements, Types
5. Quality Control – Need, Elements, Types

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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BBAO503	DSE	Fundamentals of Quality Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT II: Quality Gurus (Contribution)

1. Dr. Walter Shewhart, Dr. Edwards Deming
2. Dr. Philip B Crosby, Dr. Joseph Juran
3. Dr. Genichi Taguchi, Dr. Shiegeo Shingo
4. Dr. Kaoru Ishikawa, Dr. Masaaki Imai

UNIT III: Introduction to TQM

1. TQM Concept, Evolution
2. Total Quality Management – Elements and its Principles
3. Seven tools of TQM
4. Fundamentals of Quality Control
5. Case Studies

UNIT IV: Introduction to Quality Systems, Six Sigma

1. Quality Systems(ISO)Concept
2. Evolution
3. ISO 9000 Series, ISO 14000 Series
4. Six Sigma – Concept, Evolution
5. Six Sigma – Elements and its Principles

UNIT V: Quality Awards

1. Rajiv Gandhi National Quality Award
2. The Golden Peacock National Quality Award.
3. IMC Ramakrishna Bajaj National Quality Award.
4. Malcolm Baldrige National Quality Award (MBNQA)
5. The Deming Prize

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COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BBAO503	DSE	Fundamentals of Quality Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

SUGGESTED READINGS

1. Basterfield, D.H., Basterfield, M. C., BasterfieldGlenH.,and Mary S., (2003). ***Total Quality Management,*** Pearson Education. NewDelhi.
2. Feigenbaum, A.V., (1983). ***Total Quality Control.***McGraw-Hill. New York.
3. Juran J., (1979). ***Quality Control Handbook***.McGraw-Hill. New York
4. Oakland, J.S. (2003). ***Total Quality Management Text with Cases***. Butterworth Heinmann. Oxford/New Delhi.
5. V.K., Ross, J.E., (1994). ***Principles of Total Quality.*** Lucie Press. Florida.

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BBA (Operations) V SEMESTER (2022-2026)

BBAO504 FUNDAMENTALS OF SIX SIGMA

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BBAO504	DSE	Fundamentals of Six Sigma	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVE

To equip students about the Principles of Six-Sigma Implementation and Improving Quality w.r.t Products and Services and to develop their functional expertise in Process Control, Process Improvement and Process Analysis.

EXAMINATION SCHEME

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of 5 questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

COURSE OUTCOMES

CO1 To understand the Six Sigma related functions and skills.
CO2 To know the about the process improvement using Six Sigma.
CO3 To measure and evaluate the process control techniques.
CO4 To identify the significance of six sigma implementation in an organization.
CO5 To acquaint the knowledge of design development using six sigma.

COURSE CONTENT

UNIT I: The Fundamentals of Six Sigma

1. The Evolution of Six Sigma
2. Qualities as a Business Performance
3. Principles of Six Sigma
4. Process Concept and Systems Thinking
5. Six Sigma in Service Organization

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BBAO504	DSE	Fundamentals of Six Sigma	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

UNIT II: Project Organization, Selection and Definition

1. Organizing For Six Sigma Projects- People Skills
2. Project Definition
3. Project Review
4. Process Measurement
5. Process Capability Evaluation- Benchmarking

UNIT III: Process Analysis and Process Improvement

1. Statistical Methods in Six Sigma
2. Tools for Process Analysis
3. Process Improvement
4. Tools for Process Improvement
5. Case Studies

UNIT IV: Process Control and **Design for Six Sigma**

1. Control Systems-Statistical Process Control
2. Design For Six Sigma
3. Concept Development
4. Concept Engineering
5. Design Development-Quality Function Deployment

UNIT V: Six Sigma Implementation

1. Six Sigma Implementation
2. Principles for Six Sigma Implementation
3. Project Management
4. Organizational Culture
5. Change Management

Choice Based Credit System (CBCS) in Light of NEP-2020

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BBAO504	DSE	Fundamentals of Six Sigma	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical: **C** - Credit; **DSE-** Discipline Specific Elective

*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

SUGGESTED READINGS

1. Antony, J., Kumar, A., and Bañuelas, R.,(2006). ***World class applications of Six Sigma***, Butterworth-Heinemann: Oxford.
2. Belair, G., and O' Neill, J., (2007). ***Implementing Design for Six Sigma: A leader's guide.*** Pearson Education. New Delhi
3. Evans, R. and Lindsay, W., (2005).***An Introduction to Six Sigma and Process Improvemen***t, Cengage Learning India Private Limited: New Delhi
4. Kumar, D., (2006). ***Six Sigma Best Practices: A Guide to Business Process Excellence for Diverse Industries***, J. Ross Publishing. India.
5. Pyzdek,T., and Keller, P., (2001). ***The Six Sigma Handbook***, McGraw-Hill: Delhi