Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav School of Management

Choice Based Credit System (CBCS) in Light of NEP-2020
BBA (IT) - 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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Shri Vaishnav School of Management

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

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 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.

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav School of Management

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BBA (IT) - V SEMESTER (2022-2026)

BBAIT502 CYBER SECURITY

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*				
BBAIT502	MAJ	Cyber Security	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

This course provides the foundation for understanding the key issues associated with protecting information assets. The purpose of the course is to provide the student with an overview of the field of information security and assurance.

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 five 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 Understand the broad set of technical, social & political aspects of Cyber Security.
CO2 Appreciate the vulnerabilities and threats posed by criminals, terrorist, and nation states to national infrastructure.
CO3 Understand the importance of ethical hacking tools.
CO4 Understanding the ethical hacking process. CO-8: Implementing ethical hacking tools in an organization.
CO5 Apply methods for authentication, access control, intrusion detection and prevention and conduct research in Cyber Security

COURSE CONTENT

UNIT I: Introduction

1. Introduction to Cyber Security.
2. Importance and challenges in Cyber Security.
3. Cyberspace, Cyber threats, Cyber warfare.
4. CIA Triad, Cyber Terrorism - Cyber Security of Critical Infrastructure.
5. Cyber security -Organizational Implications.

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav School of Management

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

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
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BBAIT502	MAJ	Cyber Security	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: Hackers and Cyber Crimes
1. Types of Hackers - Hackers and Crackers.
2. Cyber-Attacks and Vulnerabilities.
3. Malware threats - Sniffing - Gaining Access.
4. Escalating Privileges, Executing Applications.
5. Hiding Files - Covering Tracks, Worms, Trojans, Viruses, Backdoors

UNIT III: Ethical Hacking and Social Engineering
1. Ethical Hacking Concepts and Scopes.
2. Threats and Attack Vectors, Information Assurance, Threat Modeling.
3. Enterprise Information Security Architecture - Vulnerability Assessment and Penetration, Testing.
4. Types of Social Engineering.
5. Insider Attack - Preventing Insider Threats, Social Engineering Targets and Defense Strategies.

UNIT IV: Cyber Forensics and Auditing
1. Introduction to Cyber Forensics - Computer Equipment and associated storage media.
2. Role of forensics Investigator.
3. Forensics Investigation Process - Collecting Network based Evidence.
4. Writing Computer Forensics Reports.
5. Auditing - Plan an audit against a set of audit criteria.

UNIT V: CYBER ETHICS AND LAWS
1. Introduction to Cyber Laws.
2. E-Commerce and E-Governance.
3. Certifying Authority and Controller, Offence under IT Act.
4. Computer Offence and theirpenalties under IT Act 2000.
5. Intellectual Property Rights in Cyberspace.

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

BBA (IT) - V SEMESTER (2022-2026)

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*				
BBAIT502	MAJ	Cyber Security	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. Donaldson, S. E., Siegel, S. G., Williams, C. K., Aslam, A., Donaldson, S. E., Siegel, S. G., & Aslam, A. (2015). Managing an enterprise cybersecurity program. *Enterprise Cybersecurity: How to Build a Successful Cyberdefense Program Against Advanced Threats*, 243-262.

2. HoCybersecurity, E. How to Build a Successful Cyberdefense Program. *Scott Donaldson, Stanley Siegel, Chris K. Williams, Abdul Aslam-Google Libros.*

3. Godbole, Nina , Belapure, Sumit, (2020). Cyber Security. Willey Publication India.

4. Grimes, Roger . Hacking the Hacker (2021). Wiley Publication India.

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
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BBA (IT) - V SEMESTER (2022-2026)

BBAIT503 INFORMATION TECHNOLOGY TRENDS

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*				
BBAIT503	DSE	Information Technology Trends	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 familiarize students with the changes in technology, applications and systems

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 five 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 Understanding trends in Information Technology

COURSE CONTENT

UNIT I: Introduction
1. Basic concepts of modern communication and telephone technology: CDMA, WLL, GSM, VOIP, Bluetooth, Wi-fi
2. Communication technology: 2G, 3G, 4G, 5G
3. Communication over radio, microwave systems, Communication satellites, radar, fiber optics
4. Geographic Information System (GIS) and its Applications.

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*				
BBAIT503	DSE	Information Technology Trends	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: Information Security

1. Brief overview of Information Security, Malicious programs, cryptography, digital signature
2. Firewall, Security Awareness and Policies, Application areas requiring security
3. Mobile commerce, Technologies for Mobile commerce, M-commerce in India
4. Digital Marketing

UNIT III: Data Warehouse and Data Marts

1. Introduction of data warehouse and data marts
2. Dataware house components
3. Advantages of Data Ware House
4. Data Mining: Evolution, advantages, technologies used in data mining.

UNIT IV: Artificial Intelligence and Expert System

1. Concept of AI and Expert System
2. Merits and Demerits of Expert System
3. Applications of Artificial Intelligence
4. Applications of Expert System

UNIT V: Internet of Things (IoT)

1. Overview of IoT, characteristics of IoT, Functional Blocks of IoT
2. Home Automation
3. Industry applications, Surveillance and other IoT Applications
4. Introduction to Virtual Reality and Applications

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*				
BBAIT503	DSE	Information Technology Trends	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. Alex Leon and M. Leon (Latest Edition). *Fundamentals of Information Technology*. Vikas Publications. New Delhi.
2. Ravi Kalakota, Andrew B Whinson, Addison Wesley. *Frontiers of E-Commerce*. Longman Publication
3. SJPT Joseph (Latest Edition). *E-Commerce: An Indian Perspective*. Prentice Hall of India Pvt. Ltd.
4. C.P.P. Fleeger, S.L.P Fleeger, D.N. Shah and S. Ware (Latest Edition). *Security in Computing*. Prentice Hall.
5. Joschen Shiller (Latest Edition). *Mobile Communications*. Pearson Education.
6. Rao M.N.(Latest Edition). *Cloud Computing*. PHI
7. Raj Kamal (Latest Edition). *Internet of Things*. Tata McGraw Hill.
8. Arun K Pujari (Latest Edition). *Data Mining*. University Press
9. Elaine Rich, Keving Knight (Latest Edition). *Artificial Intelligence*. Tata McGraw Hill
10. Andrew S Tannenbaum. (Latest Edition). *Computer Networks*. Pearson Education

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BBAIT504 COMPUTER ORGANIZATION AND ARCHITECTURE

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*				
BBAIT504	DSE	Computer Organization and Architecture	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 familiarize students with the organization and architecture of computers

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 five 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 Understanding of design issues and concepts of organization and architecture.

COURSE CONTENT

UNIT I: Introduction

1. Brief overview of organization and architecture
2. Structure and Function
3. Designing for performance
4. Multicore, Many integrated core (MICs), and General-purpose computing on graphics processing units (GPGPUs)

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*				
BBAIT504	DSE	Computer Organization and Architecture	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: A Top-Level View of Computer Function and Interconnection

1. Computer components
2. Computer Function
3. Interconnection Structures
4. Bus Interconnection

UNIT III: Cache, Internal and External Memory

1. Computer Memory: Characteristics and Hierarchy
2. Cache Memory Principles
3. Internal Memory: RAM, ROM, PROM, EPROM, EEPROM, Flash Memory
4. External Memory: Magnetic Disk, Optical Memory, Magnetic Tape

UNIT IV: Input/ Output Modules

1. External Devices
2. I/O Modules
3. Programmed I/O
4. Interrupt driven I/O

UNIT V: Operating System Support

1. Overview of Operating System
2. Objectives and Functions of Operating System
3. Types of Operating System
4. Scheduling: Long-term, Medium-term, Short-term

SUGGESTED READINGS

1. Mano, M. M. (1993). *Computer system architecture*. Prentice-Hall, Inc..
2. Stallings, W. (2003). *Computer organization and architecture: designing for performance*. Pearson Education India.