AXIS INSTITUTE OF HIGHER EDUCATION – KN115

VALUE ADDED COURSE
SESSION: 2022-23

AXIS INSTITUTE OF HIGHER EDUCATION – KN115

Rooma Kanpur

VALUE ADDED COURSE
2023-24

SR.	COURSE CODE	COURSE NAME	DURATION
1	VACQAQC	Quality Control And Quality Assurance	45 Hours
2	VACSLWM	Solid Liquid Waste Management	30 Hours
3	VACHH	Holistic Health	40 Hours
4	VAC/BBA/22-23/01	Customer Relationship Management (CRM)	34 Hours
5	VAC/BBA/22-23/02	Data Analytics Certificate Program	30 Hours
6	VAC/BBA/22-23/03	Advanced Computing Strategies in Management	30 Hours
7	VAC/BCA/22-23/01	Microsoft Data Analyst Associate (DA-100) - Honeywell - Youth empowerment	100 Hours
8	VAC/BCA/22-23/02	Cloud computing	38 Hours
9	VAC/BCA/22-23/03	Computer career skills project and challenges	30 Hours

INTRODUCTION

The ever-changing global scenario makes the world more modest and needs high levels of lateral thinking and the spirit of entrepreneurship to cope up with the emergent challenges. Many a times, the defined skill sets that are being imparted to students today with Program Specific Objectives in educational institutions become redundant sooner or later due to rapid technological advancements. No university curriculum can adequately cover all areas of importance or relevance. It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

The main objectives of the Value-Added Course are:

✓ **To provide students an understanding of the expectations of industry.**

✓ **To improve employability skills of students.**

✓ **To bridge the skill gaps and make students industry ready.**

✓ **To provide an opportunity to students to develop inter-disciplinary skills.**

✓ **To mold students as job providers rather than job seekers.**

Course Designing The department interested in designing a Value-Added Course should undertake Training Need Analysis, discuss with the employers, alumni and industrial experts to identify the gaps and emerging trends before designing the syllabus.

CONDUCTION OF VALUE ADDED COURSES

Value Added Course is not mandatory to qualify for any program and the credits earned through the Value-Added Courses shall be over and above the total credit requirement prescribed in the curriculum for the award of the degree. It is a teacher assisted learning course open to all students without any additional fee. Classes for a VAC are conducted during the RESERVED Time Slot in a week on the regular class hours. The value-added courses may be also conducted during weekends / vacation period. Students will be encouraged to opt for the VAC offered by their Department. Industry Experts / Eminent Academicians from other Institutes are eligible to offer the value-added course. The course can be offered only if there are at least 5 students opting for it. The duration of value added course is of minimum 30 hours.

DURATION AND VENUE

❖ The duration of value-added course should not be less than 30 hours.

❖ The HOD of the Department shall provide class room/s based on the number of students/batches.

❖ VAC shall be conducted in the respective School itself.

GUIDELINES FOR CONDUCTING VALUE ADDED COURSES

❖ Value Added Course is not mandatory to qualify for any program.

❖ It is a instructor supported learning course open to all students without any added fee.

❖ The value-added courses may be also conducted during weekends / vacation period if required.

❖ Each faculty member in charge of a course is responsible for maintaining Attendance and Assessment Records for candidates who have registered for the course.

❖ The Record must include information about the students' attendance and Assignments, seminars, and other activities that were carried out.

❖ The record shall be signed by the Course Instructor and the Head of the Department at the end of the semester and kept in safe custody for future verification.

❖ Each student must have a minimum of 75% attendance in all courses for the semester in order to be eligible to take certificate.

❖ Attendance requirements may be relaxed by up to 10% for valid reasons such as illness, representing the University in extracurricular activities, and participation in NCC.

❖ The students who have successfully completed the Value Added Course shall be issued with a Certificate duly signed by the Authorized signatories.

- **QUALITY CONTROL AND QUALITY ASSURANCE**

(COURSE CODE : VACQAQC)

Course Objective:
1. To ensure that products are as uniform as possible
2. To minimize errors and inconsistencies within them.

Course Outcomes:

The aim is to enhance product quality and reduce risks, gain production efficiencies,and garner customer loyalty.

Courses contents:
1. Sample Inspection:
2. Testing: Statistical Process Control (SPC)
3. Documentation and Records:
4. Corrective Action
5. Training and Education
6. Continuous Improvement
7. Meeting agreed customer requirements for delivery within the timeframesstipulated within the established Service Pathway.
8. Meeting regularity and any other requirements for service realization – inaccordance with established SOPs, policies, processes, and legislation.
9. To enable internal and external parties – including accreditation bodies toassess the organizations ability to meet requirements.
10. Identifying opportunities for improvement (OFI's) through quality controland evaluation
11. Minimizing the impact and consequence of poor quality.

List of reference books:
1. Handbook on Quality Assurance & Quality Control in Construction by Jude D'Silva.
2. A Text Book of Quality Control And Quality Assurance by Deepanti, Ashish, Rageeb, Dilpreet

- **SOLID LIQUID WASTE MANAGEMENT**

(COURSE CODE : VACSLWM)

Course Objective:
1. To reduce the environmental and health hazards that arise from indiscriminate dumping of waste and pollution of natural resources like the land, sea, and air.

Course Outcomes:

The aim of bringing improvements in cleanliness, hygiene, and the general qualityof life.

Courses contents:
1. Classification of waste
2. Study different types of waste
3. Waste collection and disposal
4. Liquid waste
5. Visit to collection area
6. Other type of waste, collection and management

List of reference books:
1. Solid and Liquid Waste Management Waste To Wealth By Rajaram
2. A text book of Solid waste management- by Iqbal H. Khan

HOLISTIC HEALTH
(COURSE CODE : VACHH)

The aim of the course is to introduce the students to different health aspects, valuesand attitudes to lead a healthy and fulfilled life.

Objectives:
1. Introduce students to the concepts of Holistic health and wellness.
2. Provide understanding of physical, mental, emotional, social and spiritualwellbeing.
3. Integrate healthy life styles for holistic health aspects.

Courses contents:
1. PHYSICAL HEALTH: Introduction to physical, mental, emotional, social andspiritual health, understanding human physique, Diet and nutrition, Significance of yoga and exercise.

2. MENTAL HEALTH: Causes of mental stress and means to overcome it, Scienceof Sleep for mental fitness, Anger and anxiety management.

3. EMOTIONAL HEALTH: Emotional Quotient, Emotional health Vs Mentalhealth, Habits to boost emotional well-being, Psychological insights.

4. SOCIAL HEALTH: Concept of social health, Social determinants of health, inter-personal relationships, Society and Lifestyles.

5. SPIRITUAL HEALTH: Meaning of Spiritual health, Types of spirituality,difference between spirituality and religion, Impact of spirituality on health.

List of reference books:
1. A Practical guide to holistic health by Karen Glanz, Barbara K. Rimer, K. Viswanath by RamaSwami
2. Theoretical Foundations of Health Education and Health Promotion - by ManojSharma

<div align="center">**Customer Relationship Management (CRM)**</div>

(COURSE CODE : VAC/BBA/22-23/01 **)**

Course Objective:
This course aims to provide students with a comprehensive understanding of Customer Relationship Management (CRM) and its importance in modern business. The course will cover the strategies, tools, and technologies used to manage and analyze customer interactions and data, with the goal of improving business relationships, customer retention, and driving sales growth.

Course Outcomes:
By the end of this course, students will be able to:
1. Understand the fundamental concepts and importance of CRM in business.

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2. Utilize CRM tools and software to manage customer data and interactions.
3. Develop strategies to improve customer satisfaction and retention.
4. Analyze customer data to gain insights into customer behavior and preferences.
5. Implement CRM strategies to enhance sales and customer loyalty.

- **Module 1: Introduction to CRM (8 Hours)**
    1. Lecture 1: Overview of CRM: Definition and Importance
    2. Lecture 2: Evolution of CRM: Traditional vs. Modern Approaches
    3. Lecture 3: Components of CRM: People, Processes, and Technology
    4. Lecture 4: CRM Strategy: Aligning CRM with Business Goals
    5. Lecture 5: Customer Data Management: Importance and Techniques
    6. Lecture 6: Workshop: Understanding CRM Systems and Tools
    7. Lecture 7: Case Studies: Successful CRM Implementations
    8. Lecture 8: Analysis: Evaluating CRM Effectiveness in Organizations
- **Module 2: CRM Tools and Technologies (8 Hours)**
    1. Lecture 1: CRM Software: Overview and Key Features
    2. Lecture 2: Using CRM for Sales Management: Techniques and Best Practices
    3. Lecture 3: Marketing Automation and CRM: Integration and Benefits
    4. Lecture 4: CRM in Customer Service: Enhancing Customer Support
    5. Lecture 5: Data Analytics in CRM: Leveraging Data for Better Decisions
    6. Lecture 6: Workshop: Popular CRM tools
    7. Lecture 7: Case Studies: Impact of CRM on Sales and Marketing
    8. Lecture 8: Project: Developing a CRM Strategy for a Business Scenario
- **Module 3: Customer Satisfaction and Retention (8 Hours)**
    1. Lecture 1: Understanding Customer Needs and Expectations
    2. Lecture 2: Measuring Customer Satisfaction: Techniques and Tools
    3. Lecture 3: Strategies for Enhancing Customer Satisfaction
    4. Lecture 4: Building Customer Loyalty: Programs and Practices
    5. Lecture 5: Managing Customer Complaints and Feedback

6. Lecture 6: Workshop: Designing a Customer Loyalty Program
7. Lecture 7: Case Studies: Successful Customer Retention Strategies
8. Lecture 8: Project: Developing a Customer Retention Plan

- **Module 4: Advanced CRM Strategies (8 Hours)**
    1. Lecture 1: CRM and Digital Transformation: Trends and Innovations
    2. Lecture 2: Personalization in CRM: Techniques and Technologies
    3. Lecture 3: Integrating Multiple Customer Touchpoints
    4. Lecture 4: Ethical Issues in CRM: Data Privacy and Security
    5. Lecture 5: Future of CRM
    6. Lecture 6: Workshop: Implementing Advanced CRM Strategies
    7. Lecture 7: Case Studies: Innovative CRM Practices
    8. Lecture 8: Course Key takeaways and Final Review

Data Analytics Certificate Program
(COURSE CODE : VAC/BBA/22-23/02 **)**

Course Objective:
The objective of this course is to introduce students to the fundamental concepts and tools of data analytics. Students will learn how to collect, analyze, and interpret data to make informed business decisions. The course covers statistical analysis, data visualization, and the use of data analytics tools to drive business strategies.

Course Outcomes:
By the end of this course, students will be able to:
1. Understand the key concepts and processes of data analytics.
2. Use statistical methods to analyze business data.
3. Develop data visualizations to communicate insights effectively.
4. Apply data analytics tools to solve business problems.
5. Interpret and present data-driven business recommendations.

- **Module 1: Introduction to Data Analytics (8 Hours)**
    1. Lecture 1: What is Data Analytics? Overview and Importance
    2. Lecture 2: Types of Data: Structured, Unstructured, and Semi-Structured
    3. Lecture 3: The Data Analytics Process: From Data Collection to Decision-Making
    4. Lecture 4: Tools and Technologies in Data Analytics
    5. Lecture 5: Workshop: Introduction to Excel and Basic Data Functions
    6. Lecture 6: Case Studies: Successful Data-Driven Decision-Making
    7. Lecture 7: Data Collection Techniques: Surveys, Experiments, and Observations
    8. Lecture 8: Ethical Considerations in Data Analytics
- **Module 2: Statistical Analysis and Data Interpretation (10 Hours)**
    1. Lecture 1: Descriptive Statistics: Mean, Median, Mode, and Standard Deviation
    2. Lecture 2: Inferential Statistics: Hypothesis Testing and Confidence Intervals
    3. Lecture 3: Regression Analysis: Linear and Multiple Regression
    4. Lecture 4: Correlation vs. Causation: Understanding Relationships in Data
    5. Lecture 5: Probability Distributions and Their Applications
    6. Lecture 6: Workshop: Performing Statistical Analysis Using Excel
    7. Lecture 7: Case Studies: Statistical Analysis in Business
    8. Lecture 8-10: Project: Analyzing a Business Dataset and Presenting Findings
- **Module 3: Data Visualization and Business Intelligence (5 Hours)**
    1. Lecture 1: Introduction to Data Visualization: Importance and Techniques
    2. Lecture 2: Tools for Data Visualization: Tableau, Power BI, and Excel
    3. Lecture 3: Designing Effective Dashboards: Principles and Practices
    4. Lecture 4: Storytelling with Data: Communicating Insights Effectively
    5. Lecture 5: Case Studies: Impact of Data Visualization on Business Decisions
- **Module 4: Advanced Data Analytics Techniques (8 Hours)**
    1. Lecture 1: Predictive Analytics: Techniques and Applications
    2. Lecture 2: Introduction to Machine Learning for Data Analytics
    3. Lecture 3: Clustering and Classification: Understanding Customer Segmentation
    4. Lecture 4: Time Series Analysis: Forecasting Business Trends

5. Lecture 5: Data Analytics Project: Solving a Real-World Business Problem
6. Lecture 6: Course Key takeaways and Final Review

Advanced Computing Strategies in Management
(COURSE CODE : VAC/BBA/22-23/03 **)**

Course Objective:
This course is designed to equip students with advanced computing strategies and tools
necessary for modern business management. The course focuses on the application of computing
technologies in management processes, including enterprise resource planning (ERP), business
process management (BPM), and the use of artificial intelligence (AI) in decision-making.
Course Outcomes:
By the end of this course, students will be able to:
1. Understand the role of advanced computing in business management.
2. Implement ERP systems to improve business efficiency.
3. Utilize BPM tools to optimize business processes.
4. Apply AI techniques to enhance decision-making.
5. Develop strategies for integrating advanced computing into management practices.

- **Module 1: Computing Technologies in Business (10 Hours)**
    1. Lecture 1: Overview of Computing in Business: Historical Perspective and
       Current Trends
    2. Lecture 2: Understanding Enterprise Resource Planning (ERP) Systems
    3. Lecture 3: Business Process Management (BPM): Concepts and Tools
    4. Lecture 4: Role of Cloud Computing in Business Operations
    5. Lecture 5: Workshop: Introduction to ERP Systems
    6. Lecture 6: Case Studies: ERP Implementations in Large Organizations
    7. Lecture 7: Impact on Business Models
    8. Lecture 8-10: Ethical Issues in Computing: Data Privacy and Security Concerns
- **Module 2: Artificial Intelligence and Machine Learning in Management (8 Hours)**
    1. Lecture 1: Introduction to Artificial Intelligence (AI) in Business
    2. Lecture 2: Machine Learning: Concepts and Business Applications
    3. Lecture 3: AI for Decision-Making: Techniques and Tools
    4. Lecture 4: Implementing AI in Business: Challenges and Opportunities
    5. Lecture 5: Workshop: Applying AI Techniques in Management Scenarios
    6. Lecture 6: Case Studies: Successful AI Implementations in Business
    7. Lecture 7: Understanding Machine Learning Models: Regression, Classification,
       and Clustering
    8. Lecture 8: Applications in Business Strategy
- **Module 3: Advanced Computing Strategies for Business Optimization (12 Hours)**
    1. Lecture 1: Business Intelligence and Analytics: Role in Strategic Management
    2. Lecture 2: Integrating AI for Enhanced Business Insights
    3. Lecture 3: Advanced Data Management Techniques: Big Data, Data
       Warehousing, and Data Mining
    4. Lecture 4: Business Process Optimization with Advanced Computing Tools
    5. Lecture 5: Workshop: Optimizing Business Processes with BPM Tools
    6. Lecture 6: Case Studies: Business Process Reengineering Using Computing
       Strategies

7. Lecture 7: Implementing Advanced Computing Strategies: Best Practices
8. Lecture 8: Workshop: Developing a Strategy for Implementing Advanced Computing in a Business Context

Microsoft Data Analyst Associate (DA-100) - Honeywell - Youth Empowerment
(COURSE CODE : VAC/BCA/22-23/01 **)**

Overview:
This course provides students with the knowledge and skills required to become a Data Analyst. It covers data preparation, modeling, visualization, and analysis using Microsoft tools. The course also focuses on empowering youth with essential data analytics skills through Honeywell's youth empowerment initiatives.

Course module – As provided by training partner

Cloud Computing
 (COURSE CODE : VAC/BCA/22-23/02 **)**

Course Objective:
- To provide a comprehensive understanding of cloud computing concepts and models.
- To familiarize students with leading cloud platforms and their services.
- To equip students with practical skills in deploying and managing cloud-based applications.

Course Outcomes:
- Students will understand the core concepts of cloud computing and its various models.
- Students will gain hands-on experience with cloud platforms like AWS, Azure, or Google Cloud.
- Students will be able to design, deploy, and manage cloud-based applications.
- Students will develop a solid understanding of cloud security, compliance, and best practices.
- Students will be prepared to pursue further certifications or careers in cloud computing.

Module 1: Introduction to Cloud Computing
- Overview of cloud computing: Definition and characteristics
- History and evolution of cloud computing
- Benefits and challenges of cloud adoption
- Cloud service models: IaaS, PaaS, SaaS
- Cloud deployment models: Public, Private, Hybrid, and Community Cloud

Module 2: Cloud Computing Architecture and Infrastructure
- Core components of cloud infrastructure
- Virtualization technologies and their role in cloud computing
- Cloud storage solutions: Object storage, Block storage, and File storage
- Networking in the cloud: Virtual Private Cloud (VPC) and Load Balancing
- Introduction to data centers and cloud resource management

Module 3: Exploring Leading Cloud Platforms
- Overview of Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP)
- Key services offered by AWS, Azure, and GCP
- Hands-on experience: Setting up a basic environment in AWS/Azure/GCP
- Comparison of cloud platforms: Strengths, weaknesses, and use cases
- Cost management and pricing models for cloud services

Module 4: Cloud Security and Compliance
- Importance of security in cloud computing
- Cloud security challenges and best practices
- Identity and Access Management (IAM) in the cloud
- Encryption, data protection, and compliance standards (e.g., GDPR, HIPAA)
- Disaster recovery and business continuity in cloud environments

Module 5: Cloud Application Development and Deployment
- Cloud-native application development: Concepts and best practices
- Microservices architecture and containerization with Docker
- Deploying applications using Kubernetes and Docker Swarm
- Serverless computing: AWS Lambda, Azure Functions, and Google Cloud Functions
- Continuous Integration/Continuous Deployment (CI/CD) in the cloud

Module 6: Managing and Monitoring Cloud Services
- Cloud resource management and optimization techniques
- Monitoring tools and services for cloud environments (e.g., CloudWatch, Azure Monitor)
- Performance tuning and auto-scaling strategies
- Troubleshooting common issues in cloud deployments

- Hands-on lab: Monitoring and managing cloud applications

Module 7: Emerging Trends and Future of Cloud Computing
- Edge computing and its integration with cloud services
- AI and Machine Learning in the cloud
- IoT and cloud computing
- Cloud computing in 5G and beyond
- Future trends and the evolving landscape of cloud computing

Computer Career Skills Project and Challenges
(COURSE CODE : VAC/BCA/22-23/03 **)**

Overview:
This course offers a hands-on approach to developing essential computer career skills. Students engage in beginner-level projects and challenges provided by Oracle, gaining practical experience in various computing domains. The course aims to build a strong foundation for a successful career in the IT industry.

Course module – As provided by training partner

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