Agribusiness & Management, B.Sc. AM, 6 semesters

Semester 1:

Module Name	Module Code	Teaching Hours	Credits
Introduction to Agribusiness	AM101	45	3
Principles of Agricultural Economics	AM102	60	4
Crop Science	AM103	45	3
Introduction to Management	AM104	45	3
Communication Skills in Agriculture	AM105	30	2
Basic Accounting for Agribusiness	AM106	45	3

Semester 2:

Module Name	Module Code	Teaching Hours	Credits
Agricultural Marketing	AM201	45	3
Farm Management	AM202	60	4
Livestock Management	AM203	45	3
Financial Management in Agribusiness	AM204	45	3
Agricultural Policy and Regulations	AM205	45	3
Agribusiness Information Systems	AM206	45	3

Semester 3:

Module Name	Module Code	Teaching Hours	Credits
Agribusiness Supply Chain Management	AM301	60	4
Agricultural Finance	AM302	45	3
Environmental Sustainability in Agribusiness	AM303	45	3
Agribusiness Entrepreneurship	AM304	45	3
Agricultural Extension and Communication	AM305	45	3
Elective 1	AM306	45	3

Semester 4:

Module Name	Module Code	Teaching Hours	Credits
Agribusiness Risk Management	AM401	60	4
Agricultural Policy Analysis	AM402	45	3
Horticulture Management	AM403	45	3
Supply Chain Logistics in Agribusiness	AM404	45	3
Advanced Agricultural Marketing	AM405	60	4
Elective 2	AM406	45	3

Semester 5:

Module Name	Module Code	Teaching Hours	Credits
Agribusiness Information Technology	AM501	60	4
International Agribusiness	AM502	45	3
Agribusiness Ethics and Social Responsibility	AM503	30	2
Rural Development Economics	AM504	45	3
Agribusiness Research Methods	AM505	45	3
Elective 3	AM506	45	3

Semester 6:

Module Name	Module Code	Teaching Hours	Credits
Agribusiness Innovation and Technology	AM601	60	4
Agricultural Project Management	AM602	45	3
Capstone Project	AM603	90	6
Agribusiness Leadership and Management	AM604	45	3
Elective 4	AM605	45	3
Elective 5	AM606	45	3

Elective Modules:
1. AM306 - Organic Farming Practices
2. AM406 - Agricultural Biotechnology
3. AM506 - Sustainable Agribusiness Practices
4. AM605 - Agribusiness Risk Analysis
5. AM606 - Food and Agribusiness Marketing

Module outline with topics for each module in the Bachelor of Science in Agribusiness & Management (B.Sc. AM) program:

Module Outline:

Module 1: Introduction to Agribusiness (AM101)
1. Definition and Scope of Agribusiness
2. Key Components of Agribusiness
3. Overview of Global Agricultural Systems
4. Agribusiness Management Models
5. Importance of Agribusiness in the Economy
6. Historical Development of Agribusiness

Module 2: Principles of Agricultural Economics (AM102)
1. Fundamental Economic Concepts in Agriculture
2. Supply and Demand Analysis in Agriculture
3. Agricultural Price Determination
4. Farm Profitability and Efficiency
5. Economic Decision-making in Farming
6. Market Structures in Agriculture

Module 3: Crop Science (AM103)
1. Basics of Crop Production
2. Soil Management and Fertility
3. Crop Protection and Pest Management
4. Crop Physiology and Growth
5. Sustainable Agricultural Practices
6. Emerging Trends in Crop Science

Module 4: Introduction to Management (AM104)
1. Basics of Management Theory
2. Functions of Management (Planning, Organizing, Leading, Controlling)
3. Management Styles and Approaches
4. Team Building and Leadership
5. Decision-making in Agribusiness
6. Management Challenges in Agriculture

Module 5: Communication Skills in Agriculture (AM105)
1. Effective Written Communication in Agribusiness
2. Oral Communication and Presentation Skills
3. Communication Strategies for Agricultural Extension
4. Interpersonal Communication in Agriculture
5. Communication Technology in Agribusiness
6. Stakeholder Engagement in Agriculture

Module 6: Basic Accounting for Agribusiness (AM106)
1. Fundamentals of Financial Accounting
2. Agricultural Financial Statements
3. Budgeting in Agribusiness
4. Cost Accounting in Agriculture
5. Financial Analysis and Reporting
6. Financial Decision-making in Agribusiness

The pattern continues for subsequent modules.

Module 7: Agricultural Marketing (AM201)

1. Marketing Principles in Agriculture
2. Market Research in Agribusiness
3. Agribusiness Branding and Promotion
4. Distribution Channels in Agriculture
5. Pricing Strategies in Agribusiness
6. E-Marketing in Agriculture

Module 8: Farm Management (AM202)

1. Planning and Decision-making on the Farm
2. Farm Records and Bookkeeping
3. Farm Business Analysis
4. Farm Resource Allocation
5. Sustainable Farm Practices
6. Precision Farming Technologies

Module 9: Livestock Management (AM203)
1. Principles of Livestock Farming
2. Animal Nutrition and Health
3. Genetics and Breeding in Livestock
4. Livestock Marketing and Value Chain
5. Sustainable Livestock Production
6. Emerging Trends in Livestock Management

The pattern continues for the subsequent semesters and modules.

Module 10: Agribusiness Supply Chain Management (AM301)
1. Supply Chain Concepts in Agribusiness
2. Logistics and Transportation in Agriculture
3. Inventory Management in Agribusiness
4. Risk Management in Agribusiness Supply Chains
5. Quality Control and Assurance in Agribusiness
6. Sustainable Supply Chain Practices

Module 11: Agricultural Finance (AM302)

1. Financial Management Principles in Agriculture
2. Sources of Agricultural Finance
3. Credit and Risk Management in Agribusiness
4. Investment Analysis in Agriculture
5. Financial Planning for Farms
6. Government Policies and Agricultural Finance

Module 12: Environmental Sustainability in Agribusiness (AM303)
1. Sustainable Agriculture Practices
2. Environmental Impact Assessment in Agribusiness
3. Conservation Agriculture
4. Organic Farming and Certification
5. Agroecology and Biodiversity
6. Climate Change Adaptation in Agribusiness

The pattern continues for the elective modules.

Elective Modules (e.g., AM306 - Organic Farming Practices):
1. AM306 - Organic Farming Practices
2. AM406 - Agricultural Biotechnology
3. AM506 - Sustainable Agribusiness Practices
4. AM605 - Agribusiness Risk Analysis
5. AM606 - Food and Agribusiness Marketing

Special Optional Module: AI in Agribusiness & Management

(1) How AI can be applied in this course:

In the "AI in Agribusiness & Management" module, students will explore the applications of Artificial Intelligence (AI) in optimizing agricultural processes, supply chain management, decision-making, and sustainability. The module may cover the following areas:

Precision Agriculture with AI:

- Introduction to AI-driven technologies for precision farming.
- Applications of AI in crop monitoring, yield prediction, and resource optimization.

Supply Chain Optimization:

- Utilizing AI algorithms for improving efficiency in agribusiness supply chains.
- Case studies on AI applications in logistics, inventory management, and distribution.

Smart Farming and IoT Integration:

- Integration of AI with Internet of Things (IoT) for real-time monitoring of agricultural operations.
- Hands-on experience with AI-powered sensors and devices in smart farming.

Predictive Analytics in Agribusiness:

- Application of AI for predicting market trends, commodity prices, and demand for agricultural products.
- Using predictive analytics for better decision-making in agribusiness.

AI in Livestock Management:

- Applications of AI in monitoring livestock health, optimizing feeding practices, and improving breeding strategies.
- Case studies on AI-driven technologies for efficient livestock management.

- **Environmental Impact Assessment with AI:**

  - AI-based tools for assessing the environmental impact of agricultural practices.
  - Implementing AI in sustainable agriculture to minimize ecological footprints.

(2) Advantages of applying AI in this course:

Increased Agricultural Productivity:

- AI-driven precision agriculture enhances productivity by optimizing resource use and improving crop management.

Efficient Supply Chain Management:

- AI improves the efficiency of agribusiness supply chains, reducing wastage, and ensuring timely delivery of products.

Data-Driven Decision Making:

- AI provides data-driven insights, enabling informed decision-making in agribusiness operations and management.

Enhanced Sustainability Practices:

- AI supports sustainable agriculture by optimizing resource utilization, reducing environmental impact, and promoting eco-friendly practices.

Livestock Health Monitoring:

- AI applications in livestock management contribute to early detection of health issues, leading to improved overall animal welfare.

Market Predictions and Risk Mitigation:

- AI helps in predicting market trends and commodity prices, allowing agribusinesses to make strategic decisions and mitigate risks.

Innovation in Agribusiness Practices:

- Exposure to AI fosters innovation, encouraging students to explore and implement cutting-edge technologies in agribusiness.

Competitive Advantage:

- Graduates with AI skills have a competitive edge in the agribusiness sector, as industries increasingly adopt smart and technology-driven practices.

By integrating AI into the Agribusiness & Management curriculum, students gain a comprehensive understanding of how advanced technologies can revolutionize traditional agricultural practices and contribute to sustainable and efficient agribusiness operations. This knowledge prepares them for the evolving landscape of agriculture, where technology plays a pivotal role in addressing global challenges.