



In Partnership With Diversity Learning Institute-DLI & Twikatane e.V Vermany

Master's Degree Course: General Agriculture & Entrepreneurship, M.A. GAE

Modules distribution: 85% General Agriculture & 15% Entrepreneurship

Course Duration: 12 months(1 year) 2 semesters(Total Credits = 60)

(A) Modules Outline:

Module Name	Module Code	Teaching Hours	Credits
Semester 1 Modules (General Agriculture)			
Crop Science	GAE 601	30 hours	10
- Crop Physiology and Growth	-	10 hours	-
- Crop Production Techniques	-	10 hours	-
- Pest and Disease Management	-	10 hours	-
Soil Management and Conservation	GAE 603	30 hours	10
- Soil Fertility and Nutrient Management	-	10 hours	-
- Erosion Control and Conservation Practices	-	10 hours	-
- Sustainable Agriculture	-	10 hours	-
Agricultural Economics and Policy	GAE 605	30 hours	10
- Economic Principles in Agriculture	-	10 hours	-
- Farm Management and Decision Analysis	-	10 hours	-
- Agricultural Policy and Development	-	10 hours	-
Semester 2 Modules (General Agriculture)			
Livestock Management	GAE 602	30 hours	10
- Animal Husbandry and Nutrition	-	10 hours	-
- Livestock Health and Disease Management	-	10 hours	-
- Sustainable Livestock Farming	-	10 hours	-
Crop Protection and Pest Management	GAE 604	30 hours	10
- Integrated Pest Management	-	10 hours	-
- Biotechnology in Crop Protection	-	10 hours	-
- Organic Farming and Pest Control	-	10 hours	-
Agricultural Entrepreneurship	GAE 606	30 hours	10
- Business Planning in Agriculture	-	10 hours	-
- Marketing Strategies for Agribusiness	-	10 hours	-
- Financing and Risk Management in Agriculture	-	10 hours	-

(B) How Artificial Intelligence (AI) Can Be Applied in This Course:

1. Precision Agriculture:

- Implementing AI-based precision agriculture for optimized resource management, including precise application of water, fertilizers, and pesticides.

2. Smart Livestock Management:

- Utilizing AI in livestock monitoring for health tracking, feeding optimization, and overall herd management.

3. Predictive Analytics for Crop Protection:

- Applying AI models to predict and prevent crop diseases, optimizing pest management strategies, and reducing the use of chemical interventions.

4. Market Analysis and Agricultural Entrepreneurship:

- Integrating AI-driven market analysis tools to identify trends, assess demand, and formulate effective strategies for agricultural entrepreneurship.

5. Financial Decision Support:

- Using AI for financial modeling and decision support in agriculture, including risk assessment, budget optimization, and investment analysis.

6. Supply Chain Optimization:

- Implementing AI in the agricultural supply chain for efficient inventory management, logistics optimization, and timely delivery of agricultural products.

By incorporating AI into the General Agriculture & Entrepreneurship course, students can gain practical insights into how advanced technologies can enhance agricultural productivity and support entrepreneurial ventures in the agriculture sector.