

**ANDHRA UNIVERSITY
VISAKHAPATNAM**

**SYLLABUS OF
B. Vocational Course**

AGRICULTURE

**UGC- NATIONAL SKILLS
QUALIFICATIONS
FRAMEWORK**

2020-21

ADMITTED BATCH

1ST YEAR	I SEM	1.	English (language)	3+0=3
		2.	Telugu (language)	3+0=3
		3.	Human Values and Professional Ethics (Skill development)	2+0=2
		4.	Plant Nursery (Skill development)	2+0=2
		5.	Introduction to Agronomy (Core subject)	4+2=6
		6.	Introduction to Soil science (Core subject)	4+2=6
		7.	Fundamentals of Genetics (Core subject)	4+2=6
	Credits=22+6= 28			
	II SEM	1.	English (language)	3+0=3
		2.	Inorganic Chemistry (General education)	3+0=3
		3.	Information & Communication Technology (Skill development)	2+0=2
		4.	Fruits and Vegetables Preservation (Skill development)	2+0=2
		5.	Agriculture Marketing (Skill development)	2+0=2
		6.	Introduction to Entomology (Core subject)	4+2=6
		7.	Introduction to Plant Pathology (Core subject)	4+2=6
8.		Introduction to Plant Breeding (Core subject)	4+2=6	
Credits=24+6=30				
2ND YEAR	III SEM	1.	English (Language)	3+0=3
		2.	Organic Chemistry (General education)	3+0=3
		3.	Health & Hygiene (Skill development)	2+0=2
		4.	Environmental Education (Skill development)	2+0=2
		5.	Disaster Management Skill development)	2+0=2
		6.	Agronomy of Field Crops (Core subject)	4+2=6
		7.	Pests of Field Crops & their Management (Core subject)	4+2=6
		8.	Manures, Fertilizers & Soil Fertility Management (Core subject)	4+2=6
	Credits 24+6=30			
	IV SEM	1.	Physical Chemistry (General education)	3+0=3
		2.	Principles of Organic Farming (Core subject)	4+2=6
		3.	Weed & Water Management (Core subject)	4+2=6
		4.	Fungicides & Plant disease Management (Core subject)	4+2=6
		5.	Farm power & Machinery (Core subject)	4+2=6
		6.	Rain fed Agriculture & Water shed Management (Core subject)	4+2=6
Credits 23+10=33				
3RD YEAR	V SEM	1.	Environmental Chemistry (General education)	3+0=3
		2.	Fundamentals of Crop Physiology (Core subject)	4+2=6
		3.	Principles of Seed Technology (Core subject)	4+2=6
		4.	Horticulture (Core subject)	4+2=6
		5.	Introduction to Agricultural Economics and Farm Management (Core subject)	4+2=6
		6.	Project work (Field work)	0+4=4
	Credits 19+12=31			
	VI SEM	1.	Production Technology for Vegetables & Spices (Core subject)	4+2=6
		2.	Pests of Horticultural Crops & Productive Entomology (Core subject)	4+2=6
		3.	Breeding of Field Crops (Core subject)	4+2=6
		4.	Production Technology of Ornamental Crops, Medicinal & Aromatic Plants (Core subject)	4+2=6
5.		Project Work (Field work)	0+4=4	
Credits 16+12=28				
TOTAL CREDITS 128+52= 180				

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B. Vocational course
AGRICULTURE
2020-21 Admitted Batch
II Year – Semester IV
PRINCIPLES OF ORGANIC FARMING
(CREDITS 4+2=6)

UNIT - I

- Organic farming – definition – need – scope – principles – characteristics - relevance to modern agriculture.
- Different eco friendly farming systems- biological farming, natural farming, regenerative agriculture – permaculture - biodynamic farming.
- Relevance of organic farming to A.P, India, and global agriculture and future prospects- advantages - barriers.

UNIT - II

- Initiatives taken by the central and state governments, NGOs and other organizations for promotion of organic agriculture in India.
- Organic nutrient sources and their fortification – organic manures- methods of composting
- Green manures- bio fertilisers – types, methods of application – benefits and limitations.

UNIT - III

- Nutrient use in organic farming-scope and limitations.
- Nutrient management in organic farming.
- Organic ecosystem and their concepts.
- Choice of crops and varieties in organic farming – crop rotations – need and benefits – multiple cropping.

UNIT - IV

- Fundamentals of insect, disease and weed management under organic mode of production- cultural- biological methods-non chemical pest and disease management.
- Botanicals- pyrethrum, neem seed kernel extract, neem seed powder, soluble neem formulations, neem oil.
- Operational structure of NPOP – other agencies for organic production.

UNIT - V

- Inspection – certification - labelling and accreditation procedures for organic products.
- Processing, - economic consideration and viability.
- Marketing and export potential of organic products – national economy.

PRINCIPLES OF ORGANIC FARMING (PRACTICAL)

1. Visit to organic farm to study the various components, identification and utilisation of organic products.
2. Compost making- aerobic and anaerobic methods
3. Vermicompost preparation
4. Preparation of enriched farm yard manure
5. Visit to organic clusters and bio control lab to study the maintenance of bio-fertilizers/bio-inoculant cultures
6. Biological nitrogen fixers.
7. Methods of application of Bio-pesticides (Trichocards, BT, NPV)
8. Preparation of neem products and other botanicals for pest and disease control
9. Preparation of green pesticides (panchagavya, beezamrutam, jeevamrutam, ghanajeevamrutam, dravajeevamrutam).
10. Different methods of biofertiliser applications.
11. Quality analysis of biofertilisers/bioinoculants and compost
12. Case studies of Indigenous Technical knowledge e (ITK) for nutrient , insect, pest, disease and weed management
13. Economic analysis of organic production system
14. Study of post harvest management in organic farming
15. Study of quality parameters of organic produce
16. Visit to organic farms to study the various components and their utilization

References

1. Arun K. Sharma. 2002. A Hand book of organic farming. Agrobios, India. 627p.
2. Palaniappan, S.P and Annadurai, K.1999. Organic farming-Theory and Practice. Scientific publishers, Jodhpur,India. 257p.
3. Mukund Joshi and Prabhakarasetty, T.K. 2006. Sustainability through organic farming. Kalyani publishers, New Delhi. 349p.
4. Balasubramanian, R., Balakishnan, K and Siva Subramanian, K. 2013. Principles and practices of organic farming. Satish Serial Publishing House. 453p
5. Tarafdar, J.C., Tripathi, K.P and Mahesh Kumar, 2009. Organic agriculture. Scientific Publishers, India. 369p.
6. Tiwari, V.N., Gupta, D.K., Maloo, S.R and Somani, L.L. 2010. Natural, organic, biological, ecological and biodynamic farming. Agrotech Publishing Academy, Udaipur. 420p.
7. Dushyent Gehlot. 2005. Organic farming- standards, accreditation, certification and inspection. Agrobios, India. 357p