



ANDHRA KESARI UNIVERSITY

B. VOCATIONAL COURSE

CURRICULAR FRAMEWORK B.Voc HONOURS Horticulture FROM THE A.Y. 2025-26 batch (Major + Minor with CSP & VI Semester Internship)

1st Year - Semester I

Sl.No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major-Core(Fundamentals of Horticulture and Soil Science)	I	3	2	5	3	1	4
2	Major - Core(Plant Propagation and Nursery Management)	II	3	2	5	3	1	4
3	AECC - English	I	4	0	4	3	0	3
4	AECC - MIL (Telugu/Hindi/Sanskrit)	I	4	0	4	3	0	3
5	Skill Enhancement Course (SEC) Intro' to Artificial Intelligence	I	4	2 (Practice)	6	4	0	4
End of Semester I of 1st Year		5	18	6	24	16	2	18

1st Year - Semester II

Sl.No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major - Core (Basics of Vegetable Science)	III	3	2	5	3	1	4
2	Major - Core (Pests and diseases of horticulture plants and their management)	IV	3	2	5	3	1	4
5	English	II	4	0	4	3	0	3
6	MIL (Telugu/Hindi/Sanskrit)	II	4	0	4	3	0	3
7	Multidisciplinary Course(Introduction to Social work)	I	2	0	2	2	0	2
8	Skill Enhancement Course (SEC) Application of Artificial Intelligence (Discipline Specific)	II	4	2 (Practice)	6	4	0	4
9	Indian Knowledge System	I	2	0	2	0	0	0
10	Community Service Project (minimum of 80 hours with 1 Credit)							1
End of Semester II of 1st Year		7	22	6	28	18	3	21

Dr. Ramana

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2nd Year - Semester III								
Sl. No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major - Core (Fruit crop production technology)	VI	3	2	5	3	1	4
2	Major - Core (Vegetable crop production technology)	VII	3	2	5	3	1	4
3	Major - Core (Plantation crops and medicinal crops)	VIII	3	2	5	3	1	4
4	Minor (Fundamentals of Horticulture and Soil Science)	I	3	2	5	3	1	4
5	AECC (Creative Writing/Business Writing in English)	III	4	0	4	3	0	3
6	AECC (Creative Writing/Journalistic Writing in MIL - Telugu/Hindi/Sanskrit)	III	4	0	4	3	0	3
7	Multidisciplinary Course(Introduction to Public Administration)	II	2	0	2	2	0	2
	Skill Enhancement Course (SEC) Design Thinking/Problem Solving / Others	III	2	0	2	2	0	2
End of Semester III of 2nd Year		8	24	8	32	22	4	26
2nd Year - Semester IV								
Sl. No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major - Core (Pests and disease management of horticultural crops)	IX	3	2	5	3	1	4
2	Major - Core (Production Technology of Cut Flowers)	X	3	2	5	3	1	4
3	Major - Core (Growth and Development of Horticultural Crops)	XI	3	2	5	3	1	4
4	Minor (Soil Science and Crop Physiology of Horticultural Crops)	II	3	2	5	3	1	4
5	Multidisciplinary Course(Introduction to Nanotechnology)	IV	2	0	2	2	0	2
6	Skill Enhancement Course (SEC) Design Thinking/Problem Solving / Others	IV	2	0	2	2	0	2
End of Semester IV of 2nd Year		6	16	8	24	16	4	20


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3rd Year - Semester V								
Sl. No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major – Core (Ornamental Horticulture)	V	3	2	5	3	1	4
2	Major - Elective (Commercial Floriculture)	XII	3	2	5	3	1	4
3	Major - Elective (Precision Farming and Protected Cultivation)	XIII	3	2	5	3	1	4
4	Minor(Plant Propagation and Nursery Management)	III	3	2	5	3	1	4
5	Minor(Basics of Vegetable Science)	IV	3	2	5	3	1	4
6	Environmental Education	I	2	0	2	2	0	2
End of Semester V of 3rd Year		6	17	10	27	17	5	22
3rd Year - Semester VI								
Sl. No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major - Elective (Precision Farming and Protected Cultivation)	XIV	3	2	5	3	1	4
2	Major - Elective (Post-harvest Management of Horticultural Crops)	XV	3	2	5	3	1	4
3	Minor(Plantation crops and medicinal crops)	VII	3	2	5	3	1	4
4	Minor(Ornamental Horticulture)	VIII	3	2	5	3	1	4
5	Semester Internship (minimum of 180 hours with 3 Credits)							3
End of Semester VI of 3rd Year		4	12	8	20	12	7	19


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4th - Year - Semester VII								
Sl.No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major - Core (Water Management in Horticultural Crops)	XII	3	2	5	3	1	4
2	Major - Core (Soil Fertility and Nutrient Management)	XIII	3	2	5	3	1	4
3	Major - Core (Farm Management and Marketing)	XIV	3	2	5	3	1	4
4	Major - Elective (Dry land Horticulture)	V	3	2	5	3	1	4
5	Major - Elective (Plantation Crops)	VI	3	2	5	3	1	4
6	OOTC	I	2		2	2		2
7	IKS	I	2		2		Audit Course	
End of Semester VII of 4th Year		7	19	10	29	17	5	22
4th - Year - Semester VIII								
Sl.No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major - Core (General Principles of Fruits and Vegetable Preservation)	XII	3	2	5	3	1	4
2	Major - Core (Fundamentals of Plant Physiology)	XIII	3	2	5	3	1	4
3	Major - Core (FLORICULTURE MANAGEMENT AND PLANT PATHOLOGY)	XIV	3	2	5	3	1	4
4	Major - Elective (MUSHROOM CULTURE AND TECHNOLOGY)	V	3	2	5	3	1	4
5	Major - Elective (Plant tissue culture)	VI	3	2	5	3	1	4
6	OOTC	I	2		2	2		2
7	IKS	I	2		2		Audit Course	
End of Semester VIII of 4th Year		7	19	10	29	17	5	22


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Batch ::2025-29

2nd Year 3rd Semester

Coures 5: Fruit Crop Production Technology

Unit-1:- Fruit crop Importance and scope of fruit crop industry in India; Importance of rootstocks

Unit-2:-Cultivation of major fruits I Production technologies for the cultivation of major fruits-mango, banana, citrus, grape, guava

Unit-3:-Cultivation of major fruits II Production technologies for the cultivation of major fruits-litchi, papaya, sapota, apple, pear, peach, walnut, almond

Unit-4:-Cultivation of minor fruits Production technologies for the cultivation of minor fruits- date, ber, pineapple, pomegranate, jackfruit, strawberry

Unit-5:- Definition – area and production of fruit crops in Andhra Pradesh
– Orchard management– Definition- Selection and layout of orchard -
Physical features in orchard, planting Systems.

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2nd Year 3rd Semester

Coures 6: Vegetable Crop Production Technology

Learning Outcomes: On successful completion of this course, the students will be able to:

- Distinguish the growing of vegetables according to season and climate
- Get detailed knowledge on cultivation aspects of different vegetables
- Understand and explain the special intercultural operations done in vegetable crops
- Study of morphology and taxonomy of different vegetable crops
- Study of different varieties of vegetable crops
- Identify the diseases and pests of vegetable crops and their management

Unit 1: introduction to Vegetable crops

12 Hrs.

1. Importance of vegetable cultivation in India and Andhra Pradesh.
2. Classification and Nutritive value of vegetables.
3. Area and production of vegetables in India and Andhra Pradesh.
4. Export and import potential of vegetables in India. Constraints in vegetable production and remedies to overcome them.

Unit 2: Solanaceous and Leafy vegetables

12 Hrs.

"Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

·Cultivation of (a) Brinjal (b) Tomato(c) Capsicum (d) Spinach (c) Coriander and (d)

MenthaUnit 3 :Root and Tuber crops

16 Hrs.

"Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of

following crops:

Cultivation of (a) Carrot (b) Beet root(c) Tapioca and (d) Colocasia

Unit 4 :Cole crops

08 Hrs.

"Importance, morphology and taxonomy, varieties, climate and soil, seeds and sowing, "manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

Cultivation of (a) Cabbage and (b) Cauliflower

Unit 5: Leguminous vegetables

12 Hrs.

"Importance, Morphology and taxonomy, varieties, climate and soil, seeds and sowing, manuring, irrigation, intercultural operations, diseases and their control, harvesting and yield of following crops:

Cultivation of (a) Cluster bean (b) Cow pea and (d) Dolichos

A. V. Ramesh

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Practical syllabus

CORE -

PRODUCTION TECHNOLOGY OF VEGETABLE CROPS

1. Demonstration of seed viability test.
2. Identification of vegetable seeds and vegetable crops at different growth stages
3. Preparing vegetable nursery beds
4. Raising vegetable seedlings in nursery bed and portrays
5. Identification of major diseases and insect pests of vegetables
6. Land preparation for sowing/ transplanting of vegetable crops
7. Sowing/ transplanting of vegetables in main field
8. Fertilizer application for vegetable growing
9. Visit to vegetable field to study methods of vegetable cultivation.



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2nd Year 3rd Semester

Coures 7: Plantation Crops and Medicinal Crops

Plantation crops

Unit 1: Role of plantation crops: Role of plantation crops in national economy, areaproduction statistics at national and international level, classification, clean development mechanism and carbon sequestration potential of plantation crops. Unit Export potential: Export potential, problems and prospects and IPR issues in plantation crops. Promotional programmes: Role of commodity boards and directorates in the development programmes of plantation crops.

Unit 2: Varietal wealth: Botany, taxonomy, species, cultivars and improved varieties in plantation crops, Propagation and nursery management: Plant multiplication including in-vitro multiplication, nursery techniques and nursery management in plantation crops. Agro techniques: Systems of cultivation, cropping systems, multitier cropping, climate and soil requirements, systems of planting, high density planting, nutritional requirements, water requirements, fertigation, moisture conservation, role of growth regulators, macro and micro nutrients, nutrient deficiency symptoms, physiological disorders, shade regulation, weed management, training and pruning, crop regulation, plant protection, management of drought, precision farming.

Unit 3: Maturity indices and harvest: Maturity indices, harvesting methods, harvesting mechanized harvesting in plantation crops. Unit grading, 2: Post harvest management: Post harvest handling including primary processing, packaging, storage and benefit cost analysis of plantation crops. Crops: Coconut, Arecanut, Oil palm, Cashew, Coffee, Tea, Cocoa, Rubber, Palmyrah, Betel

Medicinal Crops

Unit-IV

Aloe: Importance and uses, description of plant, species and varieties, soil, climate, land preparation, propagation crop duration, spacing & planting, manuring, irrigation, inter-cultivation, harvesting, yield and chemical composition.

Rauvolfia, Morinda: Importance and uses, botany, varieties, soil, climate propagation spacing, planting, manuring, irrigation, weeding, harvesting, root yield.

Aswagandha: Importance and uses, description of plant, varieties, soil, climate, propagation manures, fertilizers and inter cultivation Harvesting,

crop duration, method of harvesting drying, grading and yield, chemical constituents.

Unit-V

Citronella & Lemongrass: Importance and uses, botany, varieties, soil, climate, land preparation, propagation, spacing, planting, manures and fertilizers, irrigation, interculture, harvesting & yield of herb and oil.

Mint: Importance and uses, distribution, description of species of mint, varieties, chemical composition and uses, seasons, soil, climate, land preparation, propagation, spacing, planting, manures and fertilizers, irrigation, interculture, harvesting & yield

Practical

Description of botanical and varietal features; Selection of mother palms and seedlings; Nursery techniques; Soil and water conservation measures; Nutrient deficiency symptoms;

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