

# **Department of Agriculture**

#### A. Introduction:

Chaitanya (Deemed to be University), Kishanpura, Hanamkonda established in the year 2019 - 20. B. Sc (Hons). Agriculture course was introduced in Dec 2021. The faculty of Agriculture is having 11 teachers in different disciplines and is headed by **Dr. D. Vishnu Vardhan Reddy**, Dean of Agriculture and Head of the Department **Dr. D. Dev Kumar**.

## **Courses Offered**

# Chaitanya (Deemed to be University)

# DISCIPLINE-WISE SUMMARY OF CREDIT HOURS

S.N0.	Discipline	Credits
1.	Agronomy	24(13+11)
2.	Genetics & Plant Breeding	14(8+6)
3.	Soil Science & Agricultural Chemistry	8(5+3)
4.	Entomology	10(6+4)
5.	Agricultural Economics	10(7+3)
6.	Agricultural Engineering	8(4+4)
7.	Plant Pathology	12(8+4)
8.	Horticulture	10(5+5)
9.	Food Science	2(2+0)
10.	Agricultural Extension	9(6+3)
11.	Biochemistry / Physiology /	10(6+4)
	Microbiology/ Environmental	
	Sciences	
	/ Introduction forestry (2)	
12.	Statistics / Agri informatics / IPR	6(4+2)
13.	Animal Production	4(3+1)
14.	English	2(1+1)
15.	Remedial Courses	
16.	NSS/NCC/Physical Education & Yoga	2(0+2)
	Practices	
17.	Human Values and Ethics	1(1+0)
18.	Educational Tour	2(0+2)
		134 +9 (E) + = <b>143</b>
Total		143
RAWE		20+20
ELP		
Grand	Total	143 + 20+20= <b>183</b>

# **NEW COURSES**

Sl.	Course Title	Credit
No.		Hours
1.	Geoinformatics, Nanotechnology and Precision	2(1+1)
	Farming	
2.	Rainfed Agriculture and Watershed Management	2(1+1)
3.	Problematic Soils and their Management	2(2+0)
4.	Renewable Energy and Green Technology	2(1+1)
5.	Management of Beneficial Insects	2(1+1)
6.	Fundamentals of Horticulture	2(1+1)
7.	Introduction to Forestry	2(1+1)
8.	Agri- Informatics	2(1+1)
9.	Intellectual Property Rights	1(1+0)
10.	Principles of Food Science & Technology	2(2+0)
11.	Communication Skills and Personality	2(1+1)
	Development	
12.	Principles of Integrated Pest & Diseases	3(2+1)
	Management	
13.	Agricultural Heritage	1(1+0)*
14.	Elementary Mathematics	2(2+0)*
15.	Human Values & Ethics (NG)	1(1+0)**

<sup>\*</sup> Remedial courses

<sup>\*\*</sup> Non-gradial courses

# **ELECTIVE COURSES**

A student can select three elective courses out of the following and offer during  $4^{th}$ ,  $5^{th}$  and  $6^{th}$  semesters.

S.N.	Courses	Credi	Justification
		t	
		Hours	
1.	Agribusiness Management	3(2+1)	Out of 12 elective courses
2.	Agrochemicals	3(2+1)	PJTSAU selected 10 croses
3.	Commercial Plant Breeding	3(1+2)	]
4.	Food Safety and Standards	3(2+1)	3 elective courses will be offered in
5.	Biopesticides & Biofertilizers	3(2+1)	each semester i.e in 4 <sup>th</sup> , 5 <sup>th</sup> and 6 <sup>th</sup> semester.
6.	Protected Cultivation	3(2+1)	
7.	Micro propagation Technologies	3(1+2)	Student will elect one course in each semester out of three
8.	Weed Management	3(2+1)	semester out of three
9.	Agricultural Journalism	3(2+1)	1
10.	Applied crop physiology	3(2+1)	

# **B.Sc** (Hons.) Agriculture

# I Semester (1st Year)

S.No.	Course No.	Credits	Course Title
1.	AGRO-101	3(2+1)	Fundamentals of Agronomy & Agricultural Heritage
2.	ENGL-101	2(1+1)	Comprehension & Communication skills in English
3.	AMBE-101	2(1+1)	Agricultural Microbiology
4.	AGBM-101	1(1+0)	Human Values & Ethics (non gradial)
5.	SSAC-121	3(2+1)	Fundamentals of Soil Science
6.	AECO-141	2(2+0)	Fundamentals of Agricultural Economics
7.	CPHY-161	2(1+1)	Fundamentals of Crop Physiology
8.	PATH-171	3(2+1)	Introduction to Plant Pathogens
9.	HORT-181	2 (1+1)	Fundamentals of Horticulture
10.	EXTN-191	2 (2+0)	Rural Sociology & Educational Psychology
	Total 22 (15+7)		

## II Semester

S.No.	Course No.	Credits	Course Title
1.	COCA-100	2 (0+2)	Physical Education & Yoga Practices
2.	SMCA-101	2(2+0)	Elementary Mathematics
3.	BICM-101	3(2+1)	Fundamentals of Plant Biochemistry and
			Biotechnology
4.	AGRO-102	2 (1+1)	Introduction to Forestry
5.	AGRO-103	2(1+1)	Introductory Agro-meteorology & Climate change
6.	LPFM-101	2(2+0)	Live stock, Poultry and Fisheries management - I
7.	FDSN-101	2(2+0)	Principles of Food Science and Nutrition
8.	GPBR-111	3(2+1)	Fundamentals of Genetics
9.	ENTO-131	3(2+1)	Fundamentals of Entomology
10.	AENG-151	2(1+1)	Soil and Water Conservation Engineering
Total 23(		23(15+8)	

# III Semester (2<sup>nd</sup> Year I<sup>st</sup> semester)

S.No.	Course No.	Credits	Course Title		
1.	GPBR-211	3(2+1)	Fundamentals of Plant Breeding		
2.	ENTO-231	1(1+0)	Insect Ecology & IPM		
3.	AECO-241	3(2+1)	Farm Management, Production & Resource Economics		
4.	AEXT-291	3(2+1)	Fundamentals of Agricultural Extension Education		
5.	SMCA-201	2(1+1)	Statistical Methods		
6.	AENG-251	2(1+1)	Farm Power and Machinery		
7.	AGRO-201	3(2+1)	Crop production technology-I (kharif crops)		
8.	HORT-281	2(1+1)	Production Technology for Vegetables and Spices		
9.	HORT-282	2(1+1)	Production Technology for Fruit and Plantation Crops		
10.	AGRO-203	2(1+1)	Water management		
11.	PFSN - 201	1(1+0)	Principles of Food Science & Nutrition		
	Total	24 (15+9)			
NCC /	NCC / NSS after regular classes				

# $IV \ Semester \ (2^{nd} \ Year \ II^{nd} \ Semester)$

S.No.	Course No.	Credits	Course Title
1.	LPFM-201	2(1+1)	Live stock, Poultry and Fisheries Management – II
2.	AGRO-202	3(2+1)	Crop Production Technology -II (Rabi crops)
3.	GPBR-212	3(1+2)	Principles of Seed Technology
4.	SSAC-221	3 (2+1)	Manures, Fertilizers and Soil Fertility Management
5.	AECO-242	2(1+1)	Agricultural Finance and Cooperation
6.	AENG-252	2(1+1)	Protected Cultivation and Secondary Agriculture
7.	PATH-271	2(2+0)	Principles of Plant Pathology
8.	HORT-283	2(1+1)	Production Technology for Ornamental Crops, MAPand Landscaping
9.	AEXT-292	2(1+1)	Communication Skills and Personality Development
10.	Elective Course ELEC-210		Micro propagation technology (GPBR)
	ELEC-320		Bio-pesticides and Bio-fertilizers
		3(2+1)	(Ento + Microbiology)
	ELEC-280		Hi-tech Horticulture (Horticulture)
	Total	24(14+10)	
NCC /	NSS after regular classe	es	

S.No.	Course No.	Credits	Course Title
1.	AGRO-301	2(1+1)	Rainfed Agriculture & Watershed Management
2.	AGRO-302	1(0+1)	Practical Crop Production –I (Kharif Crops)
3.	GPBR-311	2 (1+1)	Crop Improvement-I (Kharif Crops)
4.	SSAC-321	2(1+1)	Management of Problem Soils and irrigation water
5.	ENTO-331	3(2+1)	Pests of Crops and Stored Grains and their Management
6.	AECO-341	3(2+1)	Agricultural Marketing, Trade & Prices
7.	AENG-351	2(1+1)	Renewable Energy and Green Technology
8.	PATH-371	2(1+1)	Diseases of Field Crops and their Management
9.	PATH-373	2(1+1)	Principles of Integrated Plant Disease Management
10.	AEXT-391	2 (1+1)	Entrepreneurship Development and Business Communication
11.	Elective course		
	ELEC- 300		Weed Management (Agronomy)
	ELEC – 340		Agribusiness management (SABM / Agril. Economics)
	ELEC - 350	3(2+1)	Food safety & Standards (Microbiology and Quality
			Control Lab)
	Total	24(13+11)	
NCC / N	NSS after regular cl	lasses	

# VI

# Semester( 3<sup>rd</sup> Year 2<sup>nd</sup> Semester)

S.No.	Course No.	Credits	Course Title	
1.	EVST-301	3(2+1)	Environmental Studies & Disaster Management	
2.	SMCA-301	2(1+1)	Agri informatics	
3.	AGRO-303	2 (1+1)	Geoinformatics and Nano-technology for Precision Farming	
4.	AGRO-304	1(0+1)	Practical crop production – II (Rabi crops)	
5.	AGRO-305	3(2+1)	Farming systems & organic farming for sustainable agriculture	
6.	GPBR-312	2 (1+1)	Crop Improvement-II (Rabi crops)	
7.	GBPR-313	1(1+0)	Intellectual Property Rights ( N)	
8.	ENTO-332	2(1+1)	Management of beneficial insects	
9.	PATH-372	3 (2+1)	Diseases of Horticultural Crops and their Management	
10.	HORT-382	2 (1+1)	Post-harvest Management and Value Addition of Fruits and Vegetables	
11.	Elective course ELEC - 310		Commercial Plant Breeding (Genetics & Pl Breeding)	
	ELEC – 320	2(2 : 1)	Agro-chemicals (Soil Science & Agril. Chemistry)	
	ELEC - 360	3(2+1)	Applied crop physiology	
	ELEC - 390		Agricultural Journalism (Agril. Extension)	
	Total	24(14+10)		
NCC / I	NCC / NSS after regular classes			

## VII SEMESTER (4th

## Year)(RAWEP & AIA)

SN.	Rural Agricultural Work Experience and Agro-industrial Attachment						
	Activities	No. of weeks	Credt Hours				
1	General orientation & On campus training by different faculties	1					
2	Village attachment	8	14				
	Unit attachment in Univ./ College. KVK/ Research StationAttachment	5					
3	Plant clinic	2	02				
	Agro-Industrial Attachment	3	04				
4	Project Report Preparation, Presentation and Evaluation	1					
Total	weeks for RAWE & AIA	20	20				

• **Agro- Industrial Attachment:** The students would be attached with the agro-industries for a period of 3 weeks to get an experience of the industrial environment and working.

# VIII SEMESTER (4<sup>th</sup>Year)(ELP)

#### V Deans' committee recommendation

Modules for Skill Development and Entrepreneurship: A student has to register 20 credits opting for **two modules of (0+10)** credits each (**total 20 credits**) from the package of modules in the **VIII semester.** 

#### PJTSAU proposal

PJTSAU proposed to have **one module (with 20 credits)** 

	V Deans Committee	Credits	Proposed by PJTSAU	Credits
	recommendations			
			Rajendranagar campu	ıs (5)
1	Production Technology	0+10	Production Technology	0+20
	forBioagents and		forBioagents and	
	Biofertilizer		Biofertilizer	
2	Seed Production and Technology	0+10	Seed Production and	0+20
			Technology	
3	Mushroom Cultivation Technology	0+10	Mushroom	0+20
			Cultivation	
			Technology	
4	Soil, Plant, Water and Seed	0+10		
	Testing			
5	Commercial Beekeeping	0+10		
6	Doulter, Deadystian Tashnalagy	0+10		
O	Poultry Production Technology	0+10		
7	Commercial Horticulture	0+10	Commercial Horticulture	0+20
8	Floriculture and Landscaping	0+10		
	7 12	0.10		
9	Food Processing	0+10		
10	Agriculture Waste Management	0+10		
11	Organic Production Technology	0+10		
12	Commercial Sericulture	0+10		
			Vermicomposting	0+20

#### **DISCIPLINE-WISE COURSES**

#### **AGRONOMY**

Course Title	Crdit Hrs.
Fundamentals of Agronomy & Agricultural Heritage *	3(2+1)
Introductory Agrometeorology & Climate change	2(1+1)
Crop production technology-I (kharif crops)	3(2+1)
Crop Production Technology -II (Rabi crops)	3(2+1)
Farming systems &Organic farming for sustainable agriculture	3(2+1)
Practical Crop Production -I	1(0+1)
Practical crop production - II	1(0+1)
Geoinformatics and Nano-technology and Precision Farming	2(1+1)
Rainfed Agriculture & Watershed Management	2(1+1)
Introduction to Forestry	2(1+1)
Water management	2(1+1)
Total	24(13+11)
* Remedial course (1 credit) New course (2 credits)	

#### GENETICS AND PLANT BREEDING

Course Title	Crdit Hrs.
Fundamentals of Genetics	3(2+1)
Principles of Seed Technology	3(1+2)
Fundamentals of Plant Breeding	3 (2+1)
Crop Improvement-I (Kharif Crops)	2(1+1)
Crop Improvement-II (Rabi crops)	2 (1+1)
Intellectual Property Rights	1(1+0)
New course (1 credit)	14(8+6)

# SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

Course title	Credit Hrs
Fundamentals of Soil Science	3(2+1)
Manures, Fertilizers and Soil Fertility Management	3 (2+1)
Management of Problem Soils and irrigation water	2(1+1)
Total	8(5+3)

#### PLANT PATHOLOGY

Course title	Credit
	Hrs
Introduction to Plant Pathogens	3(2+1)
Diseases of Field Crops and their Management-I	2(1+1)
Diseases of Horticultural Crops and their Management-II	3(2+1)
Principles of Integrated Disease Management	2(1+1)
Principles of Plant Pathology	2(2+0)
Total	12(8+4)

## **ENTOMOLOGY**

Course title	Credit Hrs
Fundamentals of Entomology	3(2+1)
Pests of Crops and Stored Grain and their Management	3(2+1)
Management of beneficial insects	2(1+1)
Insect Ecology & IPM	2(1+1)
Total	10(6+4)

#### AGRICULTURAL ECONOMICS

Course title	Credit Hrs
Fundamentals of Agricultural Economics	2(2+0)
Agricultural Finance and Cooperation	2(1+1)
Agricultural Marketing Trade & Prices	3(2+1)
Farm Management, Production & Resource Economics	3 (2+1)
Human Values & Ethics	1(1+0)
Total	11(8+3)

#### AGRICULTURAL ENGINEERING

Course title	Credit Hrs
Introductory Soil and Water Conservation Engineering	2(1+1)
Farm Power and Machinery	2(1+1)
Renewable Energy Sources	2(1+1)
Protected Cultivation and Secondary Agriculture	2(1+1)
Tota	8(4+4)

## **HORTICULTURE**

Course title	Credit
	Hrs
Fundamentals of Horticulture	2(1+1)
Production Technology for Fruit and Plantation Crops	2(1+1)
Production Technology for Vegetables and Spices	2(1+1)
Production Technology for Ornamental Crops, MAP and	2(1+1)
Landscaping	
Post-harvest Management and Value Addition of Fruits and	2(1+1)
Vegetables	
Total	10(5+5)

## AGRICULTURAL EXTENSION

Course title	Credit
	Hrs
Fundamentals of Agricultural Extension Education	3(2+1)
Rural Sociology & Educational Psychology	2(2+0)
Entrepreneurship Development and Business Communication	2(1+1)
Communication Skills and Personality Development	2(1+1)
Total	9(6+3)

#### STATISTICS AND MATHEMATICS

Course title	Credit
Statistical Methods	Hrs 2(1+1)
Agri- Informatics	2(1+1)
Elementary Mathematics	2(2+0)
Total	6(4+2)
Total	0(412)

#### **BIOCHEMISTRY**

Course title	Credit
	Hrs
Fundamentals of Plant Biochemistry and Biotechnology	3(2+1)
Total	3(2+1)
	, ,

## **MICROBIOLOGY**

Course title	Credit Hrs
Agricultural Microbiology	2(1+1)
Total	2(1+1)

12

#### **CROP PHYSIOLOGY**

Course title	Credit
	Hrs
Fundamentals of Crop Physiology	2(1+1)
Total	2(1+1)
	. ,

## ENVIRONMENTAL SCIENCE

Course title		Credit Hrs
Environmental Studies & Disaster Management		3(2+1)
	Total	3(2+1)

#### **ENGLISH**

Course title	Credit
	Hrs
Comprehension & Communication Skills in English	2(1+1)
Total	2(1+1)
	, ,

#### **ANIMAL PRODUCTION**

Course title	Credit Hrs
Livestock and poultry Management	2(1+1)
Total	2(1+1)

#### FOOD SCIENCE

Course title	Credit
	Hrs
Principles of Food Science & Nutrition	1(1+0)
Total	1(1+0)
	, ,

#### REMEDIAL COURSES

Course title	Credit Hrs
Agricultural Heritage	1(1+0)
Elementary Mathematics	2(2+0)
Total	3(3+0)

#### **Faculty of Agriculture**

S. No	Name of the Faculty	Qualification	Designation
1	Dr. D. Vishnu Vardhan Reddy	M.Sc (Ag), Ph.D. Crop Physiology	Dean of Agriculture
2	Dr. D. Dev Kumar	M.Sc (Ag), Ph.D. Crop Physiology	Assistant Professor & Head
3	Dr. T. Lokya	M.Sc (Ag), Ph.D. Soil Science	Assistant Professor
4	Dr. P. Omkar	Ph.D. Economics	Associate Professor
5	Dr. B. Sravan Kumar	M.Sc (Horti), Ph.D. Floriculture	Assistant Professor
6	Dr. J. Sumalatha	M.Sc (Ag), Ph.D. Entomology	Assistant Professor
7	Mrs. S. Kavitha	M.Sc (Horti), General Horticulture	Assistant Professor
8	Ms. G. Sahrudi	M.Sc (Ag). Entomology	Assistant Professor
9	Ms. R. Divyalatha	M.Sc (Ag). Plant Pathology	Assistant Professor
10	Mr. T. Sripal	M.Sc (Ag). Agronomy	Assistant Professor
11	Mr. Mohmmod Afrose	M.Sc (Ag). Agronomy	Assistant Professor

#### **BOS** members

S. No	Required Members	Name	Position
1	Professor	Prof. D. Vishnu Vardhan	Chairperson
		Reddy	
2	Professor	Prof. S. Suma	Member
3	Assistant Professor & Head	Dr. D. Dev Kumar	Member
4	Assistant Professor	Dr. P. Parameshwar	Member
5	Assistant Professor	Dr. T. Lokya	Member
6	Assistant Professor	Mrs. S. Kavitha	Member
7	Assistant Professor	Ms. S. Priyavardhini	Member
8	Assistant Professor	Ms. G. Sahrudi	Member
9	Expert-1	Dr. L. Jalapathi Rao	Member
10	Expert-2	Dr. V. Shashibushan	Member

#### B. Departmental Activities:

#### I. Papers submission

*I.* **Dr. P. Omkar 2023:** Two days international seminars on multi disciplinary research in sustainable agriculture and rural development issues and challenges Dec 17-18, 2023. Jabalpur, Madhya Pradesh India. Paper Title: A study on climatic changes and impacts on crop yield its variability in Telangana state as well as India- Recent issues and challenges (SARDIC-2023).

#### II. Papers presented in International/National/State Conferences/ Symposia

(i) **D. Dev Kumar 2023,** participated in the one-week online faculty development programme on "Fostering Multidisciplinary Learning: Promoting Learner –Centered Teaching using ICT through Classroom Discussions" Organized by the Department of Mathematics & Humanities. Kakatiya Institute of Technology and Science in association with the centre for training and learning, National Institute of Technology Warangal, during  $16^{th} - 21^{st}$  of October, 2023.

- (ii) Polu Parameshwar 2023. Participated in the one-week online faculty development programme on "Fostering Multidisciplinary Learning: Promoting Learner –Centered Teaching using ICT through Classroom Discussions" Organized by the Department of Mathematics & Humanities. Kakatiya Institute of Technology and Science in association with the centre for training and learning, National Institute of Technology Warangal, During  $16^{th} 21^{st}$  of October, 2023.
- (iii) **Dr. P. Omkar 2023:** Two days international seminars on multi disciplinary research in sustainable agriculture and rural development issues and challenges Dec 17-18, 2023. Jabalpur, Madyapradesh India.

#### III. Facility for shade net house:

To demostrate skills on different aspects of Agriculture to Agricultural students, in different semesters, as per course curricula, shade net house was constructed at Hyderabad campus.

Agricultural students on commercialization of Agro techniques. So that they become Job providers rather than Job Seekers.

#### IV. Students Work in University Labs:





**BIO CHEMISRY LABORATORY** 

- V. Practicles/field activities as a part of course curricula:
- a) Students Learning Practical skills:



## HÝBRIDIZATION IN GREENGRAM



**HYBRIDIZATION IN RICE** 







GRAFTING SKILS IN MANGO

# b). Visit to experimental fields of RARS Warangal:



Students at RARS Warangal



**At Rice Experiments** 







Visiting Redgram experimental fields

# c). Participation in Rythu sadassu



**Students in RARS Warangal premises** 



Visit to tractor strall





Visiting powertiller and paddy transplanter d). Intraction with progressive farmers during rythu sadassu



Progressive farmer Sri Venkanna



Progressive farmer Sri Madhan Mohan



Intraction at seed processing unit e). Visit to Horticultural Research Station Malyal



Scientists Explaining the experiments on turmeric, chilli and mango

# f). Visit to DAATT Centre, Warangal:



# g). Visit to Krishi Vignan Kendra, Malyal



Visiting farm pond under water harvesting technology



Interaction of CDU students with Scientists of KVK, Malyal

# h). Students activity at CDU Bhattupally farm



Pruning and fertilizer application

Broad casting of sprouted rice seed





Pruning and fertilizer application





Trenching and application of fertilizer to fruit saplings

# i). Visiting Farmers fields:



Interaction at farmers field



Examining papaya field



Examining marigold field

# j). Startup on seed production - activities:





Harvesting and processing of paddy variety KNM-118







Harvesting of greengram variety, WGG-42

# k). Students activity at Kummarigudem Farm



Pre-emergence weedicide spraying in the field

**Observing germination in Greengram** 



Fertilizer application to Green gram crop





On 26 January 2024 got senior students  $1^{\rm st}$  and  $2^{\rm nd}$  prizes distributed by honorable chairman Dr. Ch. V. Purushottam reddy garu





**Students of Agriculture National Cadet Corps** 

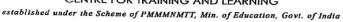


Visited a farmer Buchi reddy field at Devannapet



#### NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

CENTRE FOR TRAINING AND LEARNING





# Certificate

This is to certify that	ertify that Dr. D. Dev Kumar		
Chaitanya Deemed to be University			
"Fostering Multidisciplina	d in the One-week Online Faculty De try Learning: Promoting Learner-Centred Te organized by the Department of Mathematic	eaching using ICT through	
	& Science in association with the Centre for		
	of Technology Warangal, during 16th - 21st		
been	Prof. I Kishore Kumar	Prof. Bidyadhar Subudhi	

Scanned with OKEN Scanne

Participation in the one- week online FDP on "Fostering Multidisciplinary Learning: Promoting Learner –Centered Teaching using ICT through Classroom Discussions" Organized by the Department of Mathematics & Humanities. KITS and NIT Warangal, During  $16^{th}-21^{st}$  of October, 2023.





Dr. B. Sravan Kumar (Horticulture). Practical classes in Shade net house.



Sales of Vegetables and palak to the staff by students of Agriculture.







Visited Krishi Vignana **K2**ndra at Jammikunta







Farmers day celebrations organized by the department of Agriculture.



Conducted freshers day celebrations at Hyderabad campus



Agricultural Education day organized by Agricultural College Warangal.