

INSTITUTE	FACULTY OF AGRICULTURE
PROGRAM	BACHELOR OF SCIENCE (Hons.) AGRICULTURE
SEMESTER	2
COURSE TITLE	FUNDAMENTALS OF AGRONOMY
COURSE CODE	16AS0201
COURSE CREDITS	4

Objective:

- 1 To provide the complete knowledge of different principles of crop production.
- 2 To provide the complete knowledge of farm operations.
- 3 To provide the complete knowledge of different package of practices of crops.
- 4 To provide the complete knowledge of farm implements.

Course Outcomes: After completion of this course, student will be able to:

- 1 Students will be able to Adopt the proper package of practices for a particular crop to obtain higher yield.
- 2 Students will be able to follow the crop rotation, mixed cropping, relay cropping and other relevant practices for maximization of crop production.
- 3 Students will be able to follow the use of different farm implements on soil.
- 4 Students will be able to know about methods and utilization of fertilizer application in different crops.

Pre-requisite of course:To provide the complete knowledge of different principles of crop production.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	0	2	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	Agronomy and its scope Agronomy and its scope	4
2	Seeds and sowing Seeds and sowing	4
3	Tillage and tilth Tillage and tilth	4
4	Crop density and geometry Crop density and geometry	4

Contents : Unit	Topics	Contact Hours
5	Crop nutrition, manures and fertilizers and nutrient use efficiency Crop nutrition, manures and fertilizers and nutrient use efficiency	4
6	Crop rotation and its principles, adaptation and distribution of crops Crop rotation and its principles, adaptation and distribution of crops	4
7	Harvesting and threshing of crops Harvesting and threshing of crops	4
8	Weeds- importance, classification, crop-weed competition, concept of weed management, principles and methods. Weeds- importance, classification, crop-weed competition, concept of weed management, principles and methods.	4
9	Herbicide – classification, selectivity and resistant, allelopathy Herbicide – classification, selectivity and resistant, allelopathy	4
Total Hours		36

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	Identification of crops, seeds, fertilizers, pesticides and tillage implements Identification of crops, seeds, fertilizers, pesticides and tillage implements	2
2	Study of agro-climatic zones of India Study of agro-climatic zones of India	2
3	Identification of weeds in crops, methods of herbicides and fertilizer application Identification of weeds in crops, methods of herbicides and fertilizer application	2
4	Study of yield contributing characters and yield estimation Study of yield contributing characters and yield estimation	2
5	Seed germination and viability test Seed germination and viability test	2
6	Numerical exercises on fertilizer requirement, plant population and herbicides Numerical exercises on fertilizer requirement, plant population and herbicides	2
7	Use of tillage implements-reversible plough, one way plough, harrow, leveler and seed drill Use of tillage implements-reversible plough, one way plough, harrow, leveler and seed drill	2
Total Hours		14

Textbook :

- 1 NA, NA, NA, NA

References:

- 1 Fundamentals of Agronomy and Agro meteorology, Fundamentals of Agronomy and Agro meteorology, Reddy, S. R. and Reddy, A. P. K., Kalyani Publishers Pvt. Ltd., 2016
- 2 Principles of Agronomy, Principles of Agronomy, Reddy T. Yellamanda and Reddy G. H. Sankara, Kalyani Publishers Pvt. Ltd., 2016
- 3 Elements of Agronomy, Elements of Agronomy, Reddy S. R., Kalyani Publishers Pvt. Ltd., 2016
- 4 Numerical Agronomy, Numerical Agronomy, Sharma Abhijit, Kalyani Publishers Pvt. Ltd., 2016

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
25.00	25.00	20.00	10.00	10.00	10.00

Instructional Method:

- 1 The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by white board may also use any of tools such as demonstration, role play, quiz, brain storming, MOOCs etc.
- 2 The internal evaluation will be done on the basis of continuous evaluation of students in the class-rooms
- 3 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory
- 4 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.