| | |
|---|---|
| **INSTITUTE** | **FACULTY OF AGRICULTURE** |
| **PROGRAM** | **BACHELOR OF SCIENCE (Hons.) AGRICULTURE** |
| **SEMESTER** | **3** |
| **COURSE TITLE** | **CROP PRODUCTION TECHNOLOGY-I (KHARIF CROPS)** |
| **COURSE CODE** | **16AS0301** |
| **COURSE CREDITS** | **2** |

**Objective:**

1 To determine the origin to know the origin, geographical distribution, economic importance.

2 To understand the soil and climatic requirements, varieties, cultural practices and yield of various kharif crops.

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

1 Students will be able to identify different kharif season crop of India.

2 Students will be able to acquire knowledge about different cereal, pulses, fiber, and grasses crop.

3 Students will be able to know about package of practices of different kharif crops.

4 Student will able to calculate cost of cultivation of monsoon season agriculture field crop.

**Pre-requisite of course:**To aware about the crops growing in Kharif season.

**Teaching and Examination Scheme**

| Theory Hours | Tutorial Hours | Practical Hours | ESE | IA | CSE | Viva | Term Work |
|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 50 | 30 | 20 | 25 | 25 |

| Contents : Unit | Topics | Contact Hours |
|---|---|---|
| 1 | **Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield of Kharif crops.** Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield of Kharif crops. | 2 |
| 2 | **Cereals: Rice, Maize, Sorghum, Pearl millet, Vari (Little millet), Kodo millet and Finger Millet.** Cereals: Rice, Maize, Sorghum, Pearl millet, Vari (Little millet), Kodo millet and Finger Millet. | 3 |
| 3 | **Pulses: Pigeon pea, Green gram, Black gram and Cluster bean.** Pulses: Pigeon pea, Green gram, Black gram and Cluster bean. | 2 |

DR. HIMALAY PATEL
**Digitally signed by (Name of HOD)**

DR. KANTHA DEVI ARUNACHALAM
**Digitally signed by (Name of Dean/ Principal)**

| Contents : Unit | Topics | Contact Hours |
|---|---|---|
| 4 | **Oilseeds: Groundnut, Castor, Sesame and Soybean.**<br>Oilseeds: Groundnut, Castor, Sesame and Soybean. | 2 |
| 5 | **Fiber crops: Cotton and Jute.**<br>Fiber crops: Cotton and Jute. | 1 |
| 6 | **Forage crops: Sorghum, Cowpea and Napier hybrid and Fodder maize**<br>Forage crops: Sorghum, Cowpea and Napier hybrid and Fodder maize | 2 |
| 7 | **Cash crop: Bidi tobacco and Green manure Crops: Sunhemp and Dhaincha.**<br>Cash crop: Bidi tobacco and Green manure Crops: Sunhemp and Dhaincha. | 2 |
| **Total Hours** | | **14** |

**Suggested List of Experiments:**

| Contents : Unit | Topics | Contact Hours |
|---|---|---|
| 1 | **Identification of crops and seed**<br>Identification of crops and seed | 2 |
| 2 | **Field lay-out of different method of rice nursery including /SRI**<br>Field lay-out of different method of rice nursery including /SRI | 2 |
| 3 | **Seed treatment and sowing of major crops**<br>Seed treatment and sowing of major crops | 2 |
| 4 | **Effect of seed size on germination and seedling vigour of kharif crops**<br>Effect of seed size on germination and seedling vigour of kharif crops | 2 |
| 5 | **Effect of sowing depth and methods on germination crops**<br>Effect of sowing depth and methods on germination crops | 2 |
| 6 | **To study various methods of fertilizer application**<br>To study various methods of fertilizer application | 2 |
| 7 | **Study of growth and yield contributing characters**<br>Study of growth and yield contributing characters | 2 |
| 8 | **Visit to the agronomic and forage experiments**<br>Visit to the agronomic and forage experiments | 2 |
| 9 | **Numerical exercises on fertilizer, seed requirement and plant population**<br>Numerical exercises on fertilizer, seed requirement and plant population | 2 |
| 10 | **To work out the cost of cultivation**<br>To work out the cost of cultivation | 2 |
| **Total Hours** | | **20** |

DR. HIMALAY PATEL
**Digitally signed by (Name of HOD)**

DR. KANTHA DEVI ARUNACHALAM
**Digitally signed by (Name of Dean/ Principal)**

**Textbook :**

1 NA, NA, NA, NA

**References:**


1 Principles of Crop Production: Theory, Techniques and Technology, Principles of Crop Production: Theory, Techniques and Technology, Acquaah G., Prenice Hall, 2005

2 Principles and Practices of Agronomy, Principles and Practices of Agronomy, Balasubrananiyan P & Palaniappan SP, Agrobios, 2010

3 A Text Book of Agronomy, A Text Book of Agronomy, Chandrasekaran B, Annadural K & Samasundaram E., New Age International (P) Limited Publishers, 2010

4 Principles of Agronomy, Principles of Agronomy, Reddy, S. R., Kalyani Publishers, 2011


**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 black 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 laboratory and class-room.

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.

DR. HIMALAY PATEL
**Digitally signed by (Name of HOD)**

DR. KANTHA DEVI ARUNACHALAM
**Digitally signed by (Name of Dean/ Principal)**