**Syllabus for B.Sc. (Hons) Agriculture Year – II (Sem. III)**

**Subject Code:** 16AS0313

**Subject Short Name:** Hort. 3.2

**Subject Name:** Production Technology of Fruit and Plantation Crops

**Objective:**

1. To educate about the different forms of classification of fruit crops
2. To educate about the origin, area, climate, soil, improved varieties and cultivation practices of fruit and plantation crops
3. To educate about the physiological disorders of fruit crops, palms and plantation crops

**Credits Earned:** 2 Credits (1+1)

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

- Know define importance and scope of fruit and plantation crop industry in India, concepts of production for fruit and plantation crops, new planting system and methods, soil and climatic requirement of different fruit and plantation crops, etc.
- Understand various concepts of high density planting, new techniques of high density planting, plant propagation, seed propagation, etc.
- Demonstrate preparation and application of plant growth regulators to the crops, etc. Investigate the various problems with the production technology of fruit and plantation crops such as disorder, diseases and pests, etc.
- Distinguish different fruits and plantation crops, symptoms of disorders, diseases, insects and pests, etc.

| Teaching Scheme (Hours) | | | Credits | Theory Marks | | | Tutorial/ Practical Marks | | Total Marks |
|---|---|---|---|---|---|---|---|---|---|
| Theory | Tutorial | Practical | | ESE (E) | Mid Sem. (M) | Progressive Assessment (PA) | Viva (V) | Term work (TW) | |
| 1 | 0 | 2 | 2 | 40 | 20 | 20 | 10 | 10 | 100 |

**Theory Content:**

| Unit | Topics | Contact Hours |
|---|---|---|
| 1 | Production status, importance and scope of fruit and plantation crop industry in India | **1** |
| 2 | Cropping systems | **1** |
| 3 | Propagation and use of rootstocks | **1** |
| 4 | Production technologies for the cultivation of major fruits- Mango | **1** |
| 5 | Banana | **1** |
| 6 | Citrus | **1** |
| 7 | Grape | **1** |
| 8 | Guava | **1** |
| 9 | Papaya | **1** |
| 10 | Apple | **1** |
| 11 | Pomegranate, sapota and custard apple | **1** |
| 12 | Minor fruits: Jackfruit, strawberry | **1** |
| 13 | Pineapple, ber and jamun | **1** |
| 14 | Plantation crops- Major- Coconut, Arecanut, Oil Palm and Palmyrah Palm | **1** |
| 15 | Minor- tea, coffee, cocoa, cashewnut and rubber | **1** |
| | **Total** | **15** |

**Practical Content:**

| Unit | Topics | Contact Hours |
|---|---|---|
| 1 | Identification and description of important varieties of fruit and plantation crops | **2** |
| 2 | Propagation techniques | **2** |
| 3 | Important cultural practices for Major crops: Mango, Banana, Papaya, Sapota, Guava, Grape and Citrus | **2** |

| | | |
|---|---|---|
| 4 | Preparation and application of PGRs | **2** |
| 5 | Micro propagation and hardening | **2** |
| 6 | Nursery practices and seedling selection in plantation crops | **2** |
| 7 | Major pest and diseases of fruits and plantation crops | **2** |
| 8 | Visit to commercial orchard and plantation industries | **2** |
| | **Total** | **16** |

**Reference Books:**


- A textbook on pomology, Chattopadhyay, T. K., Kalyani Publishers, 2001
- Fruit and Plantation crops, V. Ponnuswami, M. Kumar, S. Ramesh Kumar and C. Krishnamoorthy, Narendra Publishing House, 2015
- Handbook of Horticulture, ICAR, 2001
- Production Technology of Spices and Plantation Crops, Production Technology of Spices and Plantation Crops, Shanmugavelu, K.G., N. Kumar and K.V. Peter, Agrobios, 2005


**Suggested Theory distribution:**

The suggested theory distribution as per Bloom's taxonomy is as per 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 | Understand | Apply | Analyze | Evaluate | Create |
| 25% | 25% | 20% | 10% | 10% | 10% |

**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/ field.
4. Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.