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

Subject Code: 16AS0418

Subject Short Name: Hort. 4.3

Subject Name: Production Technology of Vegetables and Spices

Objective:

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

Credits Earned: 2 Credits (1+1)

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

- Illustrate the importance of vegetables and spices.
- Learn more about scientific methods and the classification of vegetables and spices.
- Gain a comprehensive understanding of the different types of the vegetable garden, a particular kitchen gardening.
- Gain basic knowledge about the origin, area, climate, soil, improved varieties and cultivation practices such as time and methods of sowing, transplanting techniques, planting distance, fertilizer requirements, irrigation, weed management, harvesting and yield of vegetables and spices.
- Have information about the physiological disorders related to major vegetables and spices.

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	Importance of vegetables and spices in human nutrition	**1**
2	Role of vegetables and spices in national economy	**1**

3	Kitchen gardening	**1**
4	Production Technology of Tomato	**1**
5	Production Technology of Okra, Brinjal, Chilli	**1**
6	Production Technology of cucurbits: Cucumber, Bitter gourd, Sponge gourd	**2**
7	Production Technology of cole crops: Cabbage, Cauliflower, Knol-Khol	**2**
8	Production Technology of bulb crops: Onion and Garlic	**1**
9	Production Technology of root crops: Carrot, Radish and Beetroot	**1**
10	Production Technology of tuber crops: Potato	**1**
11	Production Technology of leafy vegetables: Amaranth and Palak	**1**
12	Production Technology of Spices: Black pepper, Cardamom, Clove *etc.*	**2**
	Total	**15**

Practical Content:

Unit	Topics	Contact Hours
1	Identification of vegetables and spices crops and their seeds	**2**
2	Description of varieties	**2**
3	Propagation methods of vegetables and spices	**2**
4	Nursery raising techniques in vegetables and spices	**2**
5	Study of morphological characters of vegetables and spices	**2**
6	Application methods of fertilizers	**2**
7	Harvesting and Post-harvest practices	**2**
8	Economics of vegetables and spices	**2**
9	Visit to spice gardens	**2**
	Total	**18**

Reference Books:

- Olericulture, Fundamentals of vegetable production, K. P. Singh and Anant Bahadur, Scientific Publishers, 2014
- Vegetable Crops, J. Kabir, T. K. Bose and M. G. Som, Astral Publication, 2002
- Vegetable Crops, M. S. Fagaria, B. R. Choudhary and R. S. Dhaka, Kalyani Publishers, 2004

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.