



Shri Vaishnav Vidyapeeth Vishwavidyalaya
Shri Vaishnav Institute of Agriculture, Indore
Generic Elective Course

AGGE 403: BASICS OF CROP BREEDING AND PLANT BIOTECHNOLOGY 4 (4+0)

Course Code	Course Name	TEACHING & EVALUATION SCHEME							
		THEORY			PRACTICAL		L	P	CREDITS
		END SEM University Exam	Two term exam*	Teachers Assessment*	END SEM University Exam	Teachers Assessment*			
AGGE403	BASICS OF CROP BREEDING AND PLANT BIOTECHNOLOGY	60	20	20	00	00	4	0	4

1. **Legends:** L - Lecture; P - Practical; C-Credit.

2. ***Teacher Assessment** shall be based on following components: Quiz / Assignment / Project / participation in class.

Course Objective: To study the scope and importance of Plant Breeding and Plant Biotechnology.

Course Outcomes:

1. Students will be able to identify different methods used in plant biotechnology.
2. Students will be able to analyze the importance of plant breeding and biotechnology in agriculture.

Unit-1: Meaning and objectives of plant breeding, History and scope of crop breeding, Importance of crop improvement in agriculture, Centers of origin and domestication of crops

Unit-2: Selection methods (mass selection, pure line selection), Hybridization and its steps, Heterosis and its significance

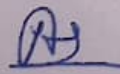
Unit-3: Introduction to plant biotechnology, Tools and techniques of biotechnology, Plant tissue culture: concept and applications

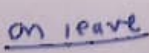
Unit-4: PCR techniques and its application, Molecular Markers like RAPD and SSR, Transgenic and its application in crop improvement


Unit-5: Introduction and meaning of intellectual property, types of intellectual property, IPR in India – Patents, copyright, Trademark, industrial design, Geographical indication and Trade secrets

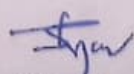
Suggested Reading

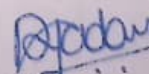
1. Chawla H S (2002) Introduction to Plant Biotechnology. 2nd Edition, Oxford IBH publishing New Delhi.
2. Purohit S S (2004) Biotechnology: Fundamentals and Applications 3rd Edition, Jodhpur.
3. Walker, J.M. 2008. Plant Biotechnology and Genetics: Principles, Techniques and Applications.



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