JHARKHAND Rai University
UGC RECOGNISED UNIVERSITY
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Lesson Plan & Tracking

Programe : B.Sc.Agriculture	Session : Fall 2022	Year : 2022	Sem:III
Course: Fundamentals of Plant Breeding(Theory)			
Name of the Faculty: Dr. Anjani Kumar	Commencement Date:29-8-2022	Date of Closure:30.12.2022	

Lecture No.	Week	Unit	Topics to be Covered	Blended Mode			Date	Duration	Tracking of Lectures	Related Course Outcome	Signature of Faculty	Signature of HoD	Remarks (if any)
				ICT Tool/Platform/ LMS	Resources	Activity							
1	1	I	Historical development, concept, nature and role of plant breeding										
2	2	I	major achievements and future prospects OF plant breeding										
3	3	I	Genetics in relation to plant breeding.										
4	4	I	Modes of reproduction										
5	5	I	apomixes										
6	6	I	self-incompatibility										
7	7	I	male sterility- genetic consequences, cultivar options.										

8	8	II	Domestication										
9	9	II	Acclimatization										
10	10	II	Introduction;										
11	11	II	Centres of origin/diversity										
12	12	II	components of Genetic variation;										
13	13	II	Heritability and genetic advance										
14	14	II	Genetic basis and breeding methods in self-pollinated crops										
15	15	II	mass selection										
16	16	II	pure line selection										
17	17	II	hybridization techniques										
18	18	II	handling of segregating population										
19	19	II	Multiline concept										
20	20	III	Concepts of population genetics										
21	21	III	Hardy-Weinberg Law,										

22	22	IIII	Genetic basis and methods of breeding cross pollinated crops,										
23	23	III	modes of selection; Population improvement Schemes										
24	24	III	Ear to row method, Modified Ear to Row, recurrent selection schemes										
25	25	III	Heterosis and inbreeding depression, development of inbred lines and hybrids										
26	26	III	composite and synthetic varieties										
27	27	IV	Breeding methods in asexually propagated crops, clonal selection and hybridization; Maintenance of breeding records and data collection										
28	28	IV	Wide hybridization and prebreeding; Polyploidy in relation to plant breeding, mutation breeding-methods and uses; Breeding for important biotic and abiotic stresses;										
29	29	IV	Biotechnological tools-DNA markers and marker assisted selection.										

30	30	IV	Participatory plant breeding; Intellectual Property Rights, Patenting, Plant Breeders and & Farmer's Rights										