

Course Schedule
Plant Breeding Methods
 HS 541
 Fall, 2018

| Lec | Sub. | Topic | Lecturer | Month | Date | Day | Exer. |
|---|--------|---|----------|-------|------|-----|-------|
| SECTION 1 -- INTRODUCTION (9 lectures) | | | | | | | |
| 1 | I. | Plant Breeding Objectives | Wehner | Aug. | 22 | W | |
| 2 | II. | Germplasm Resources | " | " | 24 | F | Title |
| 3 | III | Reproduction in the Angiosperms | " | " | 27 | M | 1 |
| 4 | IV. | Population Genetics 1, 2 | " | " | 29 | W | |
| 5 | " | " | " | " | 31 | F | |
| 6 | V. | Quantitative Genetics | " | Sept. | 5 | W | 2 |
| 7 | " | Value and variance | " | " | 7 | F | |
| 8 | " | Genetic variances | " | " | 10 | M | |
| 9 | " | NC Designs | " | " | 12 | W | |
| SECTION 2 -- BREEDING CROSS-POLLINATED CROPS (13 lectures) | | | | | | | |
| 10 | VI. | Inbreeding Depression/Heterosis 1, 2 | " | " | 14 | F | 3 |
| 11 | " | " | " | " | 17 | M | |
| 12 | - | <i>Exam I (through quantitative genetics)</i> | " | " | 19 | W | Exm |
| 13 | VII. | Populations | " | " | 21 | F | |
| 14 | VIII. | Inbreds | " | " | 24 | M | |
| 15 | IX. | Hybrids | " | " | 26 | W | 4 |
| 16 | X. | Genetic Control of Pollen - Sex expression | " | " | 28 | F | |
| 17 | " | Self-incompatibility; male sterility | " | Oct. | 1 | M | |
| 18 | XI. | Recurrent Selection 1 | " | " | 3 | W | 5 |
| 19 | " | Recurrent Selection 2 | " | " | 8 | M | |
| 20 | XII. | Gain from Selection | " | " | 10 | W | Outl |
| 21 | XIII. | Synthetics | " | " | 12 | F | |
| 22 | " | Forage breeding | " | " | 15 | M | 6 |
| SECTION 3 -- BREEDING SELF-POLLINATED CROPS (7 lectures) | | | | | | | |
| 23 | XIV. | Introduction and Bulk 1 | " | " | 17 | W | |
| 24 | " | Introduction and Bulk 2 | " | " | 19 | F | |
| 25 | XV. | Pedigree and Modifications 1 | " | " | 22 | M | |
| 26 | - | <i>Exam II (through forage breeding)</i> | " | " | 24 | W | Exm |
| 27 | " | Pedigree and Modifications 2 | " | " | 26 | F | 7 |
| 28 | XVI. | Backcross and Modifications 1 | " | " | 29 | M | |
| 29 | " | Backcross and Modifications 2 | " | " | 31 | W | Rgh |
| SECTION 4 -- SPECIAL TOPICS (7 lectures) | | | | | | | |
| 30 | XVII. | Induced Variation, Mutation Breeding | " | Nov. | 2 | F | |
| 31 | XVIII. | Intellectual Property Rights | " | " | 5 | M | 8 |
| 32 | XIX. | Project Management / Mechanization | " | " | 7 | W | |
| 33 | XX. | Genotype x Environment Interaction | " | " | 9 | F | |
| 34 | XXI. | Index Selection | " | " | 12 | M | |
| 35 | XXII. | Disease Resistance | " | " | 14 | W | 9 |
| 36 | XXIII. | Insect, Arachnid and Stress Resistance | " | " | 16 | F | Prjct |
| SECTION 5 -- CLONAL CROPS (7 lectures) | | | | | | | |
| 37 | XXIV. | Polyploidy | " | " | 19 | M | |
| 38 | - | <i>Exam III (through stress resistance)</i> | " | " | 26 | W | Exm |
| 39 | " | Interspecific Hybridization | " | " | 28 | F | |
| 40 | XXV. | Breeding Asexually-Propagated Crops | " | " | 30 | M | 10 |
| 41 | XXVI. | Breeding Large Perennials | " | Dec. | 3 | M | |
| 42 | XXVII. | Plant Breeding Overview | " | " | 5 | W | |
| - | - | Plant Breeding Final | " | " | 7 | F | Fnl |