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| Lecture | Day | Date | Snippets | Topic |
| 1 | W | Jan. 12 |  | Themes of plant breeding, pre quiz, goals of course |
| 2 | F | Jan. 14 |  | **DVS out – students watch history movie** |
| 3 | M | Jan. 17 |  | **MLK day** |
| 4 | W | Jan 19 |  | Plant Breeding – History/Milestones |
| 5 Rm 460 | F | Jan 21 |  | Review of Mendelian genetics |
| 6 | M | Jan 24 |  | Genetic Resources |
| 7 | W | Jan. 26 |  | Genetics of populations |
| 8 Rm 301 | F | Jan. 28 |  | Inbreeding |
| 9 | M | Jan. 31 | Asst 1 out | Intro to quantitative genetics |
| 10 | W | Feb. 2 | Ana | Intro to quantitative genetics |
| 11 Rm 460 | F | Feb. 4 | Asst 1 due | Genotype x environment interaction |
| 12 | M | Feb. 7 |  | **DVS out** |
| 13 | W | Feb. 9 |  | **DVS out - Exam I** |
| 14 Rm 460 | F | Feb. 11 |  | Plant Breeding terminology |
| 15 | M | Feb. 14 | David | Pedigree selection |
| 16 | W | Feb. 16 |  | Single seed descent; doubled haploids |
| 17 Rm 460 | F | Feb. 18 | 2 paragraphs due | Mass selection |
| 18 | M | Feb. 21 | Grant | Bulk selection |
| 19 | **W** | **Feb. 23** |  | **Visit tobacco breeding GH** |
| 20 Rm 460 | F | Feb. 25 |  | Off season nurseries; speed breeding |
| 21 | M | Feb. 28 | Ana  | Field plot technique |
| 22 | **W** | **Mar. 2** |  | **Visit sorghum GH** |
| 23 Rm 460 | F | Mar. 4 | David  | Field plot technique |
| 24 | **M** | **Mar. 7** |  | **Visit grass breeding GH**  |
| 25 | W | Mar. 9 |  | **DVS OUT – Exam II** |
| 26 Rm 460 | F | Mar. 11 | Grant  | Hybrids; reciprocal recurrent selection |
|  |  | **Mar. 14-18** |  | **Spring break** |
| 26 | M | Mar. 21 |  | Development of synthetics |
| 27 | W | Mar. 23 |  | Dissect cultivar release documents |
| 28  | **F** | **Mar. 25** | **Ana**  | **Visit wheat breeding GH** |
| 29 | M | Mar. 28 |  | Breeding for yield |
| 30 | W | Mar. 30 |  | Breeding for quality |
| 31 Rm 460 | F | April 1 |  | Breeding for disease resistance |
| 32 | M | April 4 | David  | Breeding for disease resistance |
| 33 | W | April 6 |  | Class presentations |
| 34 Rm 460 | F | April 8 |  | Class presentations |
| 35 | M | April 11 | Grant  | Markers in plant breeding |
| 36 | W | April 13 |  | **DVS out – Anthony Clark marker project** |
| 37 Rm 460 | F | April 15 |  | Marker assisted backcrossing |
| 37 | M | April 18 |  | **DVS out - Hands-on Marker project** |
| 38 | W | April 20 |  | **DVS out - Hands-on Marker project** |
| 39 | S | April 23 |  | Saturday Field trip to Princeton, Schochoh |
| 40 | M | April 25 |  | The UK wheat breeding program |
| 41 | W | April 27 |  | Seed production and cultivar release |
| 42 Rm 460 | F | April 29 |  | Final Day of Class: review |

Mid-term Exam I – 15%

Mid-term Exam II – 15%

Class Presentation – 20%

Final Exam – 15%

Marker Project Write-up – 15%

Problem Sets, Assignments – 20 %

Texts

Fehr – Principles of Cultivar Development Vol. 1 (Iowa State Univ. Bookstore)

 To order this book you need to call the Iowa State University Bookstore at 515- 294-0244 and place the order over the phone

Murphy – The Ghost of Gregor Mendel (dvs will provide)