MG Undergraduate Major with a Plant Cellular and Molecular Biology (PCMB) Specialization - Semesters

Part A. Required Prerequisites (do not count toward the 30 hour major)

1. Bio 1113 (4) AND 1114 (4)
2. Chem 1210 (5) AND Chem 1220 (5)
3. Chem 2510 (4), 2520 (4), 2540 (2), and 2550 (2)
4. Math 1150 Pre-Calculus (5) AND Math 1156 Calculus for Biological Sciences (5) OR Math 1151 (5)
5. Physics 1200 (5) AND 1201 (5)

Honors or more advanced versions for any of these courses are acceptable.

Part B. Core Requirements (the core comprises at least 20 credit hours of the 30 credit hour major):

1. Biochemistry 4511 (4) OR
   Biochemistry 5613 (3) AND Biochemistry 5614 (3)
2. MG 4606 Molecular Genetics (4).
3. MG 5607 Cell Biology (3) or MG5607E (4)
4. MG 5608 Genes and Development (3) or MG5608E (4)
5. MG 3300 General Plant Biology (3)
6. MG 3436 Introductory Plant Physiology (3)

Part C. Electives (choose at least 3 electives from the following list; electives plus the core must total at least 30 credit hours):

MG 4503 Molecular Genetics Writing Project (on a PCMB topic) (1)
MG 4998 (or 4998H) Undergraduate Research and/or MG 4999 (or 4999H) Thesis Research (up to 4 semester credit hours of research in a plant lab can count towards the PCMB specialization)
MG 5193 Individual Studies (on a PCMB topic) (1-3) (No more than 3 semester credit hours can count towards the major)
MG 5194 Group Studies (on a PCMB topic) (1-3) (No more than 3 semester credit hours can count towards the major)
MG 5601 Molecular Genetics Lab or MG 5602 Cell and Developmental Biology Lab with a plant module (3-4)
MG 5630 Plant Physiology (3)
MG 5643 Plant Anatomy (3)
MG 5645 Quantitative, Population and Evolutionary Genetics (2)
MG 5735 Plant Biochemistry (3)
MG 5797 Study at a Foreign Institution (1-15) with a plant focus (No more than 3 semester credit hours of 5797 or 5798 can count towards the major)

MG 5798 Study Tour: Domestic (1-15) with a plant focus (No more than 3 semester credit hours of 5797 or 5798 can count towards the major)
MG 6625 Plant Metabolic Engineering (2)
MG 6741 Reproductive Biology of Flowering Plants (2)
MG 6795 Special Topics in Molecular Genetics (on a PCMB topic) (1-3)

Plant Pathology 703 Successor: Agricultural Genomics: Principles and Applications (2?)

Other elective courses may be substituted with permission of advisor.