PLANT SCIENCE (PLNT)

PLNT 7120 Special Problems in Plant Science 3 cr
Reading or assignment or research on specific aspects of crop development, crop production, weed science, plant pathology, plant biochemistry or plant physiology.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: written consent of department head.

PLNT 7130 Topics in Plant Breeding and Genetics 3 cr
An in-depth study of selected topics of current interest in the fields of plant breeding and genetics.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: written consent of department head.

PLNT 7162 Plant Genomics 3 cr
Detailed analysis of advanced genomic techniques, experimental approaches, and progress in current plant genomic projects.

PLNT 7164 Genetic Mapping in Plants 3 cr
Application of genetic mapping analyses for the dissection of traits in plant species. Linkage mapping, quantitative trait locus (QTL) mapping, association mapping, and related analyses will be reviewed in detail. Emphasis will be placed on practical applications in genetic studies. The analysis and interpretation of real data will be conducted in computer tutorial sessions.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: PLNT 4330 or consent of instructor.

PLNT 7170 Advanced Plant Breeding 3 cr
Advanced training in modern methods of plant breeding.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: PLNT 3520 or consent of instructor.

PLNT 7250 Plant Science Seminar 3 cr
Principles of oral and poster presentations, visual aid design and organization are discussed and then applied by students in presentations of their current research, and agricultural issues. Course evaluated on a pass/fail basis.

PLNT 7340 Advanced Weed Science 3 cr
Weed biology and ecology in the context of weed management, covering theory, current information, investigative approaches and experimental techniques. Topics explored include: weed population biology, modelling, weed community ecology, herbicide efficacy and herbicide resistant weeds.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: PLNT 3540 or equivalent or consent of instructor.

PLNT 7420 Advanced Plant Science Seminar 3 cr
The development of a research proposal, instruction and practice in scientific writing and presentation of a seminar. For Ph.D. students only. Course evaluated on a pass/fail basis.

PLNT 7480 Epidemiology of Plant Disease 3 cr
Lectures, seminars and discussions relating epidemiological principles to plant disease development and control. The course examines in-depth the interrelationships of host, pathogen and environment. Measurement of epidemiological parameters is stressed in relation to disease assessment, disease forecasting and disease management.

PLNT 7610 Topics in Crop Physiology 3 cr
An in-depth study of selected topics of current interest in the field of Crop Physiology.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: written consent of department head.

PLNT 7612 Advanced Plant Physiology 3 cr
Examination of current concepts of regulation and limitations of photosynthesis, nitrogen metabolism, and assimilate partitioning in field and horticultural crops. Content will include the mode of action of plant growth regulators and herbicides in these processes.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisites: PLNT 3400 or BIOL 3400 or the former PLNT 3500, PLNT 4590 or consent of instructor.

PLNT 7620 Topics in Agronomy 3 cr
An in-depth study of selected topics of current interest in the field of Agronomy.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: written consent of department head.

PLNT 7630 Topics in Plant Pathology 3 cr
An in-depth study of selected topics of current interest in the field of Plant Pathology.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: written consent of department head.

PLNT 7660 Advanced Crop Production 3 cr
A lecture-seminar course to investigate environmental, crop management and genetic limitations to growth, yield formation, yield, water use efficiency and quality of field, forage and horticultural crops. Interactions will be stressed and emphasis will be placed on sustainable crop production systems. Simple and complex relationships will be demonstrated using models.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: consent of instructor.

PLNT 7690 Bioinformatics 3 cr
An introduction to the theory, strategies, and practice of data management, analysis and utilization in molecular biology. Topics include DNA and protein sequence analysis, biological databases, genomic mapping and analysis of gene expression data. This course will include problem-solving exercises using Unix server-based software. Not to be held with PLNT 4610.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: PLNT 2530 or PLNT 3140 or PLNT 4310 or the former PLNT 4540 or MBIO 3410 or consent of instructor.
Equiv To: PLNT 4610