Horticulture & Landscape Design

Horticulture and Landscape Design (Hort) offers courses that focus on various aspects of horticulture, landscape design, and sustainable practices. These courses range from introductory to advanced levels, providing students with a comprehensive understanding of the field. Here are some courses that exemplify the breadth of study offered in Hort:

- **HORT 105. Miracle Growing. 3 Credits. (3 Lec)**
  Science in the context of horticulture. Learn environmental factors affecting horticulture and current measurement technology. Projects explore global and regional issues, careers, and tools necessary to be a successful horticulturist.

- **HORT 201. Sustainable Landscape Studio. 3 Credits. (1 Lec, 2 Lab)**
  Focuses on planting design elements and principles, landscape trends, styles and theory; involves application of planting design to a variety of project types including engineering, architectural, climate control, basketry, sensory, and aesthetic uses. Emphasizes on plant and environmental relationships. Construction documentation and cost estimating for planting landscape installation.

- **HORT 220. Sustainable Landscape Studio II. 3 Credits. (1 Lec, 2 Lab)**
  CR/REQUISITES: HORT 120 or consent of instructor. CO-REQUISITE: HORT 131, HORT 225. One of two studios in the sustainability series relating to theoretical concepts and practical applications of sustainable landscape design and land development at nested scales (site, neighborhood, city, region, and nation) with this one focusing on natural resource aspects. Course material provided through lectures, readings, and student projects.

- **HORT 225. Landscape Design III. 3 Credits. (1 Lec, 2 Lab)**
  PREREQUISITE: ARCH 151IA. Hand graphic communication methods, media, and equipment for landscape designers throughout the design process. Exploration and assessment of landscape representation for site analysis, schematic design, planting design, and design presentation.

- **HORT 226. Landscape Design II. 3 Credits. (3 Lab)**
  PREREQUISITE: DDSN 101, DDSN 114 (may be taken as a co-requisite), and HORT 225. Understanding of the opportunities offered by computer graphic techniques for landscape architectural drawings, including plans, elevations, axonometric perspectives, and layouts. Includes instruction in three major areas of computer applications for the different phases of a design project: computer-aided design, digital image editing, and manipulation, and three-dimensional modeling. Focuses on AutoCAD, Photoshop Suite, SketchUp, and integration of hand graphics.

- **HORT 231. Landscape Design IV. 3 Credits. (3 Lab)**
  Identification, culture, and uses of deciduous and evergreen trees, shrubs and vines commonly used as ornamentals in Montana, and some species utilized outside of Montana. Lab includes extensive plant walks.

- **HORT 232. Herbaceous Ornamentals. 3 Credits. (2 Lec, 1 Lab)**
  PREREQUISITE: BIOB 170IN (may be taken as a co-requisite). Identification, characteristics, cultural requirements and ornamental uses of indoor tropical foliage and flowering plants, herbaceous landscape annuals and perennials and flowering bulbs. This is a hybrid course requiring student participation in one lab each week, with all other course information and participation via the web.

- **HORT 245. Plant Propagation. 3 Credits. (2 Lec, 1 Lab)**
  PREREQUISITE: CHMY 121IN or CHMY 141 and BIOB 170IN or BIOB 160IN. Traditional sexual and asexual reproduction of plants including seed germination, stem and leaf cuttings, grafting, and layering. Includes discussion of the biology and physiology of propagation methods. Lab includes experimentation with the various propagation methods using native plants as model systems.

- **HORT 291. Special Topics. 1-4 Credits. (1-4 Lec; 12 cr max) On Demand**
  PREREQUISITE: None required, but some may be necessary by each offering department. Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number.
HORT 435. Landscape Planning. 4 Credits. (1 Lec, 3 Lab) S
Alternate Odd Years PREREQUISITES: HORT 331 Explores opportunities for integrating biophysical characteristics and ecological assets with land use development at macro and meso scales. Topics include landscape ecology for land use planning, PROST (parks, recreation, open space and trails) planning, and master planning for green infrastructure.

HORT 440. Urban Planning and Design. 4 Credits. (1 Lec, 3 Lab) S
Alternate Even Years PREREQUISITES: HORT 331. Focuses on the challenges and opportunities of developing vibrant, sustainable neighborhoods and regions. Topics include city form, street design, sustainable neighborhoods, and urban ecological design. Studio projects focus on neighborhood master planning, brownfields redevelopment, and public infrastructure design.

HORT 447. Advanced Plant Propagation. 3 Credits. (1 Lec, 2 Lab) F
PREREQUISITE: Senior standing. Students will learn specialized sexual and asexual propagation techniques, with an emphasis on the physiological and environmental manipulation of plants associated with in vitro, seed and grafting production. Students will receive extensive tissue culture experience.

HORT 485R. Horticulture Capstone I. 1 Credit. (1 Lec) F
PREREQUISITE: Senior standing. First semester of a two-semester project for seniors majoring in Horticulture Science. This capstone course allows students to pursue a contemporary issue or problem in horticulture within a team research project.

HORT 486R. Horticulture Capstone II. 2 Credits. (2 Lec) S
PREREQUISITE: majors only and senior standing. Second semester of a two-semester project for seniors majoring in Horticulture Science. This capstone course allows students to pursue a contemporary issue or problem in horticulture within a team research project.

HORT 490R. Undergraduate Research. 1-4 Credits. (1-4 Ind; 12 cr max) F,S,Su
PREREQUISITE: Senior standing and approval of instructor. Undergraduate research which may culminate in a research paper, journal article, or undergraduate thesis. Course will address responsible conduct of research.

HORT 491. Special Topics. 1-4 Credits. (1 Ind; 12 cr max) On Demand
PREREQUISITE: Course prerequisites as determined for each offering. Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand.

HORT 492. Independent Study. 1-3 Credits. (1-3 Ind; 6 cr max) F,S,Su
PREREQUISITE: Junior standing, consent of instructor and approval of department head. Directed research and study on an individual basis.

HORT 498. Internship. 2-12 Credits. (2-12 Lec; 12 cr max) F,S,Su
PREREQUISITE: Junior standing, consent of instructor and approval of department head. An individualized assignment arranged with an agency, business, or other organization to provide guided experience in the field.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.