HORTICULTURE (HRT)

HRT 100 Introduction to Horticulture (3 CR.)
Introduces commercial horticulture industry with emphasis on career opportunities. Examines equipment, facilities, and physical arrangements of production, wholesale and retail establishments. Surveys individual areas within horticulture industry. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 115 Plant Propagation (3 CR.)
Teaches principles and practices of plant propagation. Examines commercial and home practices. Provides experience in techniques using seed-spores, cuttings, grafting, budding, layering, and division. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 119 Irrigation Systems For Turf And Orna (3 CR.)
Explains why, when, and how irrigation systems are used by the grounds management industry. Includes component selection, system design, installation, operation, and maintenance. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 120 History of Garden Design (3 CR.)
Studies the development of gardens as they chronicle the development of civilization. Introduces the periods, in both Europe and North America, beginning with settlement, on through industrial development, land and space utilization, to current environmental concerns. Explores physical and cultural influences on garden design and utilization. Lecture 3 hours per week.

HRT 121 Greenhouse Crop Production I (3 CR.)
Examines commercial practices related to production of floricultural crops. Considers production requirements, environmental control and management, and cultural techniques affecting production of seasonal crops. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 125 Chemicals in Horticulture (3 CR.)
Emphasizes basic chemical principles and their application to horticulture. Introduces principles of inorganic and organic chemicals. Studies chemical activities of insecticides, fungicides, herbicides, fertilizers, and growth regulators. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 127 Horticultural Botany (3 CR.)
Studies taxonomy, anatomy, morphology, physiology, and genetics of plants as applied to identification, propagation, and culture. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 134 Four Season Food Production (3 CR.)
Familiarizes students with organic small-scale food production through lecture and demonstration. Includes seed saving, cover crops, and gardening planning. Lecture 3 hours per week.

HRT 135 Training for Commercial Pesticide Application (3 CR.)
Introduces students to the principles and practices for safe pesticide usage as required by law in the state of Virginia. Prepares students for the official tests administered by VDACS (Virginia Department of Agriculture and Consumer Services). Lecture 3 hours. Total 3 hours per week.

HRT 160 Applied Mathematics for the Green Industry (2 CR.)
Covers the basic math skills needed in the Green Industry to include areas, volumes, calibration calculations, profit and loss statements, and topics specific to turf, landscape, greenhouse, nursery, and interior landscapes.

HRT 201 Landscape Plants I (3 CR.)
Studies landscape use of plants. Considers ornamental value, growth habit, identification, and limitations. Part I of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 202 Landscape Plants II (3 CR.)
Studies landscape use of plants. Considers ornamental value, growth habit, identification, and limitations. Part II of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 205 Soils (3 CR.)
Teaches theoretical and practical aspects of soils and other growing media. Examines media components, chemical and physical properties, and soil organisms. Discusses management and conservation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 207 Plant Pest Management (3 CR.)
Teaches principles of plant pest management. Covers morphology and life cycles of insects and other small animal pests and plant pathogens. Lab stresses diagnosis, chemical and nonchemical control of specific pests, and pesticide safety. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 230 Site Analysis (2 CR.)
Examines basic landscape and site planning techniques, environmental considerations, and construction principles. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

HRT 231 Planting Design I (3 CR.)
Applies landscape theory and principles of drawing to the planning of residential and small-scale commercial projects. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 232 Planting Design II (3 CR.)
Prerequisite is HRT 231. Applies landscape theory and principles of drawing to the planning of large-scale landscape designs. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 233 Landscape Drawing Applications (3 CR.)
Applies theories of landscape design and drawing to actual design projects and tasks. Emphasizes drawing techniques and use of advanced media in applications. Includes hard line, free-style, and computer-assisted landscape drawing in simple landscape drawing applications. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 244 Computer Aided Drafting and Design (CADD) for Landscape Designers (3 CR.)
Prerequisite is HRT 231. Co-requisite is HRT 232. Provides instruction in the use of computer-aided drafting and design software for developing landscape plans and supporting information for drawings such as dimensions and area calculations. Lecture 3 hours per week.

HRT 245 Woody Plants (3 CR.)
Studies identification, culture, and uses of woody plants in landscaping. Includes deciduous and evergreen, native and cultivated shrubs, trees, and vines. Teaches scientific and common names of plants. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 246 Herbaceous Plants (3 CR.)
Studies identification, culture and uses of herbaceous plants in landscaping. Includes perennials, biennials, common bulbs, and annuals. Teaches scientific and common names of plants. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 247 Indoor Plants (2 CR.)
Studies identification, culture, and uses of indoor plants in interior landscaping. Includes tropical, subtropical and non-hardy temperate plants. Teaches scientific and common names of plants. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

HRT 250 Plant Composition (2 CR.)
Prerequisites are HRT 245 or HRT 201. Applies basic identification and landscape traits of woody plants to the creation of groupings/ combinations for effect in design. Lecture 2 hours per week.

HRT 251 Site Engineering For Landscape Design (3 CR.)
Pre or co-requisite is HRT 231, Planting Design I. It is also recommended but not required that the student take HRT 230, Site Analysis, prior to taking this course. Applies skill sets and knowledge from planting design to the principles of engineering relating to the site. Includes developing topographical drawings, turning radius for vehicles, structural details, and other structural requirments with the design. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 252 Landscape Construction Drawings (3 CR.)
Prerequisites are HRT 231 and HRT 251. Pre or co-requisite is HRT 232. Applies skill sets and knowledge from the prerequisite foundation classes in Planting Design and Site Engineering to prepare a completed set of construction drawings and specifications. Combines basic drawing skills with the site analysis and engineering to develop drawings and specifications that can be reasonably implemented by contractors. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 259 Arboriculture (3 CR.)
Studies the techniques of tree care. Covers surgery, pruning, insect and disease recognition and control, fertilization, cabling, and lightning rod installation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week

HRT 260 Introduction to Floral Design (3 CR.)
Teaches skills required for the composition of basic table arrangements. Includes the history of design styles, identification of flowers and greens, identification and use of equipment, and conditioning and handling of flowers. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 266 Advanced Floral Design (3 CR.)
Prerequisite is HRT 260. Teaches skills required for composition of traditional and contemporary floral designs. Includes use of exotic florals to create arrangement styles such as Japanese, European, Williamsburg, etc. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 268 Advanced Floral Design Applications (3 CR.)
Teaches skills required for the composition of large floral arrangements. Includes wedding, funeral and special occasion designs for the home as well as public areas. des use of dried and silk flowers for special occasions. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 269 Professional Turf Care (3 CR.)
Covers turfgrass identification, selection, culture, propagation, and pest control. Surveys commercial turf care operations and use of common equipment. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 275 Landscape Construction & Maintenance (3 CR.)
Examines practical applications of commercial landscape construction techniques, and materials used. Covers construction, planting, and maintenance. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 290 Coordinated Internship (1-5 CR.)
Coordinated Internship

HRT 297 Cooperative Education (1-5 CR.)
Cooperative Education

HRT 298 Seminar & Project (1-5 CR.)
Completion of a project or research report related to the student¿s occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.