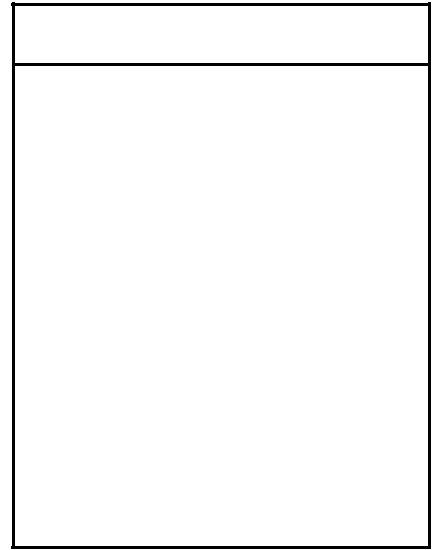


Prerequisite or corequisite: AVMT114 or



Cognate requirements—18

BIOL165, 166; CHEM131, 132

Animal Science Areas of Emphasis

Students may choose an area of emphasis from the following or develop a personalized program in consultation with their adviser to meet specific career goals.

Pre-Veterinary Medicine—24

AGRI137 (2); ANSI340 (3 species), 379, 420, 440, 445. Recommended electives for entry into veterinary college: *BCHM421, 422; CHEM231, 232; MATH165; PHYS141, 142.

*Courses may vary depending on entrance requirements of the veterinary college of choice.

Management—25

AGRI137 (2), 395; ANSI340 (4 species); ACCT111; ECON226. Electives can be tailored to meet a specific student's interest, such as animal behavior, business management or marketing, journalism, or communication.

BS: Horticulture

Major requirements—40

AGRI100, 118, 240, 308, 405; HORT105, 376, plus 18 credits in a special area of emphasis.

Cognate requirements—18

BIOL165, 166; CHEM131, 132

Horticulture Program Emphases in BS Degree Programs

Students may choose an area of emphasis from the following or develop a personalized program in consultation with their adviser to meet specific career goals.

Landscape Design—18

Select from the following: HORT135, 226, 228, 239, 350, 355, 365, 429, 448

Landscape/Turf Management—18

AGRI345 (1-4)

Topics in _____

A class based on selected topics of current interest in agriculture. Repeatable in different areas.

Management of Agriculture Enterprises
Concepts of International Agriculture

civilization and its impact upon society and the environment. The origin of landscape architectural styles and their characteristics will be explored. An introspective look at personalities of landscape designers through the ages and their influence upon the American landscape. *Fall*

HORT355 \$ Alt (3)
 (was AGRI355)
Landscape Site Design
 Concentrates on landscape accessories and hardscapes (curbing, sidewalks, driveways, terraces, pools, walls, fences). Lab includes practice in creating specification plans for hardscapes. Weekly: 2 lectures and 3 hours lab. Recommended: HORT135. *Fall*

HORT359 \$ Alt (3)
 (merges AGRI260, 370)
Greenhouse Environment and Construction
 Controlling the plant environment to enhance plant growth and optimal development through temperature, humidity, light, nutrients sanitation and carbon dioxide levels. Structures, coverings and mechanical systems used are explored to produce the most cost-effective horticultural crops. Weekly: 2 hours lecture and 3 hours lab. *Fall*

HORT360 \$ Alt (3)
 (was AGRI360)
Arboriculture
 Care of shade and ornamental trees living under environmental stress of urbanization, their legal protection and value. Includes tree anatomy and physiology, soils nutrition and water relations, transplanting, diseases and insect control, mechanical injury and pruning to develop a healthy tree. Weekly: 2 lectures and 3 hours lab. *Fall*

HORT365 \$ Alt (3)
 (was AGRI365)
Urban Landscape Design
 Designing landscapes to meet the environmental challenges and conditions of urban settings. Circulation patterns for conducting business, aesthetic and functional aspects of design for corporate/institutional, governmental agencies and municipal areas. Weekly: 2 lectures and 3 hours lab. Recommended: HORT135. *Spring*

HORT367 Alt (3)
 (was AGRI367)
Golf Course Supervision
 Management and culture for modern golf courses and country clubs. Topics include integration of turfgrass agronomics with the administrative components of budgeting, supervision and personnel management, country club organizational structures, and design of construction and environmental issues. Golf course history, U.S. golf association rules and U.S. Golf Course Superintendents' Association certification program will be covered. *Spring*

HORT378 Alt (4)
 (merges AGRI368, 369)
Integrated Pest/Disease Management
 Study of significant diseases and pests of agricultural and horticultural plant materials, including life cycles and influence of environmental conditions; determination of effective control methods for crop, ornamental and turfgrass production. *Fall*

HORT417 Alt (3)
 (was AGRI417)
Advanced Turfgrass Management
 Principles of advanced turfgrass management based on turf genera, cultivar, vegetative seed identification and optimal use criteria; detailed analysis of soil fertility management and research results; development of comprehensive management plan incorporating principles of integrated pest management into a cultural program to optimize the performance based on use systems. Use systems studied include golf courses, parks, lawns, athletic fields, bowling greens, cricket fields, and grass tennis courts. *Spring*

HORT429 \$ (3)
 (merges AGRI345, 429)
Computer Landscape Design
 Principles and practices of computer-aided landscape design, including creating scale perimeter plot plans, using drawing tools, plant/site relationships, plant selection and use leading to a computer-generated landscape drawing. Laboratory emphasizes skill development and proficiency in integrating software and hardware to create CAD-generated landscape designs. Prior landscape drawing course work is recommended. *Fall, Spring*

HORT448 \$ Alt (4)
 (merges AGRI409, 425)
Advanced Design and Graphics
 Landscape design concepts relating to the more challenging problems of residential design. Field application of grading relating to contours, specifications, exploring deck design, planting combinations, and exercises in graphics and rendering for presentations. Weekly: 2 lectures and 3 hours lab. Recommended: HORT135. *Spring*

ENGINEERING, COMPUTER SCIENCE, AND ENGINEERING TECHNOLOGY

Haughey Hall, Room 312
 (616)471-3420
 FAX: (616)471-3797
 engr-info@andrews.edu cs-info@andrews.edu
 http://www.andrews.edu/COT/

Faculty
 Ronald L. Johnson, *Acting Chair*
 Gerald W. Coy
 Glenn E. Johnson
 Gunnar Lovhoiden
 Roberto Ordóñez
 Stephen Thorman
 James Wolfer

Academic Programs	Credits
BS: Computing	40
Computer Science Emphasis	
Software Systems Emphasis	
Minor in Computer Science	20
BS in Engineering Program	
First two years on Andrews campus and final years at Walla Walla College, College Place, WA	
BSET: Engineering Technology	
Computer Engineering Technology	40
Mechon35.12, inis t (4: opt0.0014 nambuñ3	5.1Engion t=ondogy