

## HISTORY

- 833\*.** **Seminar in Chinese History**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 15 credits.

Selected topics in modern and pre-modern Chinese history  
QA: HST 897

- 840\*.** **Seminar in the History of International Relations**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 15 credits.

Seminar in the history of international relations since the era of the French and Industrial Revolutions  
QA: HST 873

- 848\*.** **Seminar in British History**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 15 credits.

Topics in British history as chosen by the professor. Research on appropriate related problems  
QA: HST 848

- 850\*.** **Seminar in Comparative History**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 12 credits.

Topics in comparative history; analysis of themes or problems from different cultures and countries; methods and concepts in the comparative approach to history

- 860\*.** **Seminar in Women's HST**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 15 credits.

Seminar in the history of women and gender

- 870\*.** **Seminar in African-American History**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 15 credits.

Social, political, economic and cultural topics and the intersection of race, class, and gender

- 890\*.** **Independent Study**  
Fall, Spring, Summer. 1 to 4 credits.  
May reenroll for a maximum of 9 credits.

R: Approval of the Department  
Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.  
QA: HST 898

- 898\*.** **Master's Research-Plan B**  
Fall, Spring, Summer. 3(03-00) May reenroll for a maximum of 6 credits.

R: Approval of the Department  
Directed research in support of plan B master's degree requirements.

- 899\*.** **Master's Thesis Research-Plan A**  
Fall, Spring, Summer. 3(03-00) May reenroll for a maximum of 6 credits.

R: Approval of the Department  
Directed research leading to a master's thesis, used in partial fulfillment of plan A master's degree requirements.  
QA: HST 899

- 901\*.** **Advanced Research Seminar in History**  
Fall, Spring. 3(3-0) May reenroll for a maximum of 9 credits.

Current issues of professional importance; innovative research topics; recent advances in historiography  
QA: HST 901A HST 901B HST 901C

- 990\*.** **Doctoral Independent Study**  
Fall, Spring, Summer. 1 to 4 credits.  
May reenroll for a maximum of 9 credits.

R: Approval of the Department  
Special projects, directed reading, and research arranged by an individual doctoral candidate and a faculty member in areas supplementing the regular course offerings.

- 999\*.** **Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 4 credits.  
May reenroll for a maximum of 24 credits.

R: Approval of the Department

QA: HST 999

## HORTICULTURE HRT

- 100\*.** **Horticulture: Plants and People**  
Spring. 3(2-2)

Functional uses of plants: aesthetics, food, industry, recreation. Growing and using horticultural plants. Consumer and environmental issues related to horticulture in daily living.

- 201\*.** **Principles of Horticulture I**  
Fall. 3(3-0)  
P: BOT 105 or BS 110 or BS 111 or concurrently.

Contributions of horticulture to society. Geography of horticulture. Effects of environment on horticultural plants. Cultivar and clone selection. Seed production, germination, transplant production and stand establishment. Field trips required.  
QP: BOT 205 ORBS 210ORBS 211 QA: HRT 201 HRT 221

- 201L\*.** **Principles of Horticulture I Laboratory**  
Fall. 1(0-3)  
P: HRT 201 or concurrently.

Growing and handling plants. Measurement of environmental factors affecting plant growth. Identification of selected horticultural species.  
QP: BOT 205 ORBS 210ORBS 211 QA: HRT 201 HRT 221

- 202\*.** **Principles of Horticulture II**  
Spring. 3(3-0)  
P: HRT 201.

Asexual propagation. Control of vegetative growth, flowering, and fruit growth. Horticultural practices used to grow, harvest, and market crops, including sustainable agriculture. Field trips required.  
QP: HRT 201 QA: HRT 201 HRT 221

- 202L\*.** **Principles of Horticulture II Laboratory**  
Spring. 1(0-3)  
P: HRT 202 or concurrently.

Asexual propagation techniques. Pruning and training. Soils and soil media. Moisture and water relations. Fertilization practices. Use of growth regulators. Pest management.  
QP: HRT 201 QA: HRT 201 HRT 221

- 211.** **Ornamental Trees and Narrow-Leaved Evergreens**  
Fall, Summer. 3(2-3)

Identification, adaptation, evaluation, management, and landscape uses of trees, deciduous shrubs, narrow-leaved evergreens, and woody vines.  
QA: HRT 211

- 212.** **Ornamental Flowering Shrubs and Broad-Leaved Evergreens**  
Spring. 3(2-3)

Identification, adaptation, evaluation, management, and landscape uses of flowering trees, deciduous shrubs, broad-leaved evergreens, woody vines and ground covers.  
QA: HRT 212

- 221\*.** **Greenhouse Structures and Management**  
Fall. 3(3-0)

Planning and operation of a commercial greenhouse. Structures, coverings, heating, cooling, ventilation, irrigation, fertilization, root media, and pest control. Field trips required.  
QA: HRT 205

- 225A\*.** **Basic Floral Design**  
Spring. 2(2-4)

Principles and mechanics of floral design. Line and mass designs, symmetrical and asymmetrical designs. Contemporary techniques. Flower identification. Retail pricing. Laboratory fee required. First half of semester.  
QA: HRT 242

- 225B\*.** **Advanced Floral Design**  
Spring. 2(2-4)  
P: HRT 225A or concurrently.

Marketing, selling, and designing flowers for weddings, funerals, and other special events. Identification, handling, and design use of fresh flowers and other materials. Laboratory fee required. Second half of semester.  
QA: HRT 242

- 310\*.** **Nursery Management**  
Fall. 3(2-3)  
P: HRT 202, HRT 211, HRT 212, MTH 116. R: Not open to freshmen and sophomores.

Management practices applied to wholesale and retail nursery production and marketing. Field trip required.  
QP: HRT 201 HRT 211HRT 212 QA: HRT 440

- 311\*.** **Landscape Design and Management Specifications**  
Spring. 4(2-4) Interdepartmental with the Department(s) of Landscape Architecture,  
P: HRT 211; HRT 212 or concurrently.

Landscape design techniques, spatial organization, plant selection, plant and site interaction. Relationship between design, construction and maintenance. Preparation of planting and maintenance specifications. Cost estimation.  
QP: HRT 211 HRT 212 QA: HRT 327

- 322\*.** **Floriculture Crop Production I**  
Fall. 3(1-4)  
P: HRT 202.

Commercial production of floriculture greenhouse crops with emphasis on flowering and potted foliage plants and on seed germination. Field trips required.  
QP: HRT 205 QA: HRT 434 HRT 209 HRT 208 HRT 435

- 323\*.** **Floriculture Crop Production II**  
Spring. 3(1-4)  
P: HRT 322.

Commercial production of bedding plants and cut flowers. Finishing procedures for selected potted plant crops. Field trips required.  
QP: HRT 205 QA: HRT 208 HRT 434 HRT 435

- 325\*.** **Floral Distribution and Marketing**  
Spring. 3(2-2)  
P: HRT 322.

Business operations of wholesale and retail floral outlets. Identification, care, and handling of commercial cut flowers and foliages. Field trips required.  
QP: HRT 201 QA: HRT 248

- 330\*.** **Commercial Fruit Production**  
Fall. 4(3-2)  
P: BOT 301, HRT 202. R: Not open to freshmen and sophomores.

Commercial aspects of tree and small fruit production. Apples, cherries, peaches, grapes, blueberries, brambles and strawberries. Field trips required.  
QP: HRT 201 HRT 221BOT 301 QA: HRT 319 HRT 320

**HORTICULTURE**

**394A\*.** **Retail Florist Practicum**  
 Fall, Spring, Summer. 1 to 3 credits.  
 May reenroll for a maximum of 6 credits.  
 P: HRT 202, HRT 225B. R: Open only to juniors and seniors. Approval of department and application required. Maximum of 8 credits may be earned in HRT 394A and HRT 490. Customer relations. Floral design, flower buying, holiday planning. Advertising, display. Financial recordkeeping. Flower care and handling.  
 QP: HRT 242 QA: HRT 332

**421\*.** **Physiology of Plants in Controlled Environments**  
 Fall. 3(3-0)  
 P: BOT 301; HRT 201 or HRT 221. R: Not open to freshmen and sophomores. Physiological responses of plants to light, temperature, and gases in controlled environments. Flowering and vegetative growth. Characteristics of natural and artificial lighting sources.  
 QP: HRT 205 BOT 301 QA: HRT 417 HRT 434

**431\*.** **Reproductive Physiology of Tree Fruits**  
 Spring of even-numbered years. 2(2-0)  
 P: HRT 330. R: Not open to freshmen and sophomores. Physiology of flowering and fruiting in tree fruits: manipulation by cultural practices and growth regulators.  
 QP: HRT 320 BOT 301 QA: HRT 412

**440\*.** **Warm Season Vegetables: Physiology and Production**  
 Spring of even-numbered years. 3(2-3)  
 P: BOT 301 or concurrently; HRT 202. R: Not open to freshmen and sophomores. Warm season vegetables emphasizing botany, physiology, growth, development, and commercial production. Fresh market and processing industries. Field trips required.  
 QP: HRT 201 BOT 301 QA: HRT 452

**442\*.** **Cool Season Vegetables: Physiology and Production**  
 Fall of even-numbered years. 3(2-3)  
 P: BOT 301 or concurrently; HRT 202. R: Not open to freshmen and sophomores. Cool season vegetables emphasizing botany, physiology, growth, development and commercial production. Fresh market and processing industries. Field trips required.  
 QP: HRT 201 BOT 301 QA: HRT 456

**460\*.** **World Vegetable Crops**  
 Spring of odd-numbered years. 3(3-0)  
 P: BOT 105 or BS 110. R: Not open to freshmen and sophomores. Importance of vegetables in human nutrition, income generation, and international development. Unique cultural and climatic requirements for production and marketing of vegetables grown worldwide.  
 QP: HRT 201 ORBS 110ORBOT 205 QA: HRT 460

**462\*.** **Tropical and Subtropical Fruits**  
 Fall of even-numbered years. 2(2-0)  
 P: BOT 105 or BS 110. R: Not open to freshmen and sophomores. Climatic requirements, botany, morphology, production practices, uses, and economic and cultural importance.  
 QP: HRT 201 ORBOT 205 QA: HRT 462

**480\*.** **Woody Plant Physiology**  
 Spring. 3(3-0) Interdepartmental with the Department(s) of Forestry.  
 P: BOT 301 R: Juniors and above  
 Physiology of carbon utilization. Effects of water, temperature, nutrition and light on apical, vegetative and reproductive growth of woody plants.  
 QP: BOT 301 QA: HRT 411

**482\*.** **Handling and Storage of Horticultural Crops**  
 Fall of odd-numbered years. 3(2-3)  
 P: BOT 105 or BS 110. R: Not open to freshmen and sophomores. Biological principles involved in quality maintenance of horticultural products. Control of deterioration during harvesting, handling, transport, and storage. Field trip required.  
 QP: BOT 205 ORBS 210 QA: HRT 416

**486\*.** **Biotechnology in Agriculture: Applications and Ethical Issues**  
 Spring of even-numbered years. 3(3-0) Interdepartmental with the Department(s) of Philosophy, Crop and Soil Sciences, Forestry.  
 P: BS 111 or BOT 105. R: Not open to freshmen and sophomores. Current and future roles of biotechnology in agriculture: scientific basis, applications. Environmental, social, and ethical concerns.  
 QP: BOT 205 ORBS 211 QA: HRT 486 PHL 486 CSS 486 FOR 486

**488\*.** **Horticultural Management**  
 Spring. 3(2-2)  
 P: HRT 202; EC 201 or EC 202; one 300 or 400 level HRT course R: Seniors HRT  
 Integration of physiological, genetic, economic and production principles to develop a horticultural business plan. Management techniques. Environmental impacts of business and production practices.  
 QP: HRT 201 HRT 221EC 201IOREC 202

**490\*.** **Independent Study in Horticulture**  
 Fall, Spring, Summer. 1 to 2 credits.  
 May reenroll for a maximum of 6 credits.  
 P: HRT 202 R: Approval of department; application required  
 Independent study of horticulture on a field, laboratory or library research program of special interest to the student.  
 QP: HRT 201 HRT 221 QA: HRT 330

**491\*.** **Selected Topics in Horticulture**  
 Fall, Spring. 1 to 3 credits. May reenroll for a maximum of 6 credits.  
 P: HRT 202 R: Juniors and above  
 Selected topics in horticulture of current interest and importance to students and the horticulture industry.  
 QA: HRT 331

**801\*.** **Research Procedures in Plant Science**  
 Spring. 3(2-1)  
 R: Approval of department  
 Orderly approach to plant research with special emphasis on the specific method and development of hypotheses with design and analysis of experiments.  
 QA: HRT 801

**802\*.** **Growth and Development of Horticultural Crops**  
 Spring of even-numbered years. 3(2-2)  
 Physiology of grafting, juvenility, flowering, fruiting, senescence, bud and seed dormancy, apical dominance of horticultural crops. Emphasis on critical review of literature.  
 QA: HRT 808

**803\*.** **Postharvest Physiology**  
 Spring of odd-numbered years. 3(2-2)  
 Physiology, biochemistry and molecular biology of maturation, ripening and senescence of harvested horticultural crop.  
 QA: HRT 825

**814\*.** **Plant Breeding and Genetics Seminar**  
 Fall, Spring, Summer. 1(1-0) May reenroll for a maximum of 10 credits. Interdepartmental with the Department(s) of Crop and Soil Sciences, Forestry.

Student seminar to cover plant breeding and genetics subjects not considered in formal courses. Course will give students experience in review, organization, oral presentation and defense of analysis of subjects in the literature.  
 QA: HRT 814

**815\*.** **Selected Topics in Plant Breeding and Genetics**  
 Fall, Spring, Summer. 1 to 2 credits. May reenroll for a maximum of 6 credits. Interdepartmental with the Department(s) of Crop and Soil Sciences, Forestry.

Selected topics in plant breeding  
 QA: HRT 815

**819\*.** **Advanced Plant Breeding**  
 Fall. 0(3-0) Interdepartmental with the Department(s) of Crop and Soil Sciences, Forestry.  
 P: CSS 250 or ZOL 241

Genetic expectations resulting from different breeding strategies with cross- and self-pollinated crop plants. Includes germplasm collections, mapping populations, and modifications of reproductive biology useful for crop improvement.

**831\*.** **Selected Topics in Horticulture**  
 Fall, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 0 credits.

Selected topics in horticultural science of current interest and importance.  
 QA: HRT 831

**836\*.** **Plant Evolution and the Origin of Crop Species**  
 Fall of even-numbered years. 3(3-0) Interdepartmental with the Department(s) of Crop and Soil Sciences, Forestry.

Cultural and biological aspects of evolution under domestication; origin and diversity of cultivated plants.  
 QA: HRT 836

**899\*.** **Master's Thesis Research**  
 Fall, Spring, Summer. 0(-) May reenroll for a maximum of 15 credits.

Master's thesis research

**999\*.** **Doctoral dissertation research**  
 Fall, Spring, Summer. 0(-) May reenroll for a maximum of 15 credits.

Doctoral dissertation research