

803. Historiography

Fall. 4(4-0)

Readings, discussions and written exercises designed to introduce the beginning graduate student to the problems, methods, and techniques of historical research. Examination of the major approaches to history. Discussion of and practice in the main techniques of historical method, including bibliography, documentation, and literary style. A section of the course will be arranged for the study of European history materials and a section for the study of American history materials.

819. Readings in Latin-American History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 40 credits. Approval of department.

821. Readings in Seventeenth and Eighteenth Century American History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits. Approval of department.

822. Readings in Nineteenth Century American History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits.

823. Readings in Twentieth Century American History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits.

824. Urban Policy in Historical Perspective

Fall. 3(3-0)

Urban policy in United States and other industrial countries since 1930, with attention to intended and unintended consequences for cities. Approved through Summer 1986.

831. Archives Administration

Winter. 4(4-0) Graduate students.

Review of archives administration, past and present, study of archivist's functions in the archives of business, government, educational, and private agencies.

832. Archives Operations

Spring. 4(1-6) HST 831.

Practical work in processing and analyzing collections in University Archives and Historical Collections; reporting and critiques on archives operations.

833. Archives Independent Study

Fall, Winter, Spring, Summer. 4 credits. HST 832.

An advanced archives course in which the student works under supervision on one or more projects, e.g., processing, finding aids, and oral history.

839. African Research

(IDC 838.) Fall, Winter, Spring. 2 to 4 credits. May reenroll for a maximum of 8 credits. Graduate standing or approval of instructor. Interdepartmental with African Languages and the departments of Anthropology, Educational Administration, Geography, Political Science, and Sociology. Administered by the Department of Anthropology.

African-related archival and field research topics and methodologies viewed from perspective of relevant social science and humanistic disciplines associated with the African Studies Center.

848. Readings in English History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 40 credits.

852. Readings in Ancient History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 40 credits.

853. Readings in Medieval History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 40 credits.

855. The Industrial Revolution in Europe

Winter of even-numbered years. 3(3-0) EC 318, EC 324. Interdepartmental with and administered by the Department of Economics. The preconditions that led to the momentous changes in agriculture and industry in Europe from 1700-1914.

863. Readings in Early Modern European History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits.

864. Readings in Recent European History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits.

867. Readings in Russian History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits.

873. Readings in the History of International Relations

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 20 credits.

894. Readings in African History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 40 credits.

897. Readings in Asian History

Fall, Winter, Spring. 4 credits. May reenroll for a maximum of 40 credits.

898. Directed Reading

Fall, Winter, Spring, Summer. 4 credits. May reenroll for a maximum of 16 credits. Graduate students; approval of department.

Supervised individual reading on special topics and fields.

899. Master's Thesis Research

Fall, Winter, Spring. Variable credit. Approval of department.

901A. Doctoral Seminar

Fall. 3(3-0) Admission to doctoral program in history.

HST 901A, HST 901B and HST 901C constitute a three-term seminar required of students entering doctoral program. Under guidance of dissertation director and course instructors student will prepare major research paper and submit for criticism by all participants. Grades are given for the three terms at the end of HST 901C.

901B. Doctoral Seminar

Winter. 3(3-0) HST 901A.

Continuation of HST 901A.

901C. Doctoral Seminar

Spring. 3(3-0) HST 901B.

Continuation of HST 901B.

999. Doctoral Dissertation Research

Fall, Winter, Spring. Variable credit. Approval of department.

HISTORY OF ART

See Art.

HORTICULTURE HRT

College of Agriculture and Natural Resources

101. Principles of Horticulture

Fall, Spring. 4(3-2) Not open to students with credit in HRT 201.

Principles of horticultural science and horticultural crop production, as related to fruits, vegetables, flowers and landscape plants.

208. Greenhouse Cut Flower Production

Fall. 4(3-2)

Commercial cut flower production including scheduling, cultural conditions, equipment, and management decisions. Laboratory provides live crops for study and discussion.

209. Foliage Plants

Fall. 4(3-2)

Identification, culture, propagation, and utilization of common foliage plants with emphasis on species and cultivars used for interior plantscapes.

211. Ornamental Trees and Narrow-leaved Evergreens

Fall. 4(2-4)

Identification, adaptation and evaluation of trees, deciduous shrubs, narrow-leaved evergreens and woody vines. Emphasis is on the aesthetic and functional uses of trees and shrubs in the landscape.

212. Ornamental Flowering Shrubs and Broad-leaved Evergreens

Spring. 4(2-4) HRT 211 or approval of instructor.

Identification, adaptation and evaluation of trees, deciduous shrubs, broad-leaved evergreens, woody vines and ground covers. Emphasis is on the flowering characteristics and aesthetic and functional uses of plants in the landscape.

221. Commercial Plant Propagation

Winter. 4(3-2) HRT 101.

Principles of plant propagation by seed, cutting, layerage, and graftage employed by nurseries; use of growth regulators and environmental treatments in plant propagation.

275. Landscape Horticulture Operations

Winter. 3(2-2)

Management aspects of landscape construction and maintenance operations. Emphasis on marketing of services, organization of labor, reporting procedures, horticultural specifications, bidding and project management.

Descriptions — Horticulture

of Courses

- 319. Small Fruit Production**
(419.) Winter of odd-numbered years. 3(3-0) HRT 101, BOT 205, BOT 301.
Commercial production culture, utilization and physiology of strawberries, grapes, blueberries and raspberries.
- 320. Tree Fruit Production**
Fall. 4(3-2) HRT 101, Juniors.
Commercial production of principle tree fruit crops of Michigan with emphasis on planting, soil management, fertilization, pruning, thinning, and grafting.
- 325. Ornamental Plant Management**
Spring. 4(3-2) HRT 101, HRT 211, HRT 212.
Transplanting and maintenance of landscape plants subject to stresses of urban environment. Development of annual maintenance specifications. Identification and evaluation of herbaceous annuals, biennials and perennials for landscape.
- 326. Herbaceous Ornamental Plants**
Summer. 4(3-3) HRT 101 or BOT 205 or approval of department.
Identification, evaluation, and utilization of annual, biennial, and herbaceous perennial plants for landscape. Includes bulbs, herbs, grasses, ferns, and cultivated plants.
- 327. Landscape Design: A Horticultural Approach**
Spring. 4(3-2) HRT 212 or concurrently.
Landscape design techniques. Plant selection and use. Plant and site relationships. Client and designer interaction. Laboratory emphasizes elementary drafting techniques, landscape plan preparation and interpretation.
- 330. Special Problems**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.
Individual work on a field, laboratory or library research problem of special interest to the student.
- 331. Selected Topics**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits if different topic is taken. Approval of department.
- 350. Floral Design**
Spring. 2(0-4) Junior majors and approval of department.
Principles of floral design and the care and handling of materials. Creation of corsages, terraria, tropical planters, and home, hospital and novelty arrangements.
- 402. Principles of Weed Control for Horticultural Crops**
Spring. 4(3-2) CEM 143, BOT 301.
Principles underlying weed control practices for horticultural crops. Weed biology and factors involved in biological, cultural, mechanical and chemical control. Collection of 40 weed species required.
- 408. Principles of Plant Breeding**
Winter. 4(3-2) CSS 250. Interdepartmental with and administered by the Department of Crop and Soil Sciences.
Application of genetics and other sciences to breeding and improvement of agronomic and horticultural crops.
- 410. Fruit Tree Physiology I**
Winter of even-numbered years. 4(4-0) Juniors, BOT 301, HRT 101.
Physiological effects of nutrition, moisture, light, temperature and culture as related to tree fruit crops.
- 412. Fruit Tree Physiology II**
Winter of odd-numbered years. 3(3-0) Juniors, HRT 101, BOT 301.
Physiology of flowering and fruit development in woody plants with special reference to chemical and cultural methods of manipulation.
- 416. Handling and Storage of Horticultural Crops**
Winter of even-numbered years. 4(3-2) Juniors.
Biological principles involving physical movement of fresh products from farm to consumer; physiological processes affecting maturity, quality and condition; selection and use of handling, storage, and transport facilities.
- 417. Controlled Plant Environment**
Fall. 3(3-0) HRT 101, BOT 301 or BOT 414.
Control of greenhouse environment and its effect on growth and production of horticultural crops.
- 418. Controlled Plant Environment Laboratory**
Fall. 2(1-2) HRT 417 or concurrently.
Experiments in the morphology and physiology of greenhouse crops. Crop production and the use of greenhouse equipment.
- 434. Greenhouse Container-Grown Plant Production**
Winter. 4(3-2) HRT 418 or approval of department.
Principles of flower crop physiology; management of container-grown plant production.
- 435. Commercial Bedding Plant Production**
Spring of odd-numbered years. 4(3-2) HRT 417, HRT 418, HRT 434.
Production and marketing of bedding plants. Includes germination, soils, transplanting, environmental factors, production practices, major species, structures, equipment, systems, problems, economics and marketing. One field trip required.
- 440. Nursery Management**
Fall. 3(2-2) Juniors.
Management practices applied to wholesale nursery production and marketing. One all-day field trip to visit nurseries is required.
- 452. Warm Season Vegetables**
Spring. 4(3-2) HRT 101, BOT 301, CSS 210.
Warm season crops with emphasis on botany, taxonomy, morphology, growth processes, production, harvesting, handling, quality and composition. Field trip required.
- 456. Cool Season Vegetables**
Fall. 4(3-2) HRT 101, BOT 301, CSS 210.
Cool season crops with emphasis on botany, taxonomy, morphology, growth processes, production, harvesting, handling, quality and composition. Field trip required.
- 460. Tropical Vegetables**
Spring of odd-numbered years. 3(3-0) HRT 101 or approval of instructor.
Culture of tropical vegetables in commercial and subsistence cropping systems. Role in human nutrition, income generation and international development.
- 462. Tropical Fruits and Spices**
Spring of even-numbered years. 3(3-0) HRT 101 or approval of instructor.
Culture of tropical fruits and spices in commercial and subsistence cropping systems. Role in human nutrition, income generation and international development.
- 801. Research Procedures in Plant Science**
Winter. 4(3-2) Approval of department.
Orderly approach to problems of biological research in relation to basic principles of research.
- 808. Physiology of Horticultural Crops**
Winter of even-numbered years. 4(3-2) BOT 415.
Physiology of grafting, juvenility, flowering of woody plants, fruiting, senescence, bud and seed dormancy as related to horticultural crops. Emphasis on critical review of literature.
- 810. Seminar**
Fall, Winter. 1(0-1)
- 814. Plant Breeding and Genetics Seminar**
Winter. 1(1-0) May reenroll for a maximum of 2 credits. Approval of department. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Crop and Soil Sciences.
- 815. Selected Topics in Plant Breeding and Genetics**
Fall, Winter, Spring, Summer. 2 to 5 credits. May reenroll for a maximum of 12 credits if different topics are taken. Approval of department. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Crop and Soil Sciences.
Selected topics in plant breeding including: host-plant resistance, nutrition and quality, computerized records and data analysis, classical literature and strategies for improving field, horticulture and forestry crops.
- 816. Special Problems in Plant Breeding and Genetics**
Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 8 credits. Approval of department. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry.
Students may conduct research in a laboratory, greenhouse or field-plot on a selected subject or study selected published literature under the supervision of a faculty member.
- 821. Genetic Concepts in Plant Breeding**
Fall. 3(3-0) CSS 250 or ZOL 441. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Crop and Soil Sciences.
Genetic structure of plant populations, gene action, inbreeding, outbreeding, heterosis, linkage and recombination, genetic architecture of traits, genetic distance.

- 822. Plant Breeding Systems**
Winter. 3(3-0) CSS 821, STT 422. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Breeding systems for improvement of self and cross pollinated and of vegetatively propagated crops. The genetic basis for parent selection.
- 823. Plant Breeding Methods**
Spring. 3(3-0) HRT 822, STT 423. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Crop and Soil Sciences. Methods, strategies and practices in organization and operation of plant breeding programs. Emphasis on practical application of classical, modern and futuristic approaches to plant breeding.
- 825. Post Harvest Physiology**
Winter of odd-numbered years. 4(3-2)
Biochemical and biophysical changes associated with the maturation, ripening and senescence of harvested horticultural plants.
- 830. Special Research Problems**
Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 12 credits. Approval of department.
- 831. Selected Topics**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits if different topic is taken. Approval of department.
- 836. Evolution of Crop Plants**
Fall of even-numbered years. 3(3-0) CSS 821 or approval of department. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Cultural and biological aspects of evolution under domestication; origin and diversity of cultivated plants.
- 838. Tissue Culture for Plant Breeding**
(840.) Winter of even-numbered years. 3(2-2) BOT 414, CSS 821. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. The application of plant cell, protoplast and tissue culture methodologies and principles to crop improvement.
- 844. Plant Organelle Genetics**
Winter of odd-numbered years. 3(3-0) Approval of department. Interdepartmental with Genetics and the departments of Botany and Plant Pathology, Crop and Soil Sciences, and Forestry. Organization, structure, function, heredity, molecular biology and manipulation of chloroplasts and mitochondria. Biological interactions between the nucleus and organelles.
- 850. Plant Interactions in Agroecosystems**
Winter of odd-numbered years. 3(3-0) BOT 450, BCH 401, CSS 402. Interactions between plants affecting mortality and plastic responses in horticultural, agronomic, and forest systems, including interference and symbiosis.
- 899. Master's Thesis Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

- 940. Theoretical Population Genetics**
Winter of even-numbered years. 4(4-0) MTH 113, STT 422, CSS 821. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Forestry. Discussion of mathematical theories in population genetics and experimental works on natural and laboratory populations.
- 941. Quantitative Genetics in Plant Breeding**
Spring of even-numbered years. 4(4-0) STT 423, CSS 823 or approval of department. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Crop and Soil Sciences. Calculation and implication of genetic parameters. Linkage. Coancestry and inbreeding. Covariance between relatives. Heritability and selection. Genotype by environment interaction. Emphasis on relationship of quantitative genetics to plant breeding.
- 944. Physiological Genetics**
Winter. 3(3-0) BOT 413; CSS 821. Interdepartmental with the departments of Crop and Soil Sciences, and Forestry. Administered by the Department of Forestry. Control of variation in higher plants including adaptive physiology, quantitative genetics, growth correlation, biochemical genetics, hybrid physiology, and geneecology.
- 999. Doctoral Dissertation Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

- 252. Professional Experience I**
Fall, Winter, Spring, Summer. 1 credit. Approval of school. A written report based on prior 400 hours of approved professional work experience in the hospitality industry.
- 261. Dimensions of Tourism**
Fall, Winter, Summer of odd-numbered years. 4(4-0) EC 201 or concurrently; not open to Seniors. Forces which influence the international and domestic hospitality, leisure, travel and recreation industries. Socio-economic models and measurement of regional impact, demand and supply.
- 265. Food Production Standards**
Fall, Spring. 4(4-0) HRI 245. Interrelationships of the environmental, microbiological and physiological principles relevant to the food service industry.
- 307. Supervision in the Hospitality Industry**
Fall, Winter, Spring, Summer of even-numbered years. 4(4-0) HRI 237, MGT 302. The direction of people at work in the hospitality industry. Special applications of supervisory management skills in hotels, restaurants and other hospitality industry establishments.
- 335. Service Industries Equipment and Utilities**
Fall, Winter, Summer of even-numbered years. 4(4-0) MTH 108 or MTH 111; HRI 237. Engineering in food and lodging industry, emphasizing utilities, machinery characteristics and environment.

HOTEL, RESTAURANT AND INSTITUTIONAL MANAGEMENT HRI

College of Business and Graduate School of Business Administration

- 102. Introduction to the Service Industries**
Fall. 3(3-0) Not open to Seniors. Management careers and opportunities in hotel, motel, food service, health facilities, club, recreational centers, tourism and other public hospitality businesses. Includes front office practice. Local field trip required.
- 203. Service Industry Accounting**
Fall, Spring. 4(4-0) ACC 202; not open to Seniors. Principles of accounting applied to service industries. Financial statement analysis and cash flow concepts. Managerial accounting emphasized.
- 237. Management of Lodging Facilities**
Fall, Winter, Spring. 4(4-0) Sophomore majors. An analysis of the guest cycle through examination of various operating departments within a hotel. Functions of revenue and nonrevenue departments with emphasis on managing departmental interrelationships.
- 245. Food Production Science**
Fall, Spring. 4(4-0) HNF 100. Interrelationships of the physical, biological and chemical principles relevant to the food service industry.
- 337. Management Systems for the Hospitality Industry**
Winter, Spring, Summer of even-numbered years. 4(4-0) CPS 110, EC 200. Evaluation and appraisal of management systems currently in use and the development of new management systems for the hospitality industry.
- 353. Professional Experience II**
Fall, Winter, Spring, Summer. 1 credit. HRI 252, approval of school. Must be completed before enrollment for final term of the senior year. A written report based on prior 400 hours of approved professional work experience in the hospitality industry.
- 375. Marketing of Hospitality and Travel Services**
Fall, Winter, Spring, Summer. 4(4-0) Applications of marketing concepts, methods and techniques in the hospitality and travel sector. Uses and limitations of various promotional forces such as advertising, field selling, merchandising, sales promotion, and in-house selling.
- 392. Managerial Finance for the Hospitality Industry**
Fall, Winter, Spring. 4(4-0) F I 391, HRI 203. Basic financial concepts applied to the hospitality management industry. Methods of expansion; franchises, condominiums, leases and management contracts. Financial aspects of feasibility studies. Financial ratios specific to the hospitality industry.