864. Readings in Recent European History
Fall, Winter, Spring. 4 credits.

867. Readings in Russian History
Fall, Winter, Spring. 4 credits.

873. Readings in the History of International Relations
Fall, Winter, Spring. 4 credits.

894. Readings in African History
Fall, Winter, Spring. 4 credits.

897. Readings in Asian History
Fall, Winter, Spring. 4 credits.

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

901A. Doctoral Seminar
Fall. 3(3-0) Admission to doctoral program in history.

901A, 901B and 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 901C.

901B. Doctoral Seminar
Winter. 3(3-0) 901A.

Continuation of 901A.

901C. Doctoral Seminar
Spring. 3(3-0) 901B.

Continuation of 901B.

920. Seminar in British and British Empire History
Fall, Winter, Spring. 5 credits.

921. Seminar in Russian and East European History
Fall, Winter, Spring. 5 credits.

928. Seminar in American History
Fall, Winter, Spring. 5 credits.

931. Seminar in African History
Fall, Winter, Spring. 5 credits.

932. Seminar in Asian History
Fall, Winter, Spring. 5 credits.

933. Seminar in the History of International Relations
Fall, Winter, Spring. 5 credits.

952. Seminar in Ancient History
Fall, Winter, Spring. 5 credits.

966. Seminar in Modern European History
Fall, Winter, Spring. 5 credits.

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

HISTORY OF ART

See Art

HORTICULTURE HRT

College of Agriculture and Natural Resources

201. Fruits, Vegetables, and Ornamental Plants for Outdoor Home Plantings
Spring. 4(3-2)

Principles and practices used in producing fruits, vegetables, flowers, trees, shrubs and vines in small gardens, containers, and the home landscape. Indices for edible quality of home grown fruits and vegetables.

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)

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
(421.) Winter. 4(3-2)

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

230. Indoor Plants and Flowers
(323.) Fall, Winter, Spring. 3(1-4) Horticulture majors will be required to learn scientific names of plants.

Identification, culture and propagation of plants; principles of flower arrangement, construction of dish gardens and hanging baskets, and the forcing of bulbs.

320. Tree Fruit Production
Fall. 4(3-2) Juniors.

Commercial production of principal tree fruit crops of Michigan with emphasis on planting, soil management, fertilization, pruning, thinning, and grafting.

324. Mass Merchandising Ornamental Plants
Spring. 2(1-2) 211 or 212.

History of merchandising ornamental plants; types of garden centers, impact of cultural information and labeling on consumer. The manager, advertiser, and buyer decision making process. One day field trip required.

325. Ornamental Plant Management
Spring. 4(3-2) 211 or 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.

330. Special Problems
Fall, Winter, Spring, Summer. 1 to 4 credits. May re-enroll for a maximum of 12 credits. Approval of department.

Primarily independent study: culture of horticulture crops indoors and outdoors; plant propagation and breeding; plant growth and development; flower store management, floral design. Library research, working with plants, teaching, field trips or seminars.

331. Special Topics
Fall, Winter, Spring, Summer. 1 to 4 credits. May re-enroll for a maximum of 12 credits if different topic is taken. Approval of department.

Topics will be selected from flower, vegetable and fruit production; landscape plant culture; horticulture therapy; pesticide management; post harvest physiology; and horticulture business management.

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
Fall. 3(2-2) Juniors. Interdepartmental and administered jointly with the Department of Crop and Soil Sciences.

Comprehensive study of principles underlying weed control practices, and factors involved in both mechanical and chemical control.

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.

411. Fruit and Landscape Crop Physiology I
Fall. 4(3-2) Juniors.

Physiological effects of moisture and nutritional environments related to fruit crops and woody perennial plants.

412. Fruit and Landscape Crop Physiology II
Winter of odd-numbered years. 3(3-0) Juniors, BOT 301, not open to students with credit in HRT 807 or 808.

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. 4(4-0) 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) BOT 301 or 414.

Control of greenhouse environment and its effect on growth and production of horticultural crops.

418. Controlled Plant Environment Laboratory
Fall. 1(0-2) 417 or concurrently.

Experiments in the morphology and physiology of greenhouse crops. Crop production and the use of greenhouse equipment.

419. Small Fruit Production
Winter. 3(3-0) Juniors.

Commercial production, culture, utilization and physiology of strawberries, grapes, blueberries and raspberries.

424. Pesticide and Growth Regulating Chemicals for Horticultural Crops
Spring. 3(2-2) Juniors.

Spray and dust equipment and application; pesticide and growth regulating chemicals, their use in the growing of horticultural crops, and influence on the physiology of the plant.

433. Greenhouse Cut Flower Production
Winter of even-numbered years. 4(3-2) May re-enroll for a maximum of 8 credits. 417 or approval of department.

Principles of flower crop physiology; includes control of environmental conditions, and emphasizes the management of cut flower production.

434. Greenhouse Container-Grown Plant Production
Winter of odd-numbered years. 4(3-2) 417 or approval of department.

Principles of flower crop physiology; includes control of environmental conditions and emphasizes the management of container-grown plant production.

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.

450. Vegetable Production
Spring. 3(3-0) CSS 210; BOT 301.

Commercial methods of production of vegetable crops, with emphasis on relation of plant physiology, soils, nutrition, and botany to production of high quality vegetables.

451. Vegetable Production Laboratory
Spring. 1(0-2) 450 or concurrently: approval of instructor.

Laboratory exercises emphasizing factors affecting germination, sex expression, bulb formation, flowering and seed stalk formation, growth and development, and post-harvest quality of vegetable crops.

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.

807. Physiology of Horticultural Crops I
Fall. 4(3-2) BOT 415.

Physiology and biochemistry of bulbous crops; morphological aspects and techniques of horticultural crops; sex expression and seed production.

808. Physiology of Horticultural Crops II
Winter. 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.

809. Physiology of Horticultural Crops III
Spring. 4(3-2) BOT 415.

Physiology of abscission, winter hardiness, water and nutrient relations, crop productivity and problems concerned with crop production.

810. Seminar
Fall, Winter. 1(0-1)

825. Post Harvest Physiology
Spring. 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. Variable credit. May re-enroll for a maximum of 12 credits. Approval of department.

831. Selected Topics.
Fall, Winter, Spring, Summer. 1 to 4 credits. May re-enroll for a maximum of 12 credits if different topic is taken. Approval of department.

899. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

951. Cytogenetics in Plant Breeding
Winter of odd-numbered years. 3(3-0) BOT 427, 828, or approval of department. Interdepartmental with and administered by the Department of Crop and Soil Sciences.

Application of cytogenetic principles to plant breeding. Significance of recombination, role of induced mutations, polyploid, chromosome substitution, and aneuploid analyses as they apply to the field of plant breeding.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

HOTEL, RESTAURANT AND INSTITUTIONAL MANAGEMENT HRI

College of Business

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.

235. Service Industries Equipment and Utilities
Fall, Winter. Summer of even-numbered years. 4(4-0) MTH 108 or 111. Not open to Seniors.

Engineering in food and lodging industry, emphasizing utilities, machinery characteristics and environment.

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.

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) 245.

Interrelationships of the environmental, microbiological and physiological principles relevant to the food service industry.

303. Service Industry Accounting
Fall, Spring. 4(4-0) AFA 391 or concurrently; not open to Seniors.

Principles of accounting applied to service industries. Financial statement analysis and cash flow concepts. Managerial accounting emphasized.

305. Lodging Management I
Fall, Winter. Summer of even-numbered years. 4(4-0) MGT 302.

Ethics and policies. Organization and manpower planning and development. Employee compensation and benefits as they apply to hospitality organization.

306. Lodging Management II
Winter, Spring. Summer of even-numbered years. 4(4-0) 305.

Continuation of 305. Supervision and activation of employees with emphasis on human relations, collective bargaining—negotiations and operating under the contract.

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.

350. Work Analysis and Design
Fall, Winter. Summer of odd-numbered years. 4(4-0) 235.

Work methods and layout. Includes flow analysis, time and motion study, work simplification, data processing and setting of standards.

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.

405. Food and Beverage Management
Winter, Spring. Summer of even-numbered years. 4(4-0) 265, 303, 306.

Duties and responsibilities of the manager in restaurant and catering operations. Management methods in goal setting, forecasting, controlling quality and costs; establishing policies to create favorable acceptance and profitable operation.

435. Food Production Systems
Fall, Winter, Spring. Summer of even-numbered years. 6(4-6) FSC 242, HRI 405.

Recognition and achievement of quality in development of systematic relationships between menu items, time, labor, equipment and costs in quantity food production. Quality procurement policies for food, beverages and related items. Field trips required.