

- 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.
- 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 (MTC)**
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits if different topics are taken. Approval of department.
Selected topics in horticultural science of current interest and importance.
- 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 of odd-numbered years. 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 genecology.
- 999. Doctoral Dissertation Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**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.

**Descriptions — Hotel, Restaurant and Institutional Management
of
Courses**

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.

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.

337. Management Systems for the Hospitality Industry
Winter, Spring. Summer of even-numbered years. 4(4-0) CPS 115, EC 202.

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) FI 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.

405. Food and Beverage Management
Winter, Spring. Summer of even-numbered years. 4(4-0) HRI 265, HRI 203.

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 operations.

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.

455A. Food Evaluation
Spring. 4(4-0) Approval of school.

History of foods and related physiological and psychological theories and their application to quality consideration.

455B. Beverage Evaluation
Fall. 4(4-0) Approval of school.

History of beverages and related physiological and psychological theories and their application to quality considerations.

462. Tourism Management
Winter. 4(4-0) HRI 261.

Tourism organizations, functions, and policy determination, tour wholesaling and retail travel agency management. Field trip required.

463. Tourism Distribution Management
Fall. 4(4-0) HRI 261.

Component channels of the tourism distribution system. Functional interrelationships of these channels with emphasis on increasing distribution effectiveness. Field trips required.

466. Tourism Planning and Development
Fall, Spring. 4(4-0) HRI 261.

Tourism resource characteristics, location, and market demand considerations. Analysis of development potential, planning processes and procedures, capital and personnel requirements, and tourism destination developments.

472. Design and Layout
Winter, Spring. 4(4-0) HRI 335.

Conceptualization, design, layout and specification of service industry facilities.

473. Operations Research in the Service Industries

Fall, Spring. Summer of odd-numbered years. 4(4-0) HRI 337, MTA 317.

Application of marketing and operational research techniques to service industry management problems, emphasizing quantitative and analytical decision models designed for specific operations in this field.

475. Promotion of Hospitality Services
Fall, Winter, Spring. Summer of odd-numbered years. 4(4-0) HRI 375.

Advertising, personal selling, sales promotion, merchandising, public relations, and publicity to compete effectively for individual and group sales in the hospitality industry.

490. Operational Analysis in the Hospitality Industry
Fall, Spring. 4(4-0) HRI 405, 800 hours work experience requirement. HRI majors only.

Advanced management concepts, leading to an understanding of decision theory as applied to directed investigation into specific hospitality operations.

499. Independent Study
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 8 credits. Majors and approval of school.

Research in any phase of food, lodging, hospitality, tourism or health facilities operations.

805. Advanced Foodservice Management
Winter. 4(4-0) HRI 435.

Administrative and technical management of foodservices. Emphasis on operation analysis and problem solving.

807. Workforce Management in the Hospitality Industry
Fall. 4(4-0) HRI 337.

Developing and maintaining a productive workforce for hospitality firms. Emphasis on supervisory skills and labor relations.

835. Energy Management in Hospitality Facilities
Fall. 4(4-0)

Achieving energy efficiency through system analysis and design. Includes energy audits and design problems.

837. Advanced Lodging Management
Winter. 4(4-0) HRI 337.

Administrative and technical management of hotels. Emphasis on operations and analysis and problem solving.

875. Innovation in Hospitality Marketing
Spring. 4(4-0) MTA 805 or concurrently.

Application of marketing concepts to the hospitality sector, with special emphasis on the role of promotion in the hospitality marketing process.

888. Financial Management for the Service Industries
Spring. 4(4-0) ACC 840.

Preparation and interpretation of financial statements, budget preparation and analysis of budgetary variances. Financial aspects of hospitality business expansion, franchising contracts, feasibility studies, and valuation considerations.

890. Special Problems
Fall, Winter, Spring, Summer. 1 to 15 credits. Approval of school.

Opportunity for outstanding students to engage in a thorough analysis of a service industry area of their choice that will result in a positive contribution to the field.