

- 808. Physiology of Horticultural Crops II**
Winter. 4(3-2) BOT 415.
Physiology of juvenility, flowering and fruiting of herbaceous and woody plants, senescence and bud and seed dormancy as related to horticultural crops.
- 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. Advanced Horticultural Studies**
Fall, Winter, Spring, Summer. Variable credit. 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)
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.
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.
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; HNF 100.
Interrelationships of the environmental, microbiological and physiological principles relevant to the food service industry.
- 303. Service Industry Accounting**
(203A., 203.) Fall, Spring. 4(4-0) AFA 202, 391.
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) MGT 302 and Juniors.
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)
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**
(447.) Winter, Spring. Summer of even-numbered years. 4(4-0) 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) 405, 472.
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.

- 448. Passenger Transportation Systems**
Winter. 4(4-0) MTA 300 or HRI 375. Interdepartmental with and administered by the Department of Marketing and Transportation Administration.
Composition and objectives of principal passenger travel markets: Analysis of carrier service, pricing and promotional practices and problems, competitive and cooperative relations. Review of major proposals for change and expansion of service systems.
- 455A. Food Evaluation**
(455.) 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**
(455.) 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)
Tourism organizations, functions, and policy determination, tour wholesaling and retail travel agency management. Field trip required.
- 466. Tourism Planning and Development**
Fall, Spring. 4(4-0) 261 or 375 or 448.
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)
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) 305; MTA 316.
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.
- 490. Operational Analysis in the Hospitality Industry**
Fall, Spring. 4(4-0) 306; Seniors.
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(1-0) to 15(1-0) May re-enroll for a maximum of 15 credits. Approval of school.
Research in any phase of food, lodging, hospitality, tourism or health facilities operations.
- 811. Policy Formulation and Organization**
Spring. 4(4-0) 875, 888; MGT 806.
Development of goals, objectives and consistent business policies for the creation of dynamic and effective organizations for all phases of service industries.

861. Economic Implications of Tourism
Fall. 4(4-0) EC 860 or concurrently.
Economic, historical, philosophical, psychological, governmental and educational aspects and satisfactions of travel. The promotion of tourism; the business of travel and its relationships to the hospitality industry.

875. Innovation in Hospitality Marketing
Spring. 4(4-0) MTA 805 or concurrently.
Changing environment of the hospitality industry is examined and new developments in marketing are analyzed for potential innovative application in the hospitality sector.

888. Financial Management for the Service Industries
Winter. 4(4-0) AFA 840.
Covers leasing, franchising, tax considerations, planning to meet financial needs from internal sources or from capital markets, management of current and capital assets, including inventories and operational equipment.

890. Special Problems
Fall, Winter, Spring, Summer. 1 to 15 credits. Approval of school.
Opportunity for the outstanding student to engage in depth analysis of a service industry area of his choice that will result in a positive contribution to the field.

896. Problems of the Service Industries
Winter. 4(4-0) 888 or concurrently.
Formulation of plans based on analysis of situations and trends applying general business principles. Discussion of actual cases with leaders in service industries.

898. Facilities Programming
Fall. 4(4-0)
Application of principles and concepts drawn from many related disciplines to planning and operation of housing and food production systems, utilizing optimum physical and human resources.

HUMAN DEVELOPMENT H D

College of Human Medicine

520. Genetics Clinic
Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll for a maximum of 9 credits.
Students will interview and examine patients with inheritable disorders, perform related laboratory diagnostic procedures, and participate in genetic counseling conferences and discussions.

590. Special Problems in Human Development
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 12 credits. Human Medicine students or approval of department.
Each student will work under direction of a staff member on an experimental, theoretical or applied problem.

608. Pediatric Specialty Clerkship
Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 43 credits. HM 602; primary clerkship.
Clinical experience with pediatric patients under the direction of members of the faculty of the Department of Human Development and community pediatricians. Fall, Saginaw. Winter, Lansing. Spring, Grand Rapids. Summer, Flint.

609. Human Development and Pediatric Sub-Specialties
Fall, Winter, Spring, Summer. 1 to 17 credits. May re-enroll for a maximum of 34 credits. H M 602.
Elected experiences in selected clinical and basic sciences related to pediatrics and human development.

HUMAN ENVIRONMENT AND DESIGN HED

College of Human Ecology

143. Design for Living I
Fall, Winter, Spring. 3(3-0)
Perceptual development including analytical judgment through the study of design, a vital part of the matrix of living. Design components and principles as they relate to the function and ideas in the various phases of man's environment and daily life.

144. Design for Living II
Fall, Winter, Spring. 3(1-4) 143.
Use of design elements and application of principles in creative problems and media.

152. Principles of Clothing Construction
Fall, Winter, Spring. 3(2-2)
Principles of clothing construction related to fit, fabric and garment assembling.

171. Textiles for Consumers
Fall, Winter, Spring. 4(3-0)
A programmed sequence develops decision-making abilities in the selection of textile alternatives for various uses. Consumer-oriented concepts of durability, comfort, care and aesthetic appearance are used to evaluate products.

201. Contemporary Retail Community
Fall, Winter, Spring. 3(3-0) Sophomores.
The retail community as it responds with a supply of goods and services to the needs of the consumer.

203. Selected Non-Textile and Apparel Merchandise
Winter, Spring. 3(3-0) 143.
Selected non-textile and apparel merchandise as it fulfills consumer needs and expectations.

210. Environmental Design: Space, Color and Texture
Fall, Winter, Spring. 3(3-0) 144 or approval of department.
Space, color and texture as components of human environment, their effect upon and use by man.

211. Environmental Design: Space, Color and Texture — Laboratory
Fall, Winter. 2(2-0) 210 concurrently.
Discussion and demonstration of space, color and texture as components of human environment, their effect upon and use by man.

213. Synthesis of Environmental Design Elements
Winter, Spring. 2(2-0) 210.
The synthesis of design elements, space, shape, color and texture, and their organization as they are related to man's near-environment.

214. Synthesis of Environmental Design Elements — Laboratory
Winter, Spring. 2(2-0) 213 concurrently.
Discussion and demonstration of design elements, space, shape, color and texture, and their organization as they are related to man's near environment.

220. Interior Space Design
Fall, Winter. 3(0-6) 210 or concurrently.
Basic designing and drawing of interior space in relationship to human needs.

221. Interior Color and Texture Design
Winter, Spring. 3(0-6) 220 or concurrently.
The manipulation and development of color and texture as components of environmental space design.

222. Basic Interior Design Synthesis
Spring. 3(0-6) 221.
Experimentation and representation of space, color and texture as they relate to environmental interior design.

230. History of Interior Design: Ancient to Medieval
Fall, 3(3-0)
Historical development of furniture, textiles, and the other decorative arts in relation to interior design and architecture from ancient times to medieval.

239. Housing Conservation
Spring. 3(3-0) Interdepartmental with and administered by the Department of Agricultural Engineering.
Skills and techniques in conserving, repairing and remodeling existing housing. Structural components of housing and evaluation of housing structure.

252. Experimental Clothing Construction
Winter, Spring. 3(2-2) 152 or pass departmental placement examination.
Application of principles of clothing construction with emphasis on fitting, alteration and couture construction techniques. Experimental execution and evaluation of techniques.

254. Contemporary Fashion Analysis
Fall, Winter, Spring. 3(2-2) 143 or approval of department.
Analysis of fashion as evidence of a dynamic relationship between man and his environment; costume as an aesthetic expression, a sociological phenomenon, and a coordinating factor for the consumer market.