

Human Environment and Design—HED

890A Supervised Independent Study in Merchandising Management
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students. Approval of department.
Independent study in topics related to consumer behavior, human resource management, or international merchandising management.

890B Supervised Independent Study in Apparel and Textiles
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students. Approval of department.
Independent study in topics related to apparel design, historic costume and textiles, museum collections, or human behavior and ecological relations.

890C Supervised Independent Study in Interior Design and Human Environment
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students. Approval of department.
Independent study in topics related to facilities design and management, human shelter, or interior design preservation and conservation.

891A Topics in Merchandising Management
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Selected topics related to consumer behavior, human resource management, or international merchandising management.

891B Topics in Apparel and Textiles
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to seniors or graduate students in the Merchandising Management, Interior Design and Facilities Management, and Apparel and Textiles major.
Selected topics related to apparel design, historic costume and textiles, museum collections, or human behavior and ecological relations.

891C Topics in Interior Design and Human Environment
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to seniors and graduate students in Merchandising Management, Interior Design and Human Environment, and Apparel and Textiles.
Selected topics related to facilities design and management, human shelter, or interior design preservation and conservation.

893A Internship in Merchandising Management
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Open only to graduate students. Approval of department.
Supervised internship in a professional setting in consumer behavior, human resource management, or international merchandising management.

893C Internship in Interior Design and Human Environment.
Fall, Spring. 2 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students. Approval of department.
Supervised internship in a professional setting in facilities design and management, human shelter, or interior design preservation and conservation.

898 Master's Project
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in the Department of Human Environment and Design.
Master's degree Plan B project. Participation in a project in apparel and textiles, interior design and human environment, or merchandising management.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 7 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Open only to graduate students in the Department of Human Environment and Design.
Master's thesis research.

900 Decision Processes in Design and Management
Spring of odd years. 3(3-0) R: Approval of department.
Theory and practice of decision processes in the design and management of human environments. Philosophy and methods of participation in environmental change.

901 Research Problems in Human Environment and Design
Fall. 3(3-0) RB: Research methods course. R: Open only to doctoral students in Human Environment: Design and Management.
Identification of researchable problems in apparel and textiles, interior design and facilities management, and merchandising management. Strategies and techniques for preparing grant proposals and documents for publication.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 36 credits. A student may earn a maximum of 36 credits in all enrollments for this course.
Doctoral dissertation research.

HUMAN MEDICINE HM

College of Human Medicine

501 Preceptorship Training
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 24 credits in all enrollments for this course. Interdepartmental with Family Practice. R: One year of graduate-professional program in College of Human Medicine.
Field experience in primary care.

511 Infectious Disease and Immunology
Fall. 3 credits. R: Open only to graduate-professional students in College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

512 Disorders of Behavior and Development
Fall. 3 credits. RB: Completion of all Block I required courses. R: Not open to first year students. Open only to graduate-professional students in the College of Human Medicine.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

513 Neurological and Musculoskeletal Domain
Fall. 4 credits. R: Open only to graduate-professional students in College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

514 Major Mental Disorders
Fall. 2 credits. R: Open only to graduate-professional students in College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

515 Cardiovascular Domain
Fall. 4 credits. R: Open only to graduate-professional students in College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

525 Pulmonary Domain
Fall. 4 credits. R: Open only to graduate-professional students in the College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

526 Urinary Tract Domain
Fall. 3 credits. R: Open only to graduate-professional students in the College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

527 Digestive Domain
Spring. 3 credits. RB: Block I. R: Open only to graduate-professional students in College of Human Medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

528 Metabolic and Endocrine and Reproductive Domain
Spring. 3 credits. RB: Block I. R: Open only to graduate-professional students in College of Human medicine. Not open to first year students.
Basic sciences applied to clinically relevant situations. Problem-based small group experiences.

531 Clinical Skills I
Fall. 2(1-2) R: Graduate professional students in College of Human Medicine.
Basic principles of doctor-patient relationship, core interviewing techniques. Exposure to clinical arena.

532 Clinical Skills II
Spring. 2(1-2) RB: (HM 531) R: Graduate-professional students in College of Human Medicine.
Adult screening physical examination and its integration with data-gathering skills.

- 533 Clinical Skills III**
 Summer. 1(1-2) RB: (HM 532) R: Graduate-professional students in College of Human Medicine.
 Age specific screening examinations and integration with data-gathering skills.
- 534 Clinical Skills IV**
 Fall. 2(1-2) RB: (HM 533) R: Open only to graduate-professional students in College of Human Medicine.
 Advanced interviewing and physical examination skills. Communication of patient-related data with the patient and other health professionals, orally and in writing. Problem solving.
- 535 Clinical Skills V**
 Spring, Summer. 2(1-2) RB: (HM 535) R: Open only to graduate-professional students in College of Human Medicine.
 Advanced interviewing and physical examination skills. Oral case presentations and written medical records. Introductory problem solving skills.
- 537 Topics in Reproductive Health**
 Fall. 1(1-0) R: Open only to graduate-professional students in the College of Human Medicine, the College of Osteopathic Medicine, and to graduate students in the College of Nursing.
 Pre-clinical focus on topics of reproductive health.
- 539 Hematopoietic/Neoplasia**
 Spring. 3 credits. RB: Block I. R: Open only to graduate-professional students in College of Human Medicine.
 Learn/apply advanced concepts of the basic sciences to clinically relevant situations. Done in integrated, problem-based small group experiences and other experiences.
- 540 Emergency Medicine for Preclinical Medical Students**
 Fall, Spring, Summer. 1(2-15) A student may earn a maximum of 2 credits in all enrollments for this course. RB: (ANTR 551) and (HM 531 and OST 501)
 A precepting experience in the principles of emergency care in the hospital.
- 543 Human Development and Behavior in Society**
 Summer. 5(4-2) R: Graduate-professional students in College of Human Medicine.
 Social science basis of medicine including social and cultural influences on health and behavior. Overview of normal growth and development throughout the life span.
- 546 The Social Context of Clinical Decisions**
 Fall. 1(1-0) RB: Completion of Block I requirements. R: Open only to graduate-professional students in College of Human Medicine.
 Social perspectives on medicine and medical care.
- 547 The Social Context of Clinical Decisions II**
 Spring. 2(2-0) RB: (HM 546) R: Open only to graduate-professional students in College of Human Medicine.
 Issues and concepts related to social and professional responsibilities of physicians.
- 548 Medical Humanities Seminar**
 Spring. 2(2-0) RB: (HM 547) R: Open only to graduate-professional students in College of Human Medicine.
 Issues related to the humanities and human values pertinent to medical practice.
- 560 Neuropathology Problem Solving Exercises**
 Fall, Spring, Summer. 2(0-4) Interdepartmental with Osteopathic Medicine. R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine. SA: PTH 525
 Independent study of neuropathology problem solving exercises.
- 561 Basic Principles of Pathology**
 Spring. 2 credits. Interdepartmental with Osteopathic Medicine. R: Graduate-professional students in colleges of Human and Osteopathic Medicine. SA: PTH 542
 Fundamental pathologic processes. Clinical applications.
- 571 Integrative Clinical Correlations I**
 Fall. 2(2-0) RB: (ANT 551 or concurrently and BMB 521 or concurrently and PSL 501 or concurrently) R: Graduate-professional students in College of Human Medicine.
 Correlation of the principles of the basic biological and behavioral sciences with disciplines of clinical medicine using case presentations.
- 572 Integrative Clinical Correlations II**
 Spring. 1(1-0) RB: (HM 571 or concurrently and ANTR 552 or concurrently and ANTR 562 or concurrently and PTH 542 or concurrently) R: Open only to graduate-professional students in the College of Human Medicine.
 Correlation of the principles of the basic biological and behavioral sciences within the disciplines of clinical medicine using case presentations.
- 573 Integrative Clinical Correlations III**
 Summer. 1(2-0) RB: (HM 543 or concurrently and HM 572 or concurrently and PHD 523 or concurrently and PHM 563 or concurrently and RAD 553 or concurrently) R: Graduate-professional students in College of Human Medicine.
 Correlation of the principles of the basic biological and behavioral sciences with the disciplines of clinical medicine using case presentations.
- 581 Mentor Program**
 Fall. 1(0-2) R: Graduate-professional students in College of Human Medicine.
 Dimensions of being a physician. Performance skills needed for patient care and interaction with medical workers. Current trends.
- 582 Mentor Program Year II**
 Fall, Spring, Summer. 1(0-2) A student may earn a maximum of 2 credits in all enrollments for this course. P:NM: Completion of 3 credits of HM 581. R: Open only to graduate-professional students in College of Human Medicine.
 Continuing exploration of the dimensions of being a physician. Professional skills needed to interact with patients and medical workers. Current trends.
- 591 Special Problems in Human Medicine**
 Fall, Spring, Summer. 1 to 34 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Graduate-professional students in College of Human Medicine.
 Work under the direction of a faculty member on an experimental, theoretical, or applied problem that requires a broad, interdisciplinary approach.
- 605 Comprehensive Care Clerkship**
 Fall, Spring, Summer. 4 to 20 credits. A student may earn a maximum of 20 credits in all enrollments for this course. Interdepartmental with Family Practice. RB: (FMP 602) R: Open only to graduate-professional students in College of Human Medicine.
 Comprehensive and longitudinal management of patients in ambulatory care settings.
- 608 Sub-Specialty Clerkships**
 Fall, Spring, Summer. 4 to 12 credits. Fall: Lansing, GR, Kalamazoo, Flint, Saginaw. Spring: (Same as above). Summer: (Same as above). A student may earn a maximum of 12 credits in all enrollments for this course. RB: (FMP 602) R: Open only to graduate-professional students in College of Human Medicine.
 Hospital-and office-based clinical experiences in sub-specialties in medicine and surgery.
- 609 Laboratory Medicine Clerkship**
 Fall, Spring, Summer. 1 to 8 credits. Fall: Flint G.Rapids Kalamazoo Lans Saginaw UP. Spring: Flint G.Rapids Kalamazoo Lans Saginaw UP. Summer: Flint G.Rapids Kalamazoo Lans Saginaw UP. A student may earn a maximum of 16 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine. R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine. SA: PTH 609
 Laboratory procedures. Correlation of laboratory data with morphologic abnormalities in patients with pathophysiology.
- 610 Pathology Clerkship**
 Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with Osteopathic Medicine. R: Open only to graduate-professional students in College of Human Medicine or Osteopathic Medicine. SA: PTH 608
 Anatomic and clinical pathology with emphasis on clinical-pathological correlation. Conducted in pathology departments of affiliated hospitals.
- 630 Emergency Medicine Clerkship**
 Fall, Spring, Summer. 2 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (MED 608) R: Open only to graduate-professional students in the College of Human Medicine.
 Clinical diagnosis and treatment of emergencies seen in community emergency departments.
- 635 Core Competencies I**
 Fall, Spring, Summer. 2(2-0) Fall: Flint-GR-Saginaw-Lansing-Kalamazoo-UP. Spring: same as above. Summer: same as above. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Family Practice; Medicine; Pediatrics and Human Development. R: Open only to graduate-professional students in College of Human Medicine.
 Core knowledge and skills from an interdisciplinary perspective.

Human Medicine—HM

- 636 Core Competencies II**
Fall, Spring, Summer. 2(2-0) Fall: same as below. Spring: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. Summer: same as above. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Family Practice; Medicine. R: Open only to graduate-professional students in College of Human Medicine.

Core knowledge and skills from an interdisciplinary perspective.

- 637 Core Competencies III**
Fall, Spring, Summer. 2(2-0) Fall: same as below. Spring: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. Summer: Flint-Saginaw-GR-Lansing-Kalamazoo-UP. A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Family Practice; Medicine; Obstetrics, Gynecology and Reproductive Biology; Pediatrics and Human Development; Surgery. R: Open only to graduate-professional students in College of Human Medicine.

Core knowledge and skills from an interdisciplinary perspective.

- 691 Research Clerkship**
Fall, Spring, Summer. 2 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. RB: (HM 690) or approval of community research director. R: Open only to graduate-professional students in the College of Human Medicine.

Biological, behavioral, or clinical research project.

- 820 Humanistic and Social Perspectives on Health**
Fall. 3(3-0) R: Open only to students in the M.A. program in Bioethics, Humanities, and Society SA: AL 820

Multidisciplinary perspectives on health care and medicine. Linkages among the humanities, social sciences and the sciences.

- 898 Master's Research**
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: Open only to students in the M.A. program in Bioethics, Humanities, and Society.

Directed research in support of master's program requirements.

- 899 Master's Thesis Research**
Fall, Spring, Summer. 1 to 9 credits. A student may earn a maximum of 12 credits in all enrollments for this course.

Master's thesis research.

HUMAN NUTRITION AND FOODS HNF

Department of Food Science and Human Nutrition College of Human Ecology

- 150 Introduction to Human Nutrition**
Fall, Spring, Summer. 3(3-0) Interdepartmental with Food Science.

Nutrition needs in life stages from a human ecological perspective. Domestic and international factors affecting the availability of a safe, nutritious food supply. Relationships of food choices to health and disease.

- 180 Preview of Nutritional Sciences**
Spring. 1(1-1) R: Open only to freshmen or sophomores.

Overview of nutritional sciences as a pre-professional major. Introduces students to faculty nutrition research projects, enables students to participate in a directed research experience, and exposes students to various career opportunities.

- 300 Experimental Approaches to Foods**
Fall, Spring. 4(2-4) P: Completion of Tier I writing requirement. RB: (CEM 143) R: Open only to juniors or seniors in the Department of Food Science and Human Nutrition.

Effects of preparation methods and ingredient substitutions on chemical and physical properties of food constituents. Effects of changes in chemical and physical properties on functional and sensory attributes of foods.

- 311 Principles of Human Nutrition**
Spring. 3(3-0) P: (BMB 200 or BMB 401 or BMB 461 or PSL 250 or PSL 431)

Identification, function and food sources of nutrients required by humans. Normal metabolism. Effects of deficiencies or excesses of specific nutrients on metabolism.

- 320 Basic Skills in Dietetic Practice**
Spring, Summer. 3(2-2) P: (HNF 150 or HNF 311) R: Open to sophomores or juniors or seniors in the Dietetics, Nutritional Sciences or Food Science majors. SA: HNF 220

Nutrient composition of foods to meet nutritional needs for meal planning. Sources of reliable food and nutrition information. Evaluation and communication of scientific and consumer information. Concepts in nutritional epidemiology.

- 375 Community Nutrition**
Fall. 3(3-0) P: (HNF 150 or HNF 311)

Human ecological approach to dietary and anthropometric assessment, intervention and evaluation of population groups. Policies, programs and resources available to address community nutritional needs.

- 400 Art and Science of Food Preparation**
Spring. 2(1-3) RB: (HNF 300 or concurrently) R: Open only to seniors in the Dietetics or Nutritional Sciences major or to graduate students in the Human Nutrition major.

Art and science of food preparation in relation to cost, health, and historical, regional, ethnic, and religious customs. Product evaluation using sensory techniques. Lecture offered full semester; laboratory offered half of semester.

- 406 Sociocultural Aspects of Food**
Fall, Spring. 3(3-0) P: (HNF 150 or concurrently) RB: ISS course or concurrently. R: Open only to juniors or seniors.

Factors impacting food consumption from a human ecological perspective. International and national food consumption patterns. Geographic, political, and economic aspects of food consumption. Food availability and distribution. Family structure, taboos, religion, and food-related health problems.

- 410 Sensory Assessment of Foods**
Spring. 2(1-2) RB: (HNF 300 or FSC 401) and (STT 200 or STT 201 or STT 315 or STT 421 or STT 464) R: Open only to majors in the Department of Food Science and Human Nutrition.

Discriminative, consumer and descriptive methods used to evoke, measure, analyze, and interpret sensory reactions to food characteristics.

- 440 Foodservice Operations**
Fall. 4(4-0) P: (FSC 342 or concurrently) RB: (HNF 150) R: Open only to juniors or seniors in the Dietetics or Nutritional Sciences major or to graduate students in the Human Nutrition major. SA: HNF 441

Principles, processes and control strategies in food-service operations. Menu planning, procurement, and on-premise storage and issuance. Purchasing, budgets, human resources, control management, ethics, marketing, production, safety and sanitation.

- 444 Computerized Foodservice Management Laboratory**
Fall, Spring. 2(1-2) P: (HNF 440 or concurrently) RB: Competency in computer spreadsheet applications. R: Open only to juniors or seniors in the Dietetics or Nutritional Sciences major or to graduate students in the Human Nutrition major.

Use of prototype management computer software for inventory management, recipe adjustment, recipe and menu pre-costing, nutrient analysis, cost analysis, accounting procedures, and other foodservice applications.

- 445 Foodservice Management Experience**
Fall, Spring. 2 credits. Spring: Total for both half-semester. P: (HNF 440 or concurrently) RB: (MMG 205) R: Open only to seniors in the Dietetics or Nutritional Sciences major or graduate students in the Human Nutrition major. Approval of department.

Receipt, storage, preparation and service of foods. Safety and sanitation. Design, layout, and care of equipment. Costing. Meal tickets required. Offered half of semester.

- 453 Nutrition and Human Development**
Spring. 3(3-0) P: (HNF 150) and (PSL 250 or concurrently or PSL 431 or concurrently) SA: HNF 463, HNF 376

Role of nutrients in anatomical, physiological, and biochemical processes as related to human growth and development. Nutrition throughout the life cycle. Nutritional assessment and programs.

- 461 Advanced Human Nutrition: Carbohydrates, Lipids and Proteins**
Fall. 3(3-0) P: (BMB 200 or BMB 401 or BMB 461) and (PSL 250 or PSL 432) SA: HNF 460

Energetics and metabolism of carbohydrates, proteins, and lipids as related to dietary requirements and disease processes in humans. Recommended dietary allowances. Food sources of nutrients.