Human Nutrition and Foods—HNF

461 Advanced Human Nutrition: Carbohydrates, Lipids and Proteins
Fall. 3(3-0) P:M: (BMB 200 or BMB 401 or BMB 461) and (PML 250 or PSL 432) SA: HNF 460
Energy, metabolism and metabolism of carbohydrates, proteins, and lipids as related to dietary requirements and disease processes in humans. Recommended dietary allowances. Food sources of nutrients.

462 Advanced Human Nutrition: Vitamins and Minerals
Fall. 3(3-0) P:M: (HNF 461 or concurrently) SA: HNF 460

465 Nutritional Pathophysiology
Fall. 4(4-0) P:M: (HNF 461 or concurrently) and (ANTR 350 or PSL 432) SA: HNF 473
Effects of specific pathophysiological states on the function of target organs. Assessment of nutritional and mental status using laboratory tests. Putative mechanisms of action, efficacy, and safety of relevant alternative and complementary therapies.

466 Medical Nutrition Therapy
Spring. 4(3-2) P:M: (HNF 461 and HNF 462) and (HNF 465 or PSL 432) and completion of Tier I writing requirement. R: Open only to juniors or seniors. SA: HNF 470
Anatomical, physiological and biochemical changes associated with diseases. Nutritional assessment. Use of modified diets as adjuncts to other therapies.

467 Outcome Measurement and Documentation in Medical Nutrition Therapy
Spring. 1(0-2) P:M: (HNF 461 and HNF 462 and HNF 465) RB: Senior dietetic majors. SA: HNF 379 C: HNF 466 concurrently.
Planning, implementation, outcome measurement, and documentation in medical nutrition therapy (MNT). Clinical, behavioral and functional outcomes resulting from interventions in clinical and outpatient settings.

474 Drug-Nutrient Interactions
Spring. 2(2-0) RB: (HNF 461 and HNF 462) R: Open to juniors or seniors in the Department of Food Science and Human Nutrition.
Reciprocal effects of foods, nutrients, and dietary constituents and pharmacologic agents. Drug-nutrient interactions in high risk groups including the elderly. Drug-nutrient counseling.

475 Community Nutrition Applications
Spring. 1(0-2) P:M: (HNF 375) R: Open to juniors or seniors.
Practice and evaluation of dietary and anthropometric nutritional assessment. Apply communication, advocacy and problem solving skills by identifying and addressing the nutrition needs and wants of a target population.

480 Concepts of Human Nutrition Research Methods
Spring. 2(1-3) P:M: (HNF 461 and HNF 462) and completion of Tier I writing requirement. RB: (FSC 455)
Issues and techniques involved in nutrition research with humans and animals. Guided laboratory experience plus independent project.

489 Independent Study
Fall, Spring. Summer. 1 to 10 credits.
A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to juniors or seniors. Approval of department.
Individual study of selected topics in foods, foodservice management or nutrition.

490H Honors Independent Study
Fall, Spring. Summer. 1 to 10 credits.
A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to seniors or juniors. Open only to honors students. Approval of department.
Individual study of selected topics in foods, foodservice management or nutrition.

494 Practicum
Fall, Spring. Summer. 1 to 10 credits.
A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to majors in the Department of Food Science and Human Nutrition. Approval of department.
Professional experience in selected settings and organizations under faculty supervision.

INFORMATION TECHNOLOGY

309 Business Information Systems and Technology
Fall, Spring. 3(3-0) P:M: (CSE 101 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in the School of Hospitality Business. SA: BUS 309
Role of information technology in shaping and supporting business processes in a global marketplace. Effects on organizations and individuals.

311 Systems Analysis and Design
Spring. 3(3-0) P:M: (BUS 309) R: Open only to students in The Eli Broad College of Business.
Structured analysis and design of information systems. Use of computer aided software engineering tools. Consulting issues associated with the design and implementation of information systems.

412 Marketing Technology and E-Commerce
Fall, Spring. 3(3-0) Interdepartmental with Marketing and Supply Chain Management. Administered by Department of Marketing and Supply Chain Management. P:M: (MSC 300 and MSC 317 and ITM 309) R: Open only to juniors or seniors in the Eli Broad College of Business, and to students in programs in which MSC 412 is a catalog-listed requirement.
Enabler technologies and their role in creating marketing opportunities, efficiencies, and innovations. Tools, applications, platforms, and infrastructures. Determination of business configurations that foster value creation from enabler technologies.

413 Fundamentals of Database Information Systems
Fall, Spring. 3(3-0) R: Open only to Juniors or seniors in The Eli Broad College of Business.
Not open to students in The School of Hospitality Business. C: ITM 311 concurrently.
Semantic and syntactic modeling of business requirements for databases. Specifical and navigational processing of databases. Database design parameters for business use.

414 Enterprise Resource Planning Systems
Spring. 3(3-0) P:M: (ITM 311 and BUS 309) R: Open only to students in The Eli Broad College of Business.
Analysis, design and use of enterprise systems. Importance of enterprise system fit and re-engineering of the enterprise. Implementation risks and organizational returns. Use of enterprise software.

INTEGRATIVE STUDIES IN ARTS AND HUMANITIES

Center for Integrative Studies in Arts and Humanities
College of Arts and Letters

201 United States and the World (D)
Fall. Spring. 4(4-0) P:M: Completion of Tier I writing requirement. RB: Designated score on English placement test. R: Concurrent registration in AL 201 (Writing Tutorial) required for students receiving 1.0 or 1.5 in Tier I writing course. Not open to students with credit in IAH 202 or IAH 206.
Major issues in development of US society and culture, presented in international and comparative context. Influences from native Americans, Europeans, Africans, and Asians. Organized historically, with thematic emphasis on literature and the arts.
202 Europe and the World (I)
Fall, Spring, Summer. 4(4-0) P.M: Completion of Tier I writing requirement. RB: Designated score on English placement test. R: Open only to undergraduate students. Concurrent registration in AL 201 (Writing Tutorial) is required for students receiving 1.0 or 1.5 in Tier I course. Not open to students with credit in IAH 201 or IAH 206. Cultural encounters and political relationships between Europeans and people(s) from other regions of the world since 1500 as shown through study of written texts, literature, the visual arts, music, and other forms of expression. Examples from Europe and several continents.

206 Self, Society, and Technology (D)
Fall, Spring. 4(4-0) P.M: Completion of Tier I writing requirement. RB: Designated score on English placement test. R: Open only to undergraduate students. Concurrent registration in AL 201 (Writing Tutorial) is required for students receiving 1.0 or 1.5 in Tier I course. Not open to students with credit in IAH 201 or IAH 202.

211A Area Studies and Multicultural Civilizations: Africa (I)
Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of Africa: literature, art, music, religion and philosophy presented in historical context. Selected regions, cultures, and themes. Variable by term.

211B Area Studies and Multicultural Civilizations: Asia (I)
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of Asia: literature, art, music, religion and philosophy presented in historical context. Selected regions, cultures, and themes. Variable by term.

211C Area Studies and Multicultural Civilizations: The Americas (D)
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of the Americas: literature, visual arts, music, religion and philosophy presented in historical context. Selected regions, cultures, and themes. Variable by term.

211D Area Studies and Multicultural Civilizations: The Middle East (I)
Fall. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of the Middle East: literature, visual arts, music, religion and philosophy presented in historical context. Themes variable by term.

211B Great Ages: The European Renaissance
Fall of odd years. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of Renaissance Europe: literature, visual arts, music, religion and philosophy presented in historical context. Selected themes, variable by term.

211C Great Ages: The Modern World (I)
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of the modern world, examined through the frame of urban and intellectual life. Literature, visual arts, music, religion and philosophy presented in historical context. Selected regions and themes. Variable by term.

213A Themes and Issues: Human Values and the Arts and Humanities
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Values of individualism, responsibility, love, community, and rationality. Students are introduced to diverse methods and materials from the arts and humanities.

213B Themes and Issues: Moral Issues and the Arts and Humanities
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Human conflict and moral dilemmas, addressed through diverse methods and materials from the arts and humanities.

213C Themes and Issues: Roles of Language in Society (D)
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Language as the medium of culture in various societies. Power and social identity as manifested through language. Students are introduced to diverse methods and materials from the arts and humanities.

214A Creative Arts and Humanities: Music and Society in the Modern World (D)
Fall of even years. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
The arts and humanities of the modern world through the prism of music. Music traditions and methodologies in their historic context. Relationship of music creativity to societies in which it has been produced.

214B Creative Arts and Humanities: Philosophy in Literature
Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Philosophy and literature, relationships to other and to societies in which they were produced. Themes such as the meaning of life, God and the problem of evil, and the nature of knowledge. Authors such as Voltaire, Dostoevsky, Wright, and Atwood examined from a variety of perspectives.

214C Creative Arts and Humanities: Cultural and Artistic Traditions of Europe
Fall, Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
European artistic and cultural movements and styles, introduced through works of art, music, literature, philosophy and religion. Presented in historical context. Specific eras and works variable by term.

215A Art of the Renaissance
Fall, Spring, Summer. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Arts and humanities of the Renaissance examined from a variety of perspectives. Authors such as Voltaire, Dostoevsky, Wright, and Atwood examined from a variety of perspectives.

241D Creative Arts and Humanities: Theater and Society in the West
Spring. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Artistic creativity seen through the prism of theater. Presented in historical context. Influences from art, literature, music, and religion. Focus on translation of social visions into dramatic art. Plays and themes variable by term.

241E Creative Arts and Humanities: The Creative Process
Spring of even years. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Philosophical, religious and historical foundations for understanding the process of creation in visual arts, theatre, music and literature. Variations across eras and societies.

241F Creative Arts and Humanities: Traditions in World Art (I)
Fall. 4(4-0) P.M: (IAH 201 or IAH 202 or IAH 206)
Aesthetic qualities of painting, sculpture and architecture within historical contexts across major civilizations. Visual forms in relation to belief systems and musical and literary traditions.

INTEGRATIVE STUDIES IN BIOLOGICAL SCIENCE
Center for Integrative Studies in General Science
College of Natural Science

200 History of Life
Fall, Summer, 3(3-0) P.M: (MTH 103 or concurrently or MTH 110 or concurrently or MTH 116 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Life from its origin to the dawn of human history. Living things as both the products of evolutionary processes and as a major force driving evolution and altering the environment of planet earth.

202 Applications of Environmental and Organismal Biology
Fall, Spring, Summer. 3(3-0) P.M: (MTH 103 or concurrently or MTH 110 or concurrently or MTH 116 or concurrently or LBS 117 or concurrently or MTH 124 or concurrently or MTH 132 or concurrently or MTH 201 or concurrently or STT 200 or concurrently or STT 201 or concurrently) or designated score on Mathematics placement test.

Critical evaluation of the use and misuse of human understanding of nature, emphasizing recent findings.