

HEALTH & SPORT SCIENCE

Courses

HSS 101. Introduction to Learning & Living in the UD Community. 1 Hour

This course is reflective and transformational in nature. It is designed to provide students with fundamental empowering mindsets, frameworks, perspectives as well as specific tools, techniques, habits and disciplines that they can use during and after college. It will also provide students with the confidence and ability to create and implement new empowering habits and ways of perceiving/being.

HSS 102. Introduction to Health & Sport Science. 2 Hours

An introduction to the professions, roles, responsibilities, and opportunities afforded to students in the health science, health and wellness and sport management majors. The course will help the student define professional goals, assess personal strengths and weaknesses in the light of competencies deemed essential for their career, and progress in their vocational discernment.

HSS 111. Introduction to Sport & Wellness. 2 Hours

An introduction to the professions, roles, responsibilities, and opportunities afforded to students in the sport and wellness major. The course will help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for their career.

HSS 113. Introduction to Dietetics & Nutrition. 2 Hours

This course guides students through vocation and profession specific discernment through reflective, observational and mentoring opportunities. Students will be exposed to the diverse practice areas in the dietetics profession throughout the semester. This is a required course for students admitted into the dietetics major. Must be admitted to the dietetics program.

HSS 114. Introduction to Health Professions. 2 Hours

An introduction to the professions, roles, responsibilities, and opportunities afforded to students in the health sciences. The course will help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a health science career.

HSS 120. Foundations of Sport Coaching. 3 Hours

This course is a study of sport coaching principles, strategies, and theories applicable across sport settings and from youth to elite levels. The course will examine different coaching philosophies, effective communication within a team setting, and various athlete motivational strategies.

HSS 121. Essentials of Youth Fitness. 3 Hours

Introduction to fitness concepts and developmental differences between youth and adults, with a focus on applying fitness programs within a youth population. Prerequisites: HSS 111 or HSS 114.

HSS 197. Introduction to Healthcare Delivery. 3 Hours

In this course, students will explore the structure and function of the U.S. healthcare system and examine its impact on care delivery and access. Through collaborative activities, they will develop teamwork and communication skills while applying critical thinking and problem-solving to real-world healthcare challenges. Students will reflect on their professional identity, considering integrity, resilience, and ethical principles in healthcare practice. Students will analyze health patterns across diverse populations using data from local and global benchmarks and assess their own implicit biases in relation to culture and environment. Additionally, students will evaluate healthcare technology's role in patient safety and advance their preparedness for public health emergencies.

HSS 200. Motor Control and Learning. 3 Hours

Introduction to the Dynamical Systems Theory of motor control and motor learning, with a focus on practical applications for skill acquisition, instruction, and feedback.

HSS 201. Medical Terminology. 2 Hours

This course is designed to introduce and build the skills and knowledge needed to develop an understanding of the terminology used in medical and health professions. The mechanism of building a medical vocabulary, utilizing roots, prefixes, suffixes, and the combining forms, and the spelling, pronunciation, and abbreviations are emphasized.

HSS 202. Healthcare Professionalism and Contemporary Issues Seminar. 1 Hour

This seminar is intended to build community and identity for BSN pathway students during their first semester of nursing classes at Sinclair College. This seminar promotes involvement with the University of Dayton community, encourages reflective practice, and prepares students to be successful UD BSN students. This seminar will focus on nursing as a profession and professionalism related to individual practice. Students will develop clinical judgment skills through discussion and reflection of contemporary healthcare issues impacting nursing and healthcare delivery that are relevant to the University of Dayton community, as well as regional, national, and global health issues. Students will reflect on their vocation and the Marianist values with regard to professionalism and ways in which they demonstrate resilience. Students must complete Sinclair course NSG 1200 prior to this course and must take Sinclair courses NSG 1400 and NSG 1450 along with this course. Prerequisites: HSS 197.

HSS 206. Fundamentals of Human Anatomy and Physiology. 3 Hours

Fundamental-level coverage of human anatomy and physiology. Major topics include: basic chemistry and metabolism, cells and tissues, skeletal, muscular, nervous, endocrine, cardiovascular, and respiratory systems. Prerequisite(s): BIO 101, OR BIO 151, OR CHM 123, OR CHM 200, OR PHY 105, OR PHY 201, OR PHY 206, OR SCI 180, OR SCI 190.

HSS 207. Fundamentals of Exercise Physiology. 3 Hours

Introduction to the study and investigation of the function and response of the body systems during various exercise intensities. Prerequisites: HSS 206 or HSS 307.

HSS 210. Introductory Foods. 3 Hours

Study of scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. Development of skills using tools for menu planning and evaluating the nutrition composition of meals and delivering health messages to the consumer. Prerequisites: CHM 123, CHM 123L, HSS 295. Corequisites: HSS 210L.

HSS 210L. Introductory Foods Laboratory. 1 Hour

The study of food, its nutritional benefits and preparation which includes the scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. This course will accompany the HSS 210 lecture. Prerequisite(s): HSS 295. Corequisite(s): HSS 210.

HSS 217. Social Determinants of Health. 3 Hours

This course introduces the Social Determinants of Health, the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. It focuses on how structured inequalities, disproportionate power relations, systematic and social oppressions, and privilege are connected to social determinants of health, health disparities and health inequities. Attention is also given to prevention strategies and the role of evidence-based health promotion and health education in increasing health status and health equity.

HSS 220. Adapted Physical Activity. 3 Hours

Course to prepare prospective teachers to adapt a physical education program so all children and youth can successfully participate in activity programs. Study of the atypical child in order to organize and administer a program which will meet individual needs.

HSS 250. Principles of Management in Health & Sport. 3 Hours

The nature of management is examined from a theoretical and practical perspective in a variety of sport and wellness settings. Managerial functions and skills are the focus of study in this course.

HSS 251. Introduction to Sport Analytics. 3 Hours

Introduction to the process of sport analytics, including preparing and managing data sets, exploring and summarizing the characteristics of data sets, data visualization, statistical analysis and interpretation, and communication of results.

HSS 253. Sport Facility Operations. 3 Hours

The processes of planning, constructing, equipping, maintaining, and operating sport facilities are investigated in this course.

HSS 255. Practicum in Health & Sport Science. 3-6 Hours

The practicum class is designed to expose students to work within sport or health and wellness management settings. Students can work within a variety of settings in proximity to the university campus. In conjunction, weekly class offer an opportunity for students to compare, contrast, analyze, and evaluate their experience in the various settings. Students are required to work/volunteer approximately 8 hours a week during the semester that they are taking the class.

HSS 285. Sport Management Field Experience. 3 Hours

This experience is done after completion of HSS 255. 150 clock hours need to be completed for the 3 semester hour experience.

HSS 295. Nutrition & Health. 3 Hours

Study of the nutrient needs of humans and of their choices as modified by socioeconomic, cultural, and life cycle factors. Sophomore standing.

HSS 302. Community Nutrition. 3 Hours

Study of the social, cultural and environmental factors relating to dietary behaviors and best practices to addressing nutrition-related needs. Prerequisite(s): HSS 295.

HSS 303. Food Service Systems Management. 2 Hours

This course provides an overview of topics related to the management of foodservice organizations in health care, school, hospitality, and other foodservice settings. The major focus includes organizational decision, leadership human resources management, performance improvement, financial improvement, and marketing.

HSS 304. Food and Nutrition Services Operations. 2 Hours

This course provides an overview of topics related to the operations of food & nutrition service organizations in health care, school, hospitality, and other foodservice settings. The major focus includes the Foodservice Systems, Menu, Purchasing, Receiving, Storage, & Inventory, Production, Service, Facilities Planning, & Equipment. Students will demonstrate the importance of operations as a primary function of the food service system. This course also provides a focus of vocational discernment where students explore career paths in food service systems. Prerequisites: HSS 210 and HSS 210L (grade of C- or better).

HSS 304L. Food and Retail Applications. 1 Hour

This course applies operations and management topics related to the food & nutrition services setting. This course has an emphasis in Food Safety standards, culminating in completion of the ServeSafe certification exam. Students will demonstrate key foodservice operations, management, and food safety concepts. This course also provides a focus of vocational discernment where students explore career paths in food service systems. Corequisite: HSS 304.

HSS 305. Human Anatomy. 3 Hours

A comprehensive view of human anatomy in all systems, incorporating both macro (gross) and micro (histology) levels. This course will also cover the embryological development of particular structures and look at how variations or changes in structure affect function. Prerequisites: BIO 151; CHM 123 or CHM 101.

HSS 305L. Human Anatomy Laboratory. 1 Hour

A study of human gross anatomy in a laboratory setting. It requires the identification of anatomical structures within human cadavers, focusing on the correct use of anatomical terminology and anatomical relationships. Prerequisites: BIO 151. Corequisites: HSS 305.

HSS 307. Human Physiology. 3 Hours

Survey of the functions of major human body systems with respect to general cell physiology, specialization into tissues, organ, and organ system physiology. The course is taught primarily from an integrative, systems-based approach, emphasizing common themes of physiology. Prerequisites: HSS 305, minimum grade of C; BIO 151; CHM 123 or CHM 101. Corequisites: HSS 305L or HSS 307L.

HSS 307L. Physiology Laboratory. 1 Hour

Systematic approach to the acquisition and interpretation of information about the physiology of living systems. One three-hour laboratory per week. Prerequisites: HSS 305 with grade of C or better, and BIO 151 and (CHM 123 or CHM 101) and HSS 305L with a grade of C or better. Corequisite(s): HSS 307.

HSS 309. Theories and Techniques for Health Behavior Change. 3 Hours

Students in this course will develop and demonstrate practical wisdom in addressing real human problems such as chronic health conditions with evidence-based prevention and intervention tools. Students will draw upon advanced knowledge of the complex factors that influence health behavior and will develop knowledge and skills in counseling supportive of health and/or nutrition related behavior change. Prerequisites: PSY 101, HSS 295.

HSS 311. Fundamentals of Exercise Physiology. 3 Hours

Introduction to the study and investigation of the function and response of the body systems during various exercise intensities. Prerequisites: HSS 206 or HSS 307.

HSS 320. Essentials of Strength Conditioning. 3 Hours

Course designed to prepare students for the certified strength and conditioning specialist (NSCA) exam. Topics included will pertain to muscular strength and endurance conditioning, physiology of strength conditioning, muscular strength testing and evaluation, and organization/administration of strength training programs.

HSS 321. Essentials of Personal Training. 3 Hours

To provide students with specific, real-world information regarding the knowledge, skills, and expectations associated with a competent personal trainer or fitness professional. Additionally, this course is designed to prepare students for the nationally accredited Certified Personal Trainer (CPT) certification exam. Prerequisite(s): HSS 305 or BIO 475.

HSS 330. Leadership in Sport. 3 Hours

As our society and industries adapt and reinvent themselves, especially in the sport (service) industry, there is a need for individuals within organizations to step up to the role of a leader, independent of their formal position. Therefore, the purpose of this course is for students to start (or continue) to develop their self-awareness, understanding, knowledge and practice of leadership.

HSS 331. Sport Ethics. 3 Hours

Study of the ethical decisions in sport and athletics, using case analysis and real world examples to assist future sport management professionals to develop a set of moral reasoning skills to self-evaluate, examine, and critically analyze ethical issues they will encounter in their professional careers. Prerequisite(s): Junior/Senior status.

HSS 335. Introduction to Athletic Training. 3 Hours

Application of principles and methods of injury prevention, evaluation, immediate care, treatment, and rehabilitation. Prerequisites: HSS 206 or HSS 305.

HSS 340. Introduction to Esports. 3 Hours

This course provides a comprehensive overview to the dynamic world of esports. Students will explore the business, technological, and cultural aspects of esports, and the key structure and stakeholders within its ecosystem. The course covers a wide range of topics including esports marketing, streaming, event management, sponsorship, and revenue generation. The course combines theoretical knowledge with practical applications, preparing students for various career opportunities within the esports sector.

HSS 341. Extreme Sports. 3 Hours

No description available.

HSS 342. Business of Baseball. 3 Hours

This course will guide students through various parts of the business of baseball beginning with the historical beginnings of the game through the current digital transformation. Various parts of the business, including media relations, international play, media sales and player relations, will be introduced by leveraging interviews with current and former industry executives, scholarly journal entries and recent media articles. All modules will lead to a final project where students will be asked to apply module learnings and think critically, creatively and courageously to create a future event for baseball.

HSS 346. Clinical Assessment and Electrocardiography. 3 Hours

This course takes an interdisciplinary, patient-centered approach to basic clinical assessment. Elements of the exam, process of data gathering, and conducting a physical exam will be covered for various populations and situations. Basics in 12-lead electrocardiography (ECG) interpretation will be covered with a focus on conducting cardiac stress tests. Prerequisite(s): HSS 307 or BIO 403.

HSS 349. Sport Finance. 3 Hours

A survey of concepts and theories in financial management and their applications in sport and wellness industries. Specific topic areas covered include both techniques in financial analysis and financial issues in intercollegiate, recreational and commercial sport industries.

HSS 350. Business of Soccer. 3 Hours

Study of international sport management issues through the perspective of European soccer with particular reference to professional soccer in England including the Premier League, Spain (La Liga), Italy (Serie A), Germany (Bundesliga), the UEFA Champions League, as well as major international governing bodies such as FIFA and UEFA.

HSS 353. Sport Media. 3 Hours

This course examines the unique role and impact of the media in global sport industry. Identification of the grand spectrum of activities and mediums comprising the media is explored from both theoretical and practical perspectives. The ever-growing role of both traditional and new media are investigated. This course also orients students to the academic and professional literature accessible in the field of sport management and develop knowledge and skills necessary for students to effectively pursue career opportunities in the field. Students will gain an understanding of the commercialized nature of sport media and exercise the analytical skills to “read” and “develop” media products in sport management. The class will also critically explore the interrelationship between sports and media in modern society and how that interrelationship reinforces social values and cultural representation of politics, race, and gender.

HSS 354. Global Sport, Culture, & Business. 3 Hours

This course examines the interplay between the local dynamics and the globalizing forces shaping contemporary global sport culture and business. Focusing specifically on a broad range of national and international contexts, the course identifies—and seeks to explain—patterns of similarity and difference in cultural and political identities, business operations, and governance in the global sporting world.

HSS 356. Organizational Behavior in Health & Sport. 3 Hours

Overview of the individual, group, and organization level factors utilized to manage people for personal, team, and organizational effectiveness in health, wellness, and sport organizations. Prerequisite(s): HSS 255 for ESM majors; None for EHA majors.

HSS 357. Sports Marketing. 3 Hours

Course content is designed to give students an understanding of marketing principles applied to sport, sport events, and sport products. Marketing strategies including the sales, promotions, and advertising of sport will be emphasized.

HSS 358. Sales & Fundraising in Sport. 3 Hours

Examination and understanding of sales and fundraising techniques. Students will gain first-hand experience in developing new skills for the job market.

HSS 360. Sport and Bodies. 3 Hours

Critical examination of the historical and contemporary ways in which the human body is altered/modified, displayed/portrayed, valued/devalued, and included/excluded in terms of gender, race, social class, and ability status within sports. This course will examine how sport and bodies function in the political, social, and economic systems of the U.S. and globally. Using the perspectives of health and sport sciences and sociology, this course examines sport and bodies from macro and micro perspectives.

HSS 370. Healthcare Administration. 3 Hours

The course introduces students to foundational concepts in health administration, providing an overview of the roles, skills and functions of a health administrator. Additionally, it provides an overview of the critical issues in healthcare in the United States. Attention is given to the factors that impact decision making in healthcare settings.

HSS 371. Foundations of Epidemiology. 3 Hours

The purpose of this course is to provide students with an introduction to epidemiology, including essential concepts, calculations, data interpretations and applications. Prerequisites: MTH 207 or PSY 216 or by permission of instructor.

HSS 384. Food Justice. 3 Hours

Diversity, social inequality and social justice are integral aspects of the fields of health science, sociology, and humanities. These issues particular to food are relevant in thinking about the challenges that people in Dayton and around the globe face. Through the combined analysis of at least two academic units, students will learn how to perform descriptive and normative analysis, as well as how to focus on pragmatic opportunities to address and ameliorate food injustice. Prerequisite(s): Sophomore-status.

HSS 395. Nutrition through the Lifecycle. 3 Hours

An examination of the role of nutrition in growth, development, and health across the life cycle. Includes a study of nutrient requirements, nutrition assessment, and nutritional care for those in each life stage. Prerequisite(s): HSS 295.

HSS 400. Research Experience in Health and Sport Science. 0-1 Hours

A faculty mentored research experience in the field of health or sport science. Research experiences may include laboratory or field-based data collections, data processing and analysis, and results reporting.

HSS 401. Nutritional Biochemistry I. 3 Hours

Extension of the student's knowledge of the science of nutrition, highlighting the biological roles of macronutrients and their metabolism. This course integrates information on the roles of macronutrients in nutrition and health as it relates to various health conditions. Prerequisites: CHM 313, HSS 307.

HSS 405. Tests & Measurements in Sport Science. 3 Hours

This course is designed to provide students with the skills required to identify and implement various fitness testing protocols related to the components of health and skill related fitness.

HSS 408. Physiology of Exercise. 3 Hours

Detailed study of the effects of exercise on human functions, as a basis for the study of physical fitness, motor skills, and athletic training. Prerequisites: HSS 307.

HSS 408L. Physiology of Exercise Laboratory. 1 Hour

Course to accompany HSS 408. Weekly two-hour laboratory stressing practical applications of exercise physiology. Prerequisites: HSS 305; HSS 307. Corequisites: HSS 408.

HSS 409. Kinesiology. 3 Hours

An investigation and analysis of the basic biomechanical principles underlying human movement. Prerequisites: HSS 305; HSS 307, minimum grade of C.

HSS 409L. Kinesiology Laboratory. 1 Hour

Hands-on kinesiology laboratory course to accompany HSS 409 - Kinesiology enabling the assessment and application of biomechanical analysis. Prerequisites: HSS 305; HSS 307 minimum grade of C. Corequisites: HSS 409.

HSS 422. Exercise for Special Populations. 3 Hours

Course designed to prepare prospective exercise specialists to adapt physical education and exercise so that all individuals can successfully participate in activity programs. A study of various disabilities and conditions in order to organize and administer a program which will meet individual needs. Prerequisites: HSS 307 or HSS 206. Corequisites: HSS 408 or HSS 311.

HSS 428. Research in Sport and Health Sciences. 3 Hours

Application and practice of research in a student's chosen profession and vocation. Emphasis will be designing and evaluating study designs, collection, analysis, interpretation, and communication of data, and role of research in professional practice. Prerequisites: MTH 207.

HSS 431. Nutrition for Exercise & Sport Science. 3 Hours

Investigation of current research in the nutritional assessment of the athlete. Topics include dietary needs, fluid replenishment, pre-game meals, and "fad" diets for the athlete. Pre-requisite(s): HSS 295.

HSS 439. Professional Seminar in Dietetics. 2 Hours

The focus of this senior level course is on a critical reflection of students' past, present, and future contributions to their communities in the context of their vocation. Students in this course will provide regular peer-to-peer mentoring to HSS 113 students, prepare an internship portfolio, reflect on their role in the common good at UD and prepare to continue their personal and professional development post graduation .

HSS 444. Sport and Wellness Seminar. 2 Hours

The focus of the course is on critical reflection of students' past, present, and future contributions to their communities in the context of their vocation. Students will prepare an artifact that represents these efforts that will be archived by the department. Strategies that will be beneficial to making a seamless transition post-graduation will be emphasized. Students should have taken at least 90 credit hours prior to enrolling in the class.

HSS 445. Pharmacology. 3 Hours

This course is a survey of pharmacology principles relevant to the future health professional. Pharmacokinetics and dosing principles will be introduced. Specific common drugs affecting the major body systems will be covered. Prerequisite(s): HSS 307 or BIO 403.

HSS 448. Safety & the Law in Health & Sport. 3 Hours

This course is a study of the legal aspects of sport, athletics, exercise, and wellness as well as the analysis of specific court cases and the formulation of preventative law policies and procedures. Prerequisites: MGT 201.

HSS 450. HSS Capstone. 1-3 Hours

The Health & Sport Science capstone is a reflective experience that concludes with a presentation in the scholarship, activity and/or practice related to the student's major and concentration. Students will present their work in a forum appropriate to the major. Prerequisites: Senior status.

HSS 455. Selected Studies in Exercise Science. 1-3 Hours

Investigating, analyzing, and reporting on a problem in physical education. Prerequisite(s): Permission of department chairperson.

HSS 456. Nutritional Biochemistry II. 3 Hours

Extension of the student's knowledge of the science of nutrition, highlighting stressing the biological roles of micronutrients and their metabolism. This course integrates information on the roles of micronutrients in nutrition and health as it relates to various health conditions. Prerequisites: HSS 401.

HSS 465. Health Science Seminar. 1 Hour

The focus of the course is on critical reflection of students' past, present, and future contributions to their communities in the context of their vocation. Students will prepare an artifact that represents these efforts that will be archived by the department.

HSS 485. Health & Sport Science Internship. 1-12 Hours

The internship provides students with the opportunity to pursue immersive and engaging experience in their chosen field of profession. A minimum of 300 on-site working hours is expected unless approved by the advisor. Prerequisites: HSS 255.

HSS 488. Special Topics in Health and Sport Science. 3 Hours

Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Example topics include: environmental physiology, sex and gender physiology, nutrition in obesity and diabetes, sports biomechanics, sports mega-events, luxury seating, concussion management, etc.

HSS 491. Exercise Science Internship. 1-3 Hours

Work experience carried out under the auspices of an industrial, commercial, educational, government or health agency-related wellness program. Application and permission of director of Exercise Science and Fitness Management program required.

HSS 492. Human Anatomy Dissection Lab. 3 Hours

This is a team based learning course where students will work in groups to complete a full body human gross anatomy dissection with a human donor. Students will complete dissections to identify structures in all systems, review the anatomical relationships, and make connections between structure and function. Completion of the course will include a reflection on the learning experience and the use of human donors for medical treatments, education, and/or research. Prerequisites: HSS 305, HSS 305L, HSS 307.

HSS 494. Assessment of Nutritional Status. 3 Hours

This course provides foundational coursework in the Nutrition Care Process with an emphasis on the nutrition assessment. The course will cover anthropometrics, biochemical analysis, clinical assessment to include Nutrition Focused Physical Exam, diet assessment, energy estimation, and body composition assessment. Prerequisite(s): HSS 295, HSS 307, third year student.

HSS 495. Medical Nutrition Therapy I. 3 Hours

Study of pathophysiology, nutrition care process, nutritional diagnostic therapy, and counseling and education theories for the purpose of disease management to include: weight management, metabolic surgeries, diabetes, cardiovascular disease, upper & lower gastrointestinal disorders, functional nutrition. Prerequisites: HSS 494.

HSS 496. Medical Nutrition Therapy II. 3 Hours

Study of pathophysiology, nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include advanced disease states to include: malnutrition, pancreatitis, end stage liver disease, non-alcoholic liver disease, renal disease, nutrition support, pulmonary disease (COPD, Bronchitis, CF), critical illness and metabolic stress, oncology. Prerequisite(s): HSS 495.

HSS 497. Advanced Experimental Methods in Health Science. 3 Hours

This course is focused on developing and applying advanced experimentation skills with a specific focus on techniques associated with the study integrative human physiology and neuromechanics. Emphasis on equipment and technology, data analysis and interpretation, statistical methods, and technical reporting. Prerequisite(s): HSS 206 or HSS 307 or BIO 403 or Instructor Permission.

HSS 498. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

HSS 499. Honors Thesis. 3 Hours

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

HSS 502. Advanced Community Nutrition. 3 Hours

This advanced Community Nutrition explores the interplay between dietary behaviors, health outcomes, and societal factors through a critical lens. Students will analyze and evaluate complex systems that influence health inequities and design evidence-based interventions to address nutrition challenges in diverse communities. The course emphasizes leadership, advocacy, and innovation to promote equitable health outcomes through sustainable and culturally responsive solutions.

HSS 503. Food and Nutrition Service Management. 2 Hours

This advanced course offers a comprehensive examination of management practices in food and nutrition service organizations across diverse settings, including healthcare, schools, hospitality, and other foodservice environments. Emphasizing organizational design, leadership, human resource management, quality and performance improvement, financial management, and marketing, students will critically evaluate the integration of these functions as the primary control mechanisms in foodservice systems. Through advanced projects and case studies, students will synthesize management strategies to address operational challenges and enhance organizational effectiveness. Additionally, the course provides opportunities for vocational discernment, encouraging students to reflect on and explore career paths in foodservice management and leadership roles.

HSS 504. Food and Nutrition Services Operations. 2 Hours

This advanced course explores the operations and systems integral to food and nutrition service organizations across healthcare, school, hospitality, and other foodservice settings. Focusing on key areas such as foodservice systems, menu planning, procurement, receiving, storage, inventory management, production, service, facilities planning, and equipment, students will critically analyze and evaluate the interconnected components of operational efficiency and system optimization. Through applied projects and case studies, students will synthesize operational strategies to address real-world challenges and enhance foodservice system performance. Additionally, the course incorporates vocational discernment to guide students in exploring and aligning career opportunities within food service systems.

HSS 504L. Food and Nutrition Services and Food Safety Lab. 1 Hour

This advanced course examines operations and management principles within food and nutrition service systems, with a particular emphasis on food safety standards and their application in professional settings. Students will critically analyze and synthesize key concepts in foodservice operations, management strategies, and food safety protocols, culminating in the completion of the ServeSafe certification exam. Through practical applications and vocational discernment activities, students will evaluate and reflect on career pathways within food service systems, equipping them with the advanced skills and insights necessary for leadership and innovation in the field.

HSS 509. Theories and Techniques for Health Related Behavior Change. 3 Hours

This graduate course in Health Behavior Counseling and Education delves into the theoretical foundations and applied practices of health behavior counseling at individual, family, community, and population levels. Using advanced social and behavioral frameworks, students critically evaluate and design innovative education and counseling interventions. Emphasis is placed on mastering counseling techniques such as Motivational Interviewing, Solution-Focused Brief Therapy, and goal setting while applying them to complex and diverse health challenges. This course prepares students to lead in addressing chronic disease prevention, lifestyle modification, and population health management.

HSS 531. Nutrition Exercise & Sports. 3 Hours

Investigates the latest research trends in the nutritional assessment of the athlete. Topics will pertain to dietary needs, fluid replenishment, pre-game meals, and 'fad' diets for the athlete.

HSS 534. Integrative and Functional Nutrition. 3 Hours

Examination of the philosophy and practice of Integrative and Functional Nutrition. Evidenced-based principles will be applied to a systems-based approach to exploring and examining traditional and non-traditional healing practices as they relate to nutrition outcomes. Prerequisite(s): Matriculated to the MDN program, non-matriculated or non-major students may request permission to register for the course if space available.

HSS 537. Biomechanics. 3 Hours

Investigations of physical principles operative in the performance of physical education activities with attempts to analyze for methods of greater effectiveness and improved performance.

HSS 540. Instructional Strategies. 3 Hours

Contemporary research on teaching in physical education, sport instruction, and an in-depth study of Mossston's Spectrum of Teaching Styles serve as the primary foci of this course.

HSS 545. Advanced Clinical Nutrition. 3 Hours

Examines the biochemical and medical background of a wide variety of clinical conditions with specific application to nutritional treatment or management. The procedures followed for the nutritional assessment, planning, implementation and evaluation of the clients are presented. Integrates evidence-based practice and research to answer a clinically relevant nutrition question. Prerequisite(s): Students enrolled in the MDN program.

HSS 548. Safety & Law: Sport Science. 3 Hours

Study of basic safety measures to prevent injuries and avoid legal suits. Investigation of the fundamental principles involved in the legal aspects of sports in contemporary society. Analysis of specific court cases dealing with negligence in physical education and sport.

HSS 550. Physiological Response in Exercise. 3 Hours

Study of the physiological changes that occur during exercise and training.

HSS 551. Laboratory Techniques in Sport Science. 3 Hours

The practical application of selected sport science tests and measurements. Emphasis will be placed on human performance (strength, cardiovascular, flexibility, and body composition) testing.

HSS 552. Becoming a Leader and Change Agent. 3 Hours

This course is experiential in nature. It is built on two premises. One, to lead others we must first lead ourselves. Two, having a healthy and flexible relationship with change is now a required skill given the rapid advancements and changes in our current world. Success in this course will be achieved by looking at the external challenges and constraints one faces in life/work, then looking inwardly as an access to altering ones responsibility and ability to lead.

HSS 555. Sport Science Research & Design Processes. 3 Hours

This course is designed to develop an understanding of the nature of the general field of sport science research. It emphasizes the application of various research processes and design, learning by doing, and learning through example. Intended for use by individuals who have minimal knowledge of statistics.

HSS 556. Issues in Sport Science. 2 Hours

Seminar to investigate and report on a specific issue in sport science.

HSS 560. Evaluation & Application of Statistics in Sport Science. 3 Hours

Application of descriptive and inferential statistics to sport science tests and measurements. Quantitative analysis of selected physical fitness, motor performance, and body composition data.

HSS 563. Advanced Statistics in Sport Science. 3 Hours

The theory and hands-on applications of various social science statistical analyses to include: independent and dependent groups t-test, analysis of variance and covariance, multiple regression and non-parametric analyses. Students will use selected statistical software packages to execute real-world analyses problems.

HSS 566. Evidence-Based Practice, Research and Statistics. 3 Hours

This course focuses on application and interpretation of statistical techniques appropriate for health science and evidenced-based practice in the healthcare setting. Emphasis on the process of identifying clinical questions, searching and appraising the evidence for potential solutions/innovations, developing methodology, developing and planning methodology and practice changes, analyzing and evaluating the outcomes and identifying additional gaps in nutrition knowledge will be covered through the completion of evidence analysis review papers.

HSS 574. MDN Research Seminar. 3 Hours

The purpose of the research seminar is to develop a greater understanding of quantitative and qualitative methodologies, research interpretation, applied statistical analysis, and technical writing skill development. Students will develop the ability to synthesize new ideas and conclusions from a literature review, critically evaluate current research design, methodologies, and statistics to better utilize evidence-based practice as registered dietitian nutritionists in a variety of practice settings. Prerequisites: HSS 566.

HSS 575. Independent Study in Physical Education & Sport Science. 1-6 Hours

Individual investigations of a problem in sport science. Students may not register for HSS 575 without having completed HSS 555 and HSS 560.

HSS 582. Internship in Sport Science. 1-4 Hours

Job-related experience under the immediate supervision of personnel from a local sport science agency.

HSS 586. Advanced Community Nutrition. 3 Hours

Students will learn and incorporate different assessment and behavior models/theories/frameworks as well as use evidence-based practice to develop, implement and evaluate a nutrition intervention for a population with whom they are working. Further, students will develop an educational module to provide information regarding nutrition resources available to the identified population. During the course, students will learn how to be involved in nutrition policy and will identify and advocate for a nutrition policy issue at the local, state or federal level. Prerequisite(s): HSS 545 and HSS 566.

HSS 587. Advanced Food Science, Management, and Sustainability. 3 Hours

This course is an in-depth study of the major trends and current issues of concern to the foodservice management professional to include agricultural practices, food science, and sustainability. Analysis of the influence of the external environment on economic, technological, political and regulatory environments, and socio-cultural trends will be covered.

HSS 591. Research Project. 1-6 Hours

The development, planning, execution, analysis and manuscript completion of a research thesis in the sport sciences. The specific research question will be the student's choice with concurrence from his/her project advisor. Submission of the written product to a peer-reviewed research journal of at least national distribution is required before graduation. Students will also complete a successful oral defense of the thesis before the predesignated thesis team of at least three graduate faculty members from the School of Education & Allied Professions, two of which are from the Department of Health & Sport Science.

HSS 594. Medical Nutrition Therapy I. 3 Hours

Medical Nutrition Therapy (MNT) serves as the cornerstone of Registered Dietitian Nutritionist (RDN) practice. This graduate-level course provides an advanced examination of disease pathophysiology and its influence on anthropometric, biochemical, clinical, and dietary/nutritional parameters. Students will critically evaluate and apply evidence-based strategies to develop personalized medical nutrition therapy interventions. The course emphasizes mastery of critical thinking, relational analysis, and clinical decision-making skills essential for advanced practice. Topics include weight management, metabolic surgery, diabetes, cardiovascular disease, and gastrointestinal disorders. Designed to prepare students for clinical rotations and the RDN exam, this course integrates advanced case studies, research projects, and applied learning experiences.

HSS 595. Dietetics and Nutrition Capstone. 3 Hours

This graduate-level research capstone course is designed to guide students through the final stages of their research projects, culminating in the production of a comprehensive manuscript and a research defense presentation. Students will engage in in-depth manuscript writing, and preparation for submission to a peer-reviewed journal.

HSS 596. Medical Nutrition Therapy II. 3 Hours

This advanced course provides an in-depth exploration of pathophysiology, the Nutrition Care Process (NCP), and the application of evidence-based nutritional diagnostic and therapeutic strategies for managing complex disease states. Students will critically analyze advanced topics such as malnutrition, pancreatitis, end-stage liver disease, non-alcoholic liver disease, renal disease, nutrition support, pulmonary conditions (COPD, bronchitis, cystic fibrosis), critical illness, metabolic stress, and oncology. Through case studies, lectures, and applied projects, students will synthesize knowledge to address complex clinical scenarios and formulate advanced nutrition care plans tailored to diverse patient populations.