Course Listing

HAD

HAD 210 Introduction to Clinical Laboratory Sciences

Defines basic clinical laboratory sciences terminology and application. Introduces the specialties within the clinical laboratory sciences profession including microbiology, hematology, chemistry, immunohematology, and immunology and their roles in patient care. Reviews professional organizations and licensures. Examines employment opportunities. Visitation of clinical laboratories included. This course is not eligible for the G/P/NC option. Open to west campus students.
1 credit

HAD 302 Fundamental Concepts in Forensic Science

Introduces specialties within the broad definition of forensic science including criminalistics, crime scene analysis, physical evidence, instrumentation, drug analysis, and biological sciences. Explores up-to-date technologies utilized in crime laboratories to apprehend criminals and to exonerate the innocent. Includes DNA testing, the DNA national database (CODIS), finger print data bank (AFIS), the fired bullet data bank (IBIS), trace evidence techniques, and high-tech advances in crime scene investigation. Not to be taken for credit if completed HAD 304.This course is not eligible for the G/P/NC option. Open to west campus students.
3 credits

HAD 304 Introd to Forensic Science

Introduces the student to forensic science. Describes the interesting and diverse disciplines that comprise the field. Addresses the value of all physical evidence to criminal and civil investigations. Emphasizes forensic biology and chemistry, and the role of the forensic laboratory in the process of criminal investigation. This course is not eligible for the G/P/NC option. Open to west campus students.
1 credit

HAD 313 Clinical Biochemistry I

Examines the physiological, biochemical and mathematical relationships involved in the establishment and utilization of laboratory procedures in the clinical chemistry laboratory. Includes, principles of routine clinical chemistry analytical methods of analysis and the clinical significance of routine clinical chemistry analytes. Prerequisite: Admission to Undergraduate CLS Program.
3.5 credits

HAD 315 Hematology I

A comprehensive study of the human hematopoietic system and its relationship to other organ systems. Includes morphological identification and biochemical relationships of erythropoiesis and leukopoiesis in healthy vs. disease states. Includes principles and applications of current methods in hematologic analysis, techniques and technology. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Admission to Undergraduate CLS Program.
4 credits

HAD 316 General Microbiology

Presents the biology of eukaryotic and prokaryotic microorganisms with special consideration to the microbial form, structure, function, physiology, metabolism, growth and genetics of bacteria, parasites, fungus and viruses. Introduces the world of microbiology with a human perspective providing a solid foundation in health related aspect of microbiology. Prerequisites: BIO 202, CHEM 132 Open to Non HSC students. This course is not eligible for the G/P/NC option. Open to west campus students.
3 credits

HAD 324 Pathology

Offers a comprehensive overview of human pathology and emphasizes the mechanisms of disease and diagnostic medicine. Provides two major categories: Part I introduces general pathology including the study of basic pathology processes that underlie all disease such as cellular pathology, inflammation, infection, immunology and neoplasia. Part II examines the pathology of major organ systems, and review of diagnostic tools. Prerequisite: Admission to Undergraduate CLS Program (HHCZB students only)
3 credits

HAD 330 Foundations in Phlebotomy

Introduces the student to the theory, principles and procedures of blood collection. Course is divided into a didactic portion for theory and principles of blood collection and a laboratory portion for blood collection procedures and techniques. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Admission to Undergraduate CLS Program
1.5 credits

HAD 331 Introduction to Biochemistry for CLS

Introduces biochemistry including all aspects of metabolism and the synthesis, structure and function of DNA, RNA and protein. Emphasizes the medical and clinical significance of these aspects of biochemistry. Prerequisite: Admission to Undergraduate CLS Program
3 credits

HAD 335 Medical Ethics in Health Care for CLS

Introduces health care professional students in clinical laboratory sciences to basic concepts and challenges in medical ethics. Provides overview of the ethics of health care in a rapidly changing society Approaches ethical dilemmas using theoretical frameworks and decision making processes. Explores ethical issues surrounding health care changes and public health policy. Includes distribution of resources and rationing of services.Includes varied topics such as

euthanasia, reproduction, transplants, cloning and genetics from ethical perspectives. Reviews classic cases in health care ethics and their impact on health policy. Discusses professional code of ethics and standards. Prerequisite: Admission to Undergraduate CLS Program
1 credit

HAD 340 Foundations in Clinical Laboratory Sciences

Introduces the student to important issues in clinical laboratory sciences. Addresses personal and professional developments facing the clinical laboratory scientist. Includes the performance of basic laboratory techniques. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Admission to Undergraduate CLS Program.
1.5 credits, S/F graded

HAD 350 Systems Physiology

Introduces the basic foundation of human integrative/systems physiology. Includes exposure to physiological control systems, while covering in detail each organ system. These will include membrane, muscle, central nervous system, sensory, cardiovascular, respiratory, renal, gastrointestinal, and endocrine physiology. The course utilizes didactic lecture material, the discussion of pathophysiology, and completion case study examples. The ultimate aim of the course is to solidify the structure and function of the human body under normal conditions and in response to disease states. Prerequisite: Admission to Undergraduate CLS Program (HHCZB students only).
4 credits

HAD 351 Research Literacy and Design

Provides necessary tools for students to evaluate research as well as to initiate and complete appropriate quantitative research methods. Main objective is to help students write a research proposal to prepare them to test their own research hypothesis. Provides basic skills to enhance interpretation, evaluation and analysis of research articles, including hypothesis, literature review, design, methodology and date analysis. Prerequisite: Admission to Undergraduate CLS Program.
1 credit

HAD 363 Computer Applications in Clinical Laboratory Sciences

Introduces various computer hardware systems and software applications used in both business and clinical laboratory settings. Includes utilization and multiple functions of computers in the clinical laboratory. Prerequisite: Admission to Undergraduate CLS Program
2 credits

HAD 380 Clinical and Medical Microbiology I

Lectures cover the medical aspects of disease-causing bacteria, including the nature and epidemiology of infectious diseases and the role of microorganisms in health and disease. Emphasizes the related theory of microbiological procedures such as collection of specimens, staining techniques, culturing methods, biochemical basis of media and reagent tests, identification of commonly cultured bacteria, and antimicrobials used in clinical microbiology. Simulated clinical laboratory includes practical experience in the isolation, identification and antimicrobial susceptibility testing of microorganisms commonly encountered. Includes morphologic, biochemical and serologic clinical laboratory techniques using microorganisms involved in human disease. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Admission to Undergraduate CLS Program.
4 credits

HAD 381 Clinical and Medical Microbiology II

Covers the classification, identification, and pathology of disease-causing bacteria. Emphasizes the related theory and performance of microbiological procedures such as collection of specimens, staining techniques, culturing methods, identification of commonly cultured bacteria, and antibiotic susceptibility testing. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisites: Admission to Undergraduate CLS Program; HAD 380
4 credits

HAD 390 Independent Study in Diagnostic Technologies

Proposals for special projects involving advanced readings, reports and discussions, or research on selected topics must be submitted to the program director for approval prior to registration for this course. Prerequisite: Admission to Undergraduate CLS Program
1-6 credits

HAD 397 Clinical Microbiology Practicum

Full-time instruction and practice of laboratory procedures in clinical microbiology in an approved hospital laboratory for a six-week period. Practice in the proper techniques for processing specimens for the isolation and identification of bacterial, fungal, and parasitic organisms commonly encountered in infectious processes. Instruction and practice in appropriate techniques for antimicrobial susceptibility testing are included. Prerequisites: Admission to Undergraduate CLS Program; HAD 425, HAD 380 and HAD 381.
6 credits

HAD 398 Clinical Hematology I Practicum

Full-time instruction and practice of laboratory procedures in hematology and special hematology in an approved hospital laboratory for a three-week period. Prerequisites: Admission to Undergraduate CLS Program; HAD 315.
3 credits

HAD 399 Clinical Continuation

This course is for clinical laboratory sciences students continuing with clinical.
0 credit, S/F graded

HAD 403 Medical Molecular Biology

Provides an overview of the structure and function of genes. Includes theory and laboratory practice of diagnostic molecular biology techniques utilized in the clinical laboratory to analyze DNA. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisites: Admission to Undergraduate CLS Program.
3 credits

HAD 406 Introduction to Clinical Cytogenetics

Introduces the student to cytogenetic principles utilized in the clinical laboratory. The lecture course is designed to introduce the theories, concepts and techniques applicable to the practice of clinical cytogenetics. Topics include morphology and behavior of human chromosomes, cytogenetic nomenclature, cytogenetic syndromes and cancer cytogenetics. Laboratory techniques such as fluorescence in situ hybridization (FISH) and various banding techniques are discussed. Prerequisites: Admission to Undergraduate CLS Program; Program Consent Required
1 credit

HAD 411 Clinical Biochemistry II

A continuation of HAD 313. Prerequisites: Admission to Undergraduate CLS Program; HAD 313
2.5 credits

HAD 412 Clinical Biochemistry III

Covers the clinical significance and analytical methods for special biochemistry analytes including hormones and metabolites, amino acids, trace elements and vitamins, porphyrins, etc. Prerequisites: Admission to Undergraduate CLS Program; HAD 313 and HAD 411
2 credits

HAD 414 Coagulation, Urinalysis and Body Fluids

A comprehensive study of the function and disorders of hemostatis and thrombosis and anticoagulant therapy. Laboratory diagnosis and laboratory applications are presented. Includes the fundamental principals of urine and body fluid analysis with correlation of laboratory methods and practice. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisites: Admission to Undergraduate CLS Program; HAD 315 and HAD 398
4 credits

HAD 415 Applied Immunology

Introduces the applications of clinical immunology in the diagnosis and prognosis of human diseases and the fundamental working knowledge of basic principles of the human immune system function. Prerequisite: Admission to undergraduate CLS program
3 credits

HAD 416 Immunohematology

Examines basic immunology, the human blood groups and blood group genetics, hemolytic disease of the newborn, transfusion therapy and current blood bank practice. Includes the performance of clinical laboratory techniques that are routinely performed in an immunohematology laboratory and the interpretation of results. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisites: Admission to Undergraduate CLS Program; HAD 315
3.5 credits

HAD 425 Parasitology/Mycology

Encompasses two specialty areas in clinical microbiology, parasitology and mycology. The first part of the course consists of a comprehensive study of parasites of human and related hosts with a special emphasis on those of medical importance. Host parasite relationships and the role of the parasite in pathogenesis are addressed in lecture. Laboratory exercises demonstrate current methods for identification of parasites of medical importance using prepared slides. The second part of the course consists of lecture and laboratory studies of fungi of medical importance. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Admission to Undergraduate CLS Program.
3 credits

HAD 432 Pharmacology

Describes the basic concepts in pharmacology as they relate to the clinical toxicology laboratory. Presents principles and applications of therapeutics in clinical pharmacology. Prerequisite: Admission to Undergraduate CLS Program.
1.5 credits

HAD 440 Forensic Sciences Clinical

Full time instruction and practice in a section of the medical examiner's office (e.g., forensic biology, forensic toxicology) to acquire hands-on experience with techniques utilized in the investigation of criminal activities. Prerequisites: Admission to Undergraduate CLS Program; HAD 304; Instructor Consent Required
3-5 credits

HAD 445 Selected Topics in Toxicology

Familiarizes students with basic concepts of pharmacology and toxicology. Covers methods of analysis and interpretation of laboratory data. Prerequisites: Admission to Undergraduate CLS Program; HAD 331 and HAD 432; Progam Consent Required
1.5 credits

HAD 460 Clinical Laboratory Quality Management

Introduces students to total quality managed environments and provides tools to affect quality management programs as their careers progress into leadership roles. Prerequisite: Admission to Undergraduate CLS Program
1 credit

HAD 468 Laboratory Information Systems Internship

Familiarizes students with responsibilites of a laboratory information systems (LIS) manager. Provides exposure to various operations involved with developing, maintaining and troubleshooting an LIS in the laboratory and medical informatics setting. Prerequisites: Admission to Undergraduate CLS Program; HAD 363; Additional Prerequisite Track Courses Required; Instructor Consent Required.
1 credit

HAD 490 Independent Study/ Clinical Laboratory Sciences

Proposals for special projects in clinical laboratory sciences involving readings, research, and laboratory problems must be submitted to the program director for approval prior to registration for this course. Prerequisites: Admission to Undergraduate CLS Program; Instructor Consent Required.
1-6 credits

HAD 492 Research Tutorial

Provides students with an opportunity to apply both skills and knowledge acquired during their studies to formulate and design a research project. Students will then, under faculty mentorship, execute their project using appropriate research methods. They will also be expected to write and present a scientific paper on the completed research. Prerequisites: Admission to Undergraduate CLS Program; HAD 351
2 credits

HAD 493 Advanced Seminar in Clinical Laboratory Sciences

Prepares students for transition to entry-level clinical laboratory scientist employment. Exposes students to information on NY State licensure, and National Board of Certification (BOC) examination preparation, job search strategies including resume writing, and interviewing preparation. National BOC and other published examination review sources will be used as framework for students to practice and develop experience with the dynamics of analysis and synthesis of laboratory produced data from multiple clinical laboratory areas (i.e. chemistry, immunohematology, microbiology, etc.) and professional organizations. Case study methods will be used for didactic content regarding teaching techniques. Students will create and present a case study unit. . Prerequisites: Admission to Undergraduate CLS Program; HAD 313, 315, 380, 381, 411, 412, 414, 416, and 425.
2 credits

HAD 494 Clinical Chemistry Practicum

Full-time instruction and practice of laboratory procedures in clinical chemistry and automation in an approved hospital laboratory. Prerequisites: Admission to Undergraduate CLS Program; HAD 313 and HAD 411
4 credits

HAD 496 Histocompatibility Practicum

Full-time instruction and practice to introduce and expose the student to various methodologies and instrumental techniques used in a histocompatibility laboratory. Prerequisites: Admission to Undergraduate CLS Program; Program Consent Required
1 credit

HAD 497 Immunohematology Practicum

Full-time instruction and practice of laboratory procedures in immunohematology (blood banking) in an approved laboratory. Emphasizes laboratory techniques used in the identification and resolution of problems encountered in current blood bank practice. Prerequisites: Admission to Undergraduate CLS Program; HAD 416
3 credits

HAD 498 Coagulation and Urinalysis Practicum

Full-time instruction and practice of laboratory procedures in coagulation and urinalysis in an approved hospital laboratory. Prerequisites: Admission to Undergraduate CLS Program; HAD 414
1 credit

HAD 506 Clinical Cytogenetics Internship

Introduces the students to clinical cytogenetic techniques and standard operating procedures utilized in a clinical cytogenetic laboratory. Permission of department is required. Prerequisites: Admission to Undergraduate CLS Program; HAD 406; Program Consent Required
3-5 credits

HAD 590 Independent Study/ Clinical Laboratory Sciences

Proposals for special projects in clinical laboratory sciences must be submitted to the program director for approval prior to registration. Prerequisites: Admission to Undergraduate CLS Program; Program Consent Required
1-6 credits

HAL

HAL 375 Supplement Use for Sport Performance

Course introduces the use of supplements in sport from a sports medicine and athletic training perspective. Discusses the advantages and disadvantages of using dietary supplements. Presents scientific research on recommended dosage and potential side effects. Both competitive and recreational athletes' needs and concerns are addressed. Upon completion of course, students should be able to evaluate and make recommendations about dietary supplements. Open to west campus students. G/P/NC grading option is not available. Prerequisite: Completion of Any Undergraduate Biology Course or Equivalent
2 credits

HAL 376 Introduction to Nutrition

Introduces students to fundamentals of nutritional science and food systems. Reviews dietary sources and functions of

macro and micronutrients and the basic of their metabolism and impact on energy balance and common health problems. Explores types of food systems, including production, transformation, distribution, access and consumption and Explores the impact on the environment and human health. Discusses contemporary issues and controversies such as eating disorders, diet trends and sports nutrition. Open to west campus students. G/P/NC grading option is not available.
3 credits

HAL 510 Strength and Conditioning for the Healthcare Practitioner

Designed to provide a comprehensive overview of strength and conditioning for the future or practicing healthcare practitioner. Emphasizes exercise sciences (including anatomy, exercise physiology, and biomechanics), nutrition, exercise technique, program design, organization, administration, testing, and evaluation. Prepares students for nationally- accredited Certified Strength and Conditioning Specialist (CSCS) certification exam. Open to non SHTM students Prerequisite: ANP 300, HAN 200 or Equivalent Anatomy Course; Instructor Consent Required
3 credits

HAL 515 Foundations of Athletic Training

Introduces the student to athletic training and the role of the athletic trainer. Topics include the historical development of the profession, concept of the sports medicine team, and injury documentation. Emphasizes strategies for injury prevention, assessment, and treatment. Focuses instruction on the recognition and management of medical emergencies, training and conditioning techniques, and the fabrication and application of taping, wrapping, supportive, and protective devices.
4 credits

HAL 520 Principles of Physical Agents

Introduces the use of therapeutic interventions to manage a variety of musculoskeletal conditions. Emphasizes an evidence-based practice approach to making sound clinical decisions for the use of therapeutic modalities. Topics include tissue response to injury, pain physiology, psychological response to injury, and therapeutic interventions for inflammatory and non-inflammatory conditions.
3 credits

HAL 525 Evidence Based Practice

Introduces concepts of evidence based practice (EBP) in athletic training. The student will learn how to obtain, process, examine, and appraise peer reviewed journal articles. The students will become a consumer of literature and form a foundation for clinical practice as well as identifying areas of interest for future research projects through literature searches and round table discussions of literature.
1 credit

HAL 530 Critical Care

This course will enable the student to evaluate and manage patients with acute conditions, including triaging conditions that are life threatening or otherwise emergent across all systems of the body. Students are required to have current certification in Basic Life Support CPR.
4 credits

HAL 535 Clinical Diagnosis & Treatment I

Focuses on the principles of clinical diagnosis and treatment of orthopedic injuries to the lower extremity. Emphasizes the components of the comprehensive orthopedic clinical evaluation and diagnosis including history, inspection, palpation, functional testing, special evaluation techniques, and the establishment and implementation of therapeutic interventions.
5 credits

HAL 540 Clin Diagnosis & Treatment II

Focuses on the principles of clinical diagnosis and treatment of orthopedic injuries of the head, cervical spine, and upper extremity. Emphasizes the components of a comprehensive orthopedic clinical evaluation and diagnosis including history, inspection, palpation, functional testing, special evaluation techniques, and the establishment and implementation of therapeutic interventions. Prerequisite: Year 1 Summer Courses
5 credits

HAL 545 Clin Diagnosis & Treatment III

Focuses on the principles of clinical diagnosis and treatment of orthopedic injuries of the thoracic and lumbosacral spine. Emphasizes the components of a comprehensive orthopedic clinical evaluation and diagnosis including history, inspection, palpation, functional testing, special evaluation techniques, and the establishment and implementation of therapeutic interventions. Prerequisite: Year 1 Fall Courses
3 credits

HAL 550 Advanced Therapeutic Interventions

Progression of previously learned therapeutic interventions. Emphasizes the use of therapeutic exercise and manual therapy techniques in order to rehabilitate patients from both surgical and non-surgical orthopedic conditions. Prerequisite: Year 1 Spring Courses
5 credits

HAL 555 Healthcare Management for Athletic Training

Provides students with the ability to analyze various issues, policies, and procedures encompassing the ethical administration of athletic training in a managed-care model. Includes US federal healthcare laws, legal liability, issues, personnel management, facility organization and design, equipment maintenance, budgeting, record keeping, health care services, informatics, counseling, and public relations. Exposes students to principles that enhance their networking, professional development, and personal branding skills. Prerequisite: Year 1 Spring Courses
3 credits

HAL 560 Nutrition And Supplement Use for Sport Performance

Provides an understanding of basic nutrition science as well as the use of supplements to enhance athletic performance. Students will become familiar with the principles of diet planning, food labeling, biological functions and food sources of primary nutrients, energy balance, weight management and physical activity; the role of nutrition in chronic disease development; nutrition throughout the life cycle and current nutrition-based controversies. Reviews the advantages and disadvantages to using dietary supplements. Addresses scientific research on recommended dosage and potential side effects. Addresses both the needs of competitive athletes¿ and everyday needs and concerns. Upon completion of this course, students should be able to evaluate and make recommendations about diet plans, dietary supplements, as well as maintaining a healthy lifestyle. Focuses on the analysis of needs of various athletes to determine if specific supplements should be recommended to improve performance.Prerequisite: Year 2 Fall Courses
3 credits

HAL 565 Research Design for Athletic Training

Presents research design and related methods commonly used to contribute to the evidence-based practice of athletic training. Provides the necessary tools for students to process and apply the skills needed to develop independent research studies. Includes literature searches, appraising scientific literature, formulating a research question or hypothesis, and selecting appropriate research designs and methods. Presents information in the context of protecting human subject and health information based on the policies and procedures of the Committee on Research Involving Human Subjects (CORIHS) and IACUC. Prerequisite: Year 1 Fall Courses
2 credits

HAL 570 Research Methods for Athletic Training

This course introduces the student to research in athletic training. The student will learn about the research process, read, examine, and comprehend peer reviewed journal articles. The student will begin assembling a research topic related to athletic training through the development of a research question and the composition of a literature review and methodology based on their proposed topic. Prerequisite: Year 1 Spring Courses
2 credits

HAL 571 Research Seminar I

This course is intended to review parametric and nonparametric statistics that will be implemented into students¿ research design in an effort to draw statistical inferences and answer research questions. Once students receive IRB approval time will be allotted for students to recruit subjects and pilot test their research projects. If students complete their pilot testing, they will be afforded time to begin their final projects. Prerequisite: Year 1 Summer Courses
1 credit

HAL 572 Research Seminar II

Culmination of the athletic training program¿s research curriculum. Upon receiving IRB approval, students will recruit subjects and collect data to answer their research questions. The goal of this course is to complete the proposed research projects and develop a publishable manuscript and a poster that can be presented at a state, regional, or national conference. Prerequisite: Year 2 Fall Courses
1 credit

HAL 575 General Medical Conditions

Provides a working knowledge of the pathophysiology and management of common diseases and other medical disorders or disabilities as they relate to athletes and the physically active. Prerequisite: Year 2 Summer Courses
4 credits

HAL 581 Athletic Training Clinical I

This course provides the student with their first clinical experience. The student will be supervised by a preceptor at all times during their clinical experience. The student will practice patient care and professional skills and behaviors on a daily basis. Emphasis is placed on topics related to the student¿s previous areas of classroom study (foundations of athletic training, principles of physical agents, evidence-based practice, lower extremity evaluation, diagnosis, and therapeutic intervention) and immediate incorporation of concurrent classroom topics (upper extremity evaluation, diagnosis, and therapeutic intervention, critical care). Prerequisite: Year 1 Summer Courses
7 credits

HAL 582 Athletic Training Clinical II

This course offers assignments in clinical settings related to the student¿s area of study (Principles of Physical Agents, Clinical Diagnosis and Treatment I & II, Critical Care). This course will give the student the opportunity to observe and integrate skills under the supervision of a preceptor. The student will practice comprehensive patient care and professional skills and behaviors on a daily basis in preparation for independent clinical practice upon graduation. Prerequisite: Year 1 Fall Courses
7 credits

HAL 583 Athletic Training Clinical III

This course provides the student with their third clinical experience. This clinical experience will be full-time (a minimum of 35 hours per week). The student will be supervised by a preceptor at all times during their clinical experience. The student will practice comprehensive patient care and professional skills and behaviors on a daily basis in preparation for independent clinical practice upon graduation. Prerequisite: Year two Summer I courses
3-5 credits

HAL 584 Athletic Training Clinical IV

This course provides the student with their fourth clinical experience. The student will be supervised by a preceptor at all times during their clinical experience. The student will practice comprehensive patient care and professional skills and behaviors on a daily basis in preparation for independent

clinical practice upon graduation. Prerequisite: Year 2 Summer Courses
7 credits

HAL 585 Athletic Training Clinical V

This course provides the student with their fifth clinical experience. This clinical experience will be full-time (a minimum of 35 hours per week). The student will be supervised by a preceptor at all times during their clinical experience. The student will practice comprehensive patient care and professional skills and behaviors on a daily basis in preparation for independent clinical practice upon graduation. Prerequisite: Year 2 Fall Courses
7 credits

HAL 586 General Medical Clinical

This course provides the student with general medical clinical experience through rotations with health care providers in different settings. The student will be supervised by a preceptor at all times during their clinical experience. The student will practice comprehensive patient care and professional skills and behaviors on a daily basis in preparation for independent clinical practice upon graduation. Prerequisite: Year 2 Fall Courses
1 credit

HAL 599 Clinical Continuation

Clinical continuation course for athletic training students only.
0 credit, S/F graded

HAN

HAN 200 Human Anatomy and Physiology for Health Science I

This is the first course in a two-part sequence that introduces the study of human anatomy and physiology at cell, tissue, and organ system levels of organization, with emphasis on understanding disease processes associated with systems. Laboratory sessions include virtual on-line exercises designed to illustrate principles learned and computer simulations in physiology and anatomy dissection. G/P/NC grade option is not available. Open to non HSC students. Prerequisite: one natural science course; U2 Standing. SBC: SNW
4 credits

HAN 202 Human Anatomy and Physiology for Health Science II

This is the second course in a two-part sequence that continues the study of human anatomy and physiology. Topics include the endocrine system, blood composition, the cardiovascular system, the lymphatic system, the immune system, the respiratory system, the digestive system, nutrition, the urinary system, the reproductive system, fluid, electrolyte, acid-base balance and heredity. Laboratory sessions entail virtual online exercises designed to illustrate principles learned and computer simulations in physiology and anatomy dissection. G/P/NC grade option is not available. Open to non-HSC students. Prerequisite: HAN 200. SBC: STEM+
4 credits

HAN 251 Research Methods in Health Science

Provides a foundation in quantitative, qualitative and mixed methods research design and methods. Emphasizes the relationship between literature review and the research process and the elements of a research proposal. Applies research designs and methods to case study research projects. Requires on-line CITI training in the protection of human subjects. G/P/NC grade option is not available. Open to non HSC students.
3 credits

HAN 300 Health Care Issues

Provides students with an overview of the organization of the health care delivery system. Includes the role of health care professionals and health care organizations. Explores issues regarding health care insurance, the uninsured and underserved, managed care and changes in the health care marketplace. Provides an overview of major diseases including epidemics, chronic and acute illness. Discusses the role of health promotion and disease prevention as well as alternative and complementary medicine. Prerequisite: Advancement to Health Science Senior Year Curriculum - HANBS
3 credits

HAN 311 Kinesiology

The mechanical aspects of human motion and the structure and function of these motions in physically active individuals with or without pathological involvement. The student learns basic qualitative and quantitative clinical techniques used in identifying pathological movement. G/P/NC grading option is not available. Prerequisite: Advancement to Health Science Senior Year Curriculum - HANBS; Pre-req courses with the minimum grade of C: 4 credits BIO/w lab; 4 credits CHEM/w lab; 4 credits PHY /w lab; 3 credits of Statistics. 8 credits of HAN 200/202 or equivalent; HAN 312 (minimum grade B).
4 credits

HAN 312 Human Anatomy, Health and Medical Language

Develops a deeper knowledge of human anatomy and a working medical vocabulary that applies to clinical scenarios. Builds on a foundation of anatomy and physiology. Emphasizes the interrelationships among human anatomy, body systems, pathophysiology and clinical medicine. Introduces the medical professionals and the technology utilized to diagnose and treat patients. G/P/NC grade option is not available. Open to non-HSC students. Prerequisite: HAN 200 or ANP 300.
3 credits

HAN 333 Communication Skills

Introduces the principles of effective communication and stages of group development. Offers theory and practice of interpersonal communication and groups. Provides specific topics related to health care teams. Prerequisite: Advancement to Health Science Senior Year Curriculum - HANBS. SBC: DIV, SPK
3 credits

HAN 335 Professional Ethics

Provides students with a framework for identifying ethical dilemmas in professional settings.Through the use of case studies and role-playing, students simulate ethical situations relating to confidentiality, informed consent and truth-telling, and explore various approaches for resolving these conflicts. Presents professional codes of ethics using small and large group discussions. Presents and discusses ethics-related topics such as genetics, transplants, cloning, advance directives, and health care accessibility. Prerequisite: Advancement to Health Science Senior Year Curriculum - HANBS. SBC: CER
3 credits

HAN 364 Issues in Health Care Informatics

Acquaints students with the use and application of personal computers and medical information systems used in health care. Emphasizes the optimization and customization potential of computer functions for standard and specialized tasks. Examines the present and potential use of the Internet in the health care arena. Presents the application of medical informatics to health care delivery though classroom demonstrations and discussions. Prerequisite: Advancement to Health Science Senior Year Curriculum - HANBS. SBC: TECH
3 credits

HAN 383 Scholarly Writing in Health Science

This course is designed to challenge the undergraduate student to improve their skills in scholarly writing and professional communications through a variety of written and verbal formats in a logical, straightforward style. Students will be shown strategies for writing with purpose, supporting detail, and organization. Students will be required to write for a variety of audiences and will conduct a limited literature review, design a research proposal, and create an evidence-based program to be presented to the class. Prerequisite: HAN 251; WRT 102; Advancement to Health Science Senior Year Curriculum - HANBS. SBC: ESI, WRTD
3 credits

HAN 395 Radiation Physics in Medicine

Provides an introduction to radiological and radiation oncology physics for students interested in a career in either medical imaging or radiation therapy/oncology. Presents elements of mathematics and general physics relevant to the radiological sciences. Topics include production of radiation, radioactivity, interaction of radiations with matter, radiation detection, characteristics of high energy medical LINAC radiation, absorbed dose calculation and measurement, radiography, radionuclide imaging, imaging with ultrasound, imaging with magnetic resonance, and basic medical radiation safety. Prerequisite: Advancement to Health Science Senior Year Curriculum - HANBS
4 credits

HAN 401 Radiobiology and Health Physics

Presents an overview of the biological effects of radiation by examining the interaction of radiation with matter, macromolecules, cells, tissue and the whole body. Studies the clinical impact of responses to radiation. Introduces students to radiation safety through topics such as biologic consequences of irradiation, regulatory limitation of exposure, methods for exposure minimization, and radiation monitoring. Restricted to students approved for appropriate senior year concentration of study in the Health Science major. Prerequisite: HAN 395
3 credits

HAN 402 Radiographic Anatomy and Pathology

Provides basic radiographic anatomy from both the projection and cross sectional point of view. Introduces basic disease processes, including the nature and causes of disease and injury. Examines these processes on medical images acquired through radiography, computed tomography, angiography, magnetic resonance, scintigraphy, emission computed tomography and ultrasonography. Restricted to students approved for appropriate senior year concentration in the Health Science major. Prerequisite: HAN 395
3 credits

HAN 404 Radiology Instrumentation

Expands imaging physics into the area of Radiologic Technology. Studies the physical basis, construction, operation, and quality control of radiographic, fluoroscopic, computed radiographic, direct radiographic, digital subtraction, and computed tomography systems. Restricted to students approved for appropriate senior year concentration of study in the Health Science major. Prerequisite: HAN 395
3 credits

HAN 405 Radiographic Technique

Focuses on production of radiographic image. Includes rationale for selection of technical factors, issues of image resolution and contrast, image receptor technology; film sensitometry; image intensification; film processing; grids; automatic exposure control; portable/surgical procedures; and basic contrast agent pharmacology, and administration directly related to the production of radiographic images. Presents an overview of the special modalities of computed radiography (CR), direct radiography (DR), fluoroscopy, digital fluoroscopy, digital subtraction angiography (DSA), computed tomography (CT), and picture archive communication systems (PACS). Special emphasis is placed on reducing patient exposure to radiation. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 395
3 credits

HAN 406 Radiologic Procedures and Positioning I

Examines routine clinical radiographic positioning of the upper and lower extremities, shoulder, spine, chest, pelvis skull, abdomen, and digestive and urinary systems. Includes portable studies, operating room applications, angiography and advanced imaging techniques. Restricted to students approved for appropriate senior year track in the Health Science major. Prerequisite: HAN 395
6 credits

HAN 416 Special Issues in Emergency Care and Resuscitation

Explores issues in special patient populations and areas in emergency care. Covers pediatric emergencies, obstetric emergencies, neonatology, and geriatric emergencies. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 417 Cardiac Emergencies

Exposes students to concepts and issues critical to assessment and care of patients presenting with cardiac emergencies. Covers cardiovascular pathophysiology; cardiac patient assessment and management; cardiac electrophysiology; cardiopulmonary resuscitation; and advanced cardiac life support. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 424 Pathophysiology for Healthcare Professionals

Provides broad but significant immersion in pathophysiology to develop an understanding of common conditions treated in the inpatient and ambulatory settings. Emphasizes a systems based approach to disease states. Highlights the pathophysiology, clinical presentation, diagnostic evaluation, and pharmacologic treatment and monitoring of the common diseases within each body system that coders encounter in the medical record. Prerequisite: Advancement to Health Sciences Senior Year Curriculum - HANBS.
3 credits

HAN 432 Introduction to Health Care Management

Introduces students to the practices and theories of health care policy and management. Presents an overview of the trends in public policy and management techniques. Restricted to students approved for appropriate senior year track in the Health Science major.
4 credits

HAN 433 Statistics for Healthcare Management

Assists students in defining and understanding the terms used in the statistical treatment of data. Students will perform descriptive and inferential statistical treatments of data (i.e., perform and interpret hypothesis testing). Prerequisite: Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 434 Corporate Compliance and Regulation

Provides an overview of recently enacted legislation requiring health care institutions' compliance programs. Introduces regulations and compliance including anti-trust, controlled substances, Americans with Disabilities Act, Occupational Safety and Health Act, Joint Commission on Accreditation of Health Care Organizations, Department of Health jurisdiction over hospitals and licensure requirements. Restricted to students approved for appropriate senior year track in the Health Science major.
4 credits

HAN 435 Sales and Marketing in Health Care

Introduces the essential aspects of marketing and sales in the changing health care world. Addresses the concept of marketing, the nature of marketing strategy and the environment in which marketing operates. Provides a framework for understanding the consumer, along with key selling methods. Topics include the "Four Ps" of marketing, promotional elements of marketing, the communication process, and personal selling. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 436 Continuous Quality Improvement in Health Care

Provides basic principles associated with Total Quality Management (TQM) and Continuous Quality Improvement (CQI). Aids identification and quality problem-solving found in all health care organizations utilizing CQI tools and techniques. Through the use of case studies, current events, and textbook materials, students will learn how to identify problems, recommend improvements, and collect data to demonstrate process improvement. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 440 Introduction to Community Health Education

Introduces students to the foundation of planning, implementing and evaluating community-based health education programs. Presents classic theories of health education including the social learning theory, health belief model, and the attribution theory. Reviews relevant health education programs. Examines various learning styles and skills. Basic health education models are introduced and critiqued through individual and group projects. Reviews health education professional organizations and associations. Each student is required to design a health education program for a selected population. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 441 Internship in Health Science

This is an elective course in the Health Science major. Students will participate in a 45-hours per credit internship experience with an off-campus or on-campus agency or organization that provides students the opportunities to apply their concentration to work experiences. The internship must be approved and sponsored by a faculty member within the concentration. Prerequisite: Restricted to students approved for appropriate senior year track in the Health Science major. Permission of Instructor.
1-6 credits

HAN 443 Aging and Disability

Provides a broad overview of aging and disability, including an introduction to the field of geriatrics, disabilities that are age-related, developmental disabilities, as well as the experience of people with disabilities as they age. The course will be taught from an interdisciplinary perspective, incorporating social, environmental, cultural, economic, and historical issues related to disability and aging. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 446 Disability Health and Community

Presents a comprehensive view of health and community concerns experienced by people with disabilities. Explores historical analysis, biomedical discourse, cultural critique, and field research to understand the evolution of medical practices, cultural beliefs, and social structures influencing the treatments, services, and opportunities available to people with disabilities in the United States and internationally. Topics include: gender, sexuality, race, poverty, "invisible disabilities", eugenic sterilization, and assisted suicide. Course lectures and readings will facilitate a multi-layered understanding of the issues faced by people with disabilities and their families. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 447 Children with Disability

Provides a comprehensive overview of the theories of child development, disabilities that impact children, the impact of family dynamics on children and the societal and familial relationships on perceptions of children's ability. Includes developmental, language, medical, motor, and sensory needs of children.
3 credits

HAN 448 Disability and Employment

Explores the historical, legal, and practical aspects of disability and employment in the U.S. Introduces U.S. history of disability and employment; pertinent employment-related legislation; existing governmental and not-for-profit vocational rehabilitation programs; roles of placement professionals; and current disability employment practices. Examines Title I of the Americans with Disabilities Act, with particular attention on ramifications of landmark Supreme Court cases. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 449 Project in Disability Studies

Students will develop an independent capstone project in a topic area of individual interest within disability studies and human development. They will be required to develop a set of readings in this topic area, write a comprehensive paper, and give an oral presentation of their project. Students will integrate experiences from an internship or lived experience (the site) with the literature on their selected topic. The course instructor will mentor students to complete the project. The site can be drawn from two sources: an internship (HAN 441) or a lived experience (a previous or current position the student has arranged separately from class; can be past or present; must be approved by the instructor).Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 450 Introduction to Public Health

Introduces the principles and practices of public health, including definitions and concepts, history and development, determinants of health, and ethical and legal aspects of public health. Orients students to various public health settings such as local and state health departments, not-for-profit community organizations, and agencies for special populations. Provides students with basic knowledge and skills for conducting community needs assessment with diverse populations. Addresses infectious disease control, environmental health, chronic disease control, tobacco and drug control, maternal and child health, women's health, and injury control topics. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 452 Epidemiology and Biostatistics

Provides students with the basic knowledge and skills for studying diseases of individuals and groups. Introduces biostatistical approaches and skills for collecting and organizing data of communities to meet health needs. Addresses epidemiological concepts, limitations and resources. Through the use of case studies, students study various epidemiological models used regionally, nationally and internationally. Includes discussions about ethical situations related to research and statistical studies. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 455 Health Literacy for Public Health

Explores the ways in which health literacy impacts patient care and the delivery of community health/public health services. Students will learn the skills needed to relay, process, and explain basic health information and services to assist patients and their families to make appropriate health decisions. Examines and analyzes issues of low health literacy, including populations at risk, research, measurement tools, writing in plain language and health communication techniques. Prerequisite: Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 456 Behavioral and Social Aspects of Health

Introduces social and behavioral factors as determinants of health. Explores theories of human and group behavior and health behavior change models through lecture and case study. Explores the dynamics between health behaviors and culture, gender, age and socioeconomic status. Students study various inventory tools for measuring health-related knowledge and methods for measuring behavior change. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 457 First Aid and Injury Care

This course instructs the student in the recognition and management of medical emergencies with emphasis placed on those conditions which most commonly occur during exercise. Successful completion of the course leads to Professional level cardiopulmonary resuscitation (CPR), automatic external defibrillator (AED) and First Aid certification by the National Safety Council.
3 credits

HAN 458 Strength and Conditioning for Hlthcare Pract

This course is designed to provide a comprehensive overview of strength and conditioning for the future or practicing healthcare practitioner. Emphasis is placed on the exercise sciences (including anatomy, exercise physiology, and biomechanics), nutrition, exercise technique, program design, organization, administration, testing, and evaluation. Physical activities in this class may involve exercises of mild, moderate, or vigorous intensity. Additionally, this course is designed to help students prepare for the nationally- accredited Certified Strength and Conditioning Specialist (CSCS) certification exam.
3 credits

HAN 459 Introduction to Sports Medicine

This course will explore the history and development of the sports medicine team and will explore the role of various health professionals that comprise the team. Additionally, the course includes content on anatomy, common injuries and rehabilitation practices.
3 credits

HAN 460 Exercise Physiology

Offers the student an understanding and appreciation of the metabolic and physiological adaptations of exercise. In-depth presentation of muscle, cardiac, and pulmonary physiology related to the healthy human at various states: rest, acute exercise, long term exercise under normal and high stress environmental conditions. Includes presentation of food sources, production of energy, and energy systems. Includes information on how training enhances strength, anaerobic power, aerobic power and physique while slowing the effects of aging and aiding in disease prevention. Prerequisite: Admission to Undergraduate Athletic Training Program
4 credits

HAN 461 Introduction to Nutrition

This course is designed to provide an understanding of basic nutrition science to students with a limited scientific background. Students will become familiar with the principles of diet planning, food labeling, biological functions and food sources of primary nutrients, energy balance, weight management and physical activity; the role of nutrition in chronic disease development; nutrition throughout the life cycle and current nutrition-based controversies. Both the needs of competitive athletes¿ and everyday needs and concerns will be addressed. Upon completion of this course, you should be able to evaluate and make recommendations about diet plans and a healthy lifestyle. Prerequisite: grade of C or better in HAN 311; Not to be taken in addition to HAL 376.
3 credits

HAN 462 Developing Health Information Systems

Introduces students to fundamental hardware and software concepts, operating systems, GUI or desktop environments and system development life cycles. Reviews Windows applications such as spreadsheet, database, forms, queries and reports. Restricted to students approved for appropriate senior year track in the Health Science major.
4 credits

HAN 464 Health Information Systems Management

Explores organizational change issues in health care environments, resource management (inventory, tracking and acquisition) and the role of policy formulation. Consumer issues, standards and security and the provision of health information resources to healthcare workers will also be covered. Relevant applications and issues related to health services will also be explored. Restricted to students approved for appropriate senior year track in the Health Science major.
4 credits

HAN 466 Applied Health Care Informatics

Provides overview of the role of information systems in health care organizations. Emphasizes the integration of evidence-based research into clinical decision-making and the influence of information systems on health outcomes. Explores technical, organizational and cost-benefit issues related to health care information systems, including clinical decision-support, integrated networking and distributed computing technologies, telemedicine applications and artificial intelligence solutions. Through a combination of classroom-based seminars, group case studies, and computer laboratory exercises, students will develop and exercise analytical skills for appraising health information systems, as well as acquire practical experience using biomedical research databases, desktop application software, and electronic communication systems. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 467 Utilization and Outcomes Research Methods

Provides the necessary tools to evaluate and implement research methods and utilize outcomes within the health care system. Presents an overview of statistics and research methods and evaluation techniques by utilizing group discussions and case studies. Demonstrates the utilization of technology as a resource for existing research as well as management tools. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 470 Occupational Health and Safety Engineering

Provides fundamentals of occupational safety and health. Emphasizes safety engineering regulations, codes and practices, safety program administration, recognition of

hazards, and implementation of hazard controls. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 471 Trauma and Trauma Systems

Explores concepts and issues that are critical to the assessment and care of trauma patients. Covers kinematics, pathophysiology, trauma patient assessment and management, and trauma system development. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 472 Emergency Response to Hazardous Materials and Terrorism

Students will learn how healthcare providers recognize and respond to hazardous material (HAZMAT) and terrorist incidents. Includes management strategies for hazardous materials incidents, identification of on-scene indicators of a suspicious incident, recognition of the tactics and objectives of terrorism, and scene/perimeter control issues unique to a terrorist incident. Restricted to students approved for appropriate senior year track in the Health Science major.
3 credits

HAN 474 Industrial Hygiene

Introduces basic concepts of industrial hygiene. Presents the methodology and procedures that professionals in the field use to identify, measure, and correct hazards in the work environment. Restricted to students approved for appropriate senior year track in the Health Science major.
4 credits

HAN 475 Fundamentals of Environmental Health

Introduces the key areas of environmental health. Utilizes a population health perspective. Emphasizes core concepts in environmental health (i.e. environmental epidemiology, environmental toxicology, environmental policy and regulation); agents of environmental diseases (i.e. microbial agents, ionizing and nonionizing radiation); and applications and domains of environmental health (i.e. water and air quality, food safety, waste disposal, occupational health, and injuries). Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
3 credits

HAN 476 Hazardous Materials, Emergency Response and Environmental Auditing

Concentrates on the nature of hazardous materials and how they are handled in the workplace. Presents the fundamentals of emergency response planning and how to perform environmental audits. Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
4 credits

HAN 477 Medical Emergencies

Presents concepts and issues critical to assessment and care of patients presenting with medical emergencies. Covers pathophysiology, medical patient assessment, and management of medical emergencies. Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
3 credits

HAN 478 Internship in Environmental Health

A 90 hour internship experience provides real-time work experience and opportunity for students to apply knowledge and skills learned in environmental health concentration courses. Restricted to students approved for appropriate senior year concentration of study in the Health Science major. SBC: EXP+
2 credits

HAN 481 Introduction to Anesthesia

Introduces the basics of the anesthesia specialty. Defines the role of the anesthesia specialist as an integral part of the patient care team. Through the use of lecture, video, tour, and hands-on demonstration, students will gain a working knowledge of how to assist anesthesiologists and anesthetists in the acquisition, preparation and application of equipment and supplies required for the administration of anesthesia. Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
2 credits

HAN 482 Introduction to Pathology

Pathology is the branch of medicine devoted to the study and understanding of disease. This course will introduce the student to the concept of disease. The types of growth, causative factors and biological behavior of neoplastic diseases are discussed. Staging procedures are introduced. Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
Prerequisite: HAN 395
3 credits

HAN 483 Cardiopulmonary Physiology for Anesthesia Technology

Familiarizes students with the anatomical structures and physiological mechanisms and functions of the cardiopulmonary system. Reviews mathematical formulas and calculations used in clinical applications of physiologic concepts. Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
3 credits

HAN 485 Clinical Monitoring

Provides students with a working knowledge of clinical monitoring devices and their application to clinical settings. Covers duties of anesthesia technologist including the provision of technical support to professional staff in order to facilitate anesthesia departmental function. Student develops skills to maintain and organize the anesthesia environment, equipment and supplies. Restricted to students approved for

appropriate senior year concentration of study in the Health Science major.
1 credit

HAN 486 Principles and Practice of Radiation Therapy

Provides students with a history and introduction to the practice and technical aspects of radiation therapy. An overview of cancer to include the following: statistics, epidemiology, etiology, patient education and assessment and pharmacology and drug administration. Radiation therapy techniques specific to anatomical sites will be demonstrated and treatment outcome statistics discussed. Additionally, treatment options available to cancer patients will be explored. The lab component, the application of radiation therapy as a primary treatment modality for various cancers will be studied. Restricted to students approved for appropriate senior year concentration of study in the Health Science major. Prerequisite: HAN 395
4 credits

HAN 487 Introduction to Treatment Planning

Provides a detailed exploration of treatment planning in the field of radiation therapy. Includes, but is not limited to, in-depth instruction in planning algorithms, data transfer, dose computation, plan evaluation and implementation, and Quality Assurance (QA). Reviews and discusses a variety of treatment planning systems and treatment machines. The lab component will explore radio-graphical cross-sectional anatomy using Computerized Tomography (CT), Positron Emission Tomography (PET) and Magnetic Resonance Imaging (MRI) imaging, full-body anatomical contouring, tolerance doses for critical organs, patient treatment setup, immobilization devices, beam modifiers, Dose Volume Histograms (DVH) and electron planning, including, but not limited to 3-Dimensional (3D) planning vs. Intensity Modulated Radiation Therapy. Restricted to students approved for appropriate senior year track concentration of study in the Health Science major. Prerequisite: HAN 395
4 credits

HAN 489 Pharmacology for Anesthesia Technology

Presents basic principles of pharmacologic properties and clinical applications. Through the use of lectures and scenarios, provides working knowledge base of drug classifications and their modes of action to produce therapeutic effects on target sites. Restricted to students approved for appropriate senior year concentration of study in the Health Science major.
4 credits

HAN 492 Radiation Oncology/Medical Phyics II

Provides students interested in a career in medical dosimetry with an introduction to medical physics for radiation oncology. This is the second course in a two-part series that provides the basis for further study of the applications of radiation oncology physics to radiation treatment planning and radiation dose calculations. Covers topics such as radiation dose distribution, patient dose calculations, treatment planning, electron beam therapy, brachytherapy, modern treatment delivery, and radiation protection. Restricted to students approved for appropriate senior year concentration of study in the Health Science program. Prerequisite: HAN 395
4 credits

HAN 497 Healthcare in Tanzania: A cultural exchange

The course incorporates learning activities that compare the healthcare systems of the United States and Tanzania, along with a focus on various hospital departments. This course aims to provide students with a well-rounded understanding of medical practices in different contexts and essential knowledge about specialized hospital departments. Through this course, students will explore the impact of culture, medicine, and public health in comprehending and addressing health challenges in various contexts through case studies. The course will offer a look at how administrative policies can impact health, health seeking, and healthcare delivery. Additionally, the course will provide opportunities for cultural exchange between students from SBU and Tanzania (KCMC) to enrich their understanding of global healthcare challenges and promote a collaborative learning environment.
3 credits, S/U grading

HAN 498 International Seminar

Examines qualitative interventions in public health; determines how an effective intervention is created; distinguishes which approaches are effective and which are not. Students will develop respect for the creative low technology approaches used to problem solve and learn hands-on-the-ground techniques for meeting community needs such as bulding physical structures including latrines, eco-stoves or small home. Other projects as appropriate may include teaching school children or giving hygiene instructions. Students will meet with community organizers and families who have been the recipients of interventions, and officials of non-governmental organizations (NGOs) that work with the community.
1-3 credits

HAN 499 Health Science Teaching Practicum

Advanced students assist faculty members teaching Health Science courses. In addition to working as tutors during instructional periods, students have regular conferences with a faculty supervisor. Students are not allowed to apply more than 6 Teaching Practicum credits toward their Bachelor's degree.Permission of the instructor is required. SBC: EXP+
1-2 credits

HAO

HAO 313 Introduction to Occupational Therapy

Introduces the history and essential aspects of occupational therapy. Examines philosophical base, definitions related to the practice, scope of practice and role delineations. Provides

an orientation to professional organizations, statutes, and credentialing. Open to west campus students.
1 credit

HAO 500 Functional Neuroscience

Presents an integrated approach to the general principles of organization and function of the autonomic, peripheral and central nervous systems. Presents these principles in a systems approach to neuroscience. The anatomy of a system will be followed with its physiology, pathophysiology relation to human function and clinical relevance to the occupational therapist. Clinical topics will include neurological testing, control of posture and balance, pain, muscle tone and spasticity, feedback versus feed-forward control, reflex versus voluntary control, control of reaching and locomotion, perception, and learning. Prerequisite: HAO 519, HAO 561
4 credits

HAO 504 Introduction to the Historical and Contemporary Practices of Occupational Therapy

Introduces occupational therapy students to the values and philosophies that influenced the development of the profession, and those that continue to influence current practices. Explores conceptual foundations, ideas, evidence, and resources that allow learners to begin developing applied skills and clinical reasoning skills to support clients in achieving greater participation in the occupations they want and need. The goal of the course is to have learners develop beginning skills for conducting contemporary occupational therapy practices.
3 credits

HAO 505 Foundations in Occupational Therapy

Provides a conceptual foundation for occupational therapy theory and practice. Instructs students on the concepts of occupation, activity, purposeful activity and participation. Through lecture and laboratory sessions, students will experience working with the concepts they are learning. Examines the philosophical base of the profession, and explores the meaning and diversity of the frames of reference in contemporary occupational therapy practice. Emphasizes the centrality of occupation in health and wellness, through balance in performance areas and contexts. Explores the impact of disability, disease, and injury on the person, their family and society. Students will learn how to break down and analyze activities for their performance components, as well as how to grade and adapt activities for therapeutic purposes. Group discussions on social and political systems will focus on how they influence the delivery of health care services. Introduces the impact of culture on treatment and health practices. Explores the concept of theory development, and how theories, models of practice and frames of reference impact occupational therapy evaluation/treatment.
3 credits

HAO 506 Life Span Growth and Development for Occupational Therapy

Provides students with a knowledge of developmental theories and factors influencing the normal developmental process. Developmental norms and sequences are examined with emphasis on physical (sensory and motor), cognitive, and psychosocial tasks. Discusses cultural and environmental influences on development. The coursework covers prenatal, child, adolescent, and adult development utilizing many frames of references from occupational therapy points of view regarding development. Prerequisites: HAO 504, HAO 561
3 credits

HAO 507 Clinical Conditions in Occupational Therapy

Addresses clinical diagnoses, symptomatology, and prognosis of many major clinical conditions commonly encountered in current practice. Emphasize the impact of disease on individual physical, cognitive and emotional function and on families and society. Case studies will be utilized within this course to enable students to relate major theories and frames of reference to treatment approaches for common diagnoses and medical conditions. The course is intended to help build a foundation for subsequent occupational therapy theory and practice courses and to provide a foundation for Fieldwork II experiences. Prerequisites: HAO 505; HAO 519; HAO 561
2 credits

HAO 508 Theories of Adult Rehabilitation

This is the first part of a two part course. Provides entry-level knowledge and attitudes necessary to effectively work as an occupational therapist with the adult population in multiple settings to support occupational performance and quality of life. Discusses and evaluates the core concepts of the occupational therapy and physical disabilities environment. Students will be able to define the role of the occupational therapist as well as the impact of a multidisciplinary team on their role as a team member and within the continuum of care of adults while applying evidence based practice. Prerequisites: HAO 505; HAO 507; HAO 519; HAO 561
2 credits

HAO 509 Occupational Therapy Theory and Practice in Pediatrics

Presents occupational therapy theories, assessments, and treatment processes as they pertain to the pediatric population. Integrates several of the predominant models in current practice with material from previous and concurrent coursework. Covers abnormal development, acute and chronic medical conditions, their effect on the CNS, orthopedic and musculoskeletal systems.. Reviews major causes of disability, the etiology and prognoses Discusses the impact on the family and cultural implications. Students learn about selecting age and developmental stage appropriate evaluations, treatment techniques/procedures. Students enhance their activity analysis skills, assessment, treatment planning, documentation skills, and professional interaction through laboratory, class assignments, and fieldwork. Prerequisite: HAO 505; HAO 507; HAO 519; HAO 561
4 credits

HAO 517 Universal Design

Focuses on adapting the environment to improve the client's quality of life. Examines the therapist's ability to help the patient reintegrate into society. Covers Americans with Disabilities Act; mobility (power and manual); seating/positioning systems; adapted toys; augmentative communication systems; computer access; environmental control units; independent living aids; and vocational adaptations. Provides foundation and knowledge of ergonomic, work hardening, functional capacity evaluations, and vocational programs. Exposes students to different occupational therapy work settings and employment, awareness of federal regulations for work-related programs, and certification requirements for this emerging practice area. The lab sessions offer practical applications of principles discussed in lectures. Prerequisite: Second Year Summer and Fall Courses
3 credits

HAO 519 Kinesiology for Occupational Therapy

Kinesiology is the study of human motion. Designed to establish a working knowledge of biomechanical principles as well as detailed understanding of the osteokinematics and arthokinematics of the various joints of the body. Students will be able to apply their knowledge of biomechanics into real life functional applications for a variety of occupations. The course consists of both lecture and laboratory sessions. Laboratory sessions provide the student with practical applications of principles discussed in lecture. In addition, the laboratory sessions will allow the student to become proficient in the areas of surface anatomy and palpation, manual muscle testing, and goniometry. The student will study normal and pathological movement, including its impact on function. Prerequisite: HAO 561
4 credits

HAO 520 Substance Abuse and Occupational Therapy

This course addresses physiological, sociological, and psychological effects of substance abuse on the abuser and his/her environment. Presents drug classifications, along with effects and withdrawal symptoms. Discusses treatment models, philosophies, and methods. Students will learn how to design both individual and group interventions. Explores in detail the occupational therapists role in the evaluation and treatment of substance abuse across the life-span and across disabilities. Reviews the use of 12-step programs and alternative treatment models, as will prevention programs, such as smoking cessation. Requires Internet Explorer 10, 9, or 8; Firefox; Chrome; Windows 8, 7, Vista or XP; Mac OS X 10.6, 10.7 and 10.8; or Safari 5.1 and 6. Prerequisites: HAO 504; HAO 505, HAO 506, HAO 507; HAO 523.
2 credits

HAO 522 Assessment and Treatment of Adult Rehabilitation

This is the second part of a two part course. Learning activities focus on the evaluation and treatment of adults with physical disabilities. Examines injury, illness, disease and the effect on occupational performance in the areas of work, self-care and leisure. Occupational therapy theories and practice are learned, including frames of reference, evaluation/assessments, treatment interventions, selection of age-appropriate occupation-based activities, and activity analysis are explored. Students will have the opportunity to further refine their documentation and clinical reasoning skills through written and verbal assignments and apply evidence based practices. Prerequisites: HAO 500; HAO 505, HAO 507, HAO 508; HAO 519; HAO 522; HAO 561
3 credits

HAO 523 Assessment and Intervention of Psychosocial Issues

Explores the psychosocial aspects of disability as they affect the function of the individual, the family and the community. Lectures and presentations will be related to the recognition of psychosocial problems and how they can be better understood, minimized, or eliminated. Provision of mental health services across all levels of care will be delineated. Multicultural factors will be discussed as they relate to mental illness and the recovery process. The course exposes the occupational therapy student to the DSM-V and the pharmacology of major mental illnesses. Psychosocial theories guiding assessment and intervention will be thoroughly discussed. Interviewing skills are demonstrated and practiced in the lab sessions. The use of group theories, the structure and function of groups in treatment, the analysis of group treatment and group activities and the therapeutic use of self are the focus in laboratory and lectures. Students will be introduced to and given the opportunity to practice a variety of assessments utilized in psychosocial occupational therapy practice. This course is to provide the student with the knowledge, skills, and attitudes necessary to function as an occupational therapist in a psychosocial/mental health treatment setting. Prerequisite: HAO 504
4 credits

HAO 524 Assessment & Interventions of the Upper Extremities

Presents fundamental upper extremity therapy topics and provides a foundation for clinical reasoning and treatment approaches. Include anatomy; common pathologies; orthotics; evaluation; and treatment. Introduces students to upper extremity orthotics including the design; biomechanical principles; function; use; care; and patient education. Enables the occupational therapy student to gain an understanding of various physical agents currently used in the rehabilitation practices. Prerequisites: HAO 500, HAO 507, HAO 508, HAO 519; HAO 522.
3 credits

HAO 525 Vision, Perception, and Cognition

Focuses on principles and techniques for the rehabilitation of visuocognitive dyfunction. Presents the theoretical rationale and specific skills needed to evaluate and treat a wide range of visual, perceptual and cognitive performance components. Includes a systematic bottom up approach to the evaluation of the adult patient with visuocognitive dysfunction. Explores a variety of treatment approaches and specific treatment techniques that can improve functional performance and outcomes, drawing from both the neurosciences and Occupational Therapy frames of reference. Emphasizes

clinical reasoning and the use of both remediation and compensatory strategies within the framework of Occupational Therapy practice. Prerequisites: HAO 500; HAO 505; HAO 507; HAO 508; HAO 561
2 credits

HAO 526 Gerontology and Occupational Therapy

Focuses on the role of occupational therapy with the aged within geriatric rehabilitation settings (in-patient, out-patient and home care); long-term care programs; wellness and safety programs; hospice; community based programs (socialization, day treatment, adult day care programs), and alternative housing environments. Addresses the aging process and its physiological, sociological, and psychological effects, with attention to heterogeneity and older person's strengths and capabilities. Presents common impairments and disabilities and rehabilitation needs of older persons. Students will develop and demonstrate skills in evaluation, treatment planning and therapeutic adaptation, documentation, and discharge planning (including collaborative client and family education), and demonstrate knowledge of assistive devices, equipment, and technology/ environmental modifications to support community living and to improve the quality of life of older persons. Addresses the importance of evidence-based practice, including occupational therapy, life-long learning and professional development, the benefits of collaborative OT -OTA partnerships and the relationships between policy, legislation and practice. Include aging and gender issues, successful aging, and community and home safety. Provides a conceptual framework for the study of gerontology as it relates to occupational therapy and develops the skills and knowledge to understand major issues in theory, research, and practice related to the older adult. Prerequisites: HAO 505, HAO 507, HAO 508, HAO 522
3 credits

HAO 530 Community, Occupation and Health

Presents the importance of occupation as a precursor to health, and of occupational therapy as a health promoting profession. Examines the theories and applications of occupational science through a review of the professional literature and class discussion. This occupational perspective of health will be the foundation for each student's design of a community-based practice program. Reviews social theories, socio-cultural and socio-political trends that impact the individual's health status and the delivery of health care services. Offers experience in designing/administering needs assessments in the community, and in organizing outcome data. Prerequisite: Successful completion of all prior coursework.
4 credits

HAO 534 The Occupational Therapy Manager

Assists the learner in creating a business plan for an occupational therapy service. Teaches skills involved in setting up a business, being a manager of people, budgets, and services, using evidence to guide management, and how to manage for change. Prerequisites: Successful completion of all prior coursework.
3 credits

HAO 540 Prosthetics & Orthotics

Provides the theoretical, psychomotor and practical skills of orthotics and upper extremity prosthetics that are necessary for current practice. Utilizes lecture, discussion and laboratories to teach the design, biomechanical principles, fit, function, use, care and patient education involved with upper extremity orthotics. Students are introduced to upper and lower extremity prosthetic devices. Prerequisites: HAO 500; HAO 507, HAO 508; HAO 519; HAO 522; HAO 524.
2 credits

HAO 549 Introduction to Research for Occupational Therapy

Description: Provides a foundation for future professional and scholarly activities and stresses the importance of research for informed practice decisions. Presents basic research concepts and statistical applications for the research process. Presents methods to review and critique published, peer-reviewed research, identify research topics of interest, and initiate the literature review process. Provides tools needed to critique commonly used assessment tools in occupational therapy and to use and interpret standardized scores. Requires the CORIHS human subjects research training. Emphasizes professional writing skills for publications and professional presentations. Explores current research methodologies used in occupational therapy to facilitate beginning research skills. Prerequisite: Successful completion of all prior coursework.
3 credits

HAO 551 Research Design and Methods for OT

Provides students beginning research and critical inquiry skills through learning current occupational therapy related research methods and by the design of research grant proposals. Students gain fundamental critical inquiry and writing skills necessary to identify appropriate funding sources and write grant proposals for research and program development. Students learn to design qualitative research projects and analyze qualitative data. Prerequisite: HAO 549
3 credits

HAO 561 Functional Anatomy Review

Provides an anatomical review of all bodily systems in order for students to acquire a basic working knowledge of the functional structure of the human body. Provides foundational knowledge for all other courses in the Occupational Therapy Program. Students will apply knowledge learned to formulate hypotheses about occupational dysfunction associated with abnormalities within systems. Utilizes critiques of research to expand on knowledge from lecture and lab.
4 credits

HAO 562 Principles of Instruction

Identifies issues facing health professions educators and application of knowledge of key education and behavior theories for occupational therapy practice. Explores commonly

used instructional methods and applies these methods to a variety of teaching/learning situations found in occupational therapy education. Explores standardized tools to measure literacy, design of patient education materials for a specific population, and provision of health education information in a community setting. Prerequisite: Successful completion of all prior coursework.
3 credits

HAO 570 Global Communities, Occupations and Health

Explores innovative, non-traditional and emerging areas of occupational therapy practice. Students meet and dialog with occupational therapy practitioners and/or other health care professionals who have developed private practices, are consultants, and are involved in emerging areas of practice. Presents timely articles concerning health care trends and non-traditional/emerging practice areas. Articulates global social issues and occupational needs for a variety of global populations. Builds upon student's prior knowledge and coursework and integrates AOTA's Standards of Practice, Core Values and Attitudes of OT, and AOTA's Code of Ethics, with attention to current and potential OT/OTA partnerships in community and non-traditional settings. Prerequisite: Successful completion of all prior coursework.
2 credits

HAO 573 Professional Behaviors I

Introduces professional behaviors, including basic communication and documentation skills, with a focus on expectations of fieldwork sites. Students will learn the concept of reflective practice, and how to use a reflective journal. Introduces the professional portfolio as a means to document clinical competence. Examines the nature of the supervisory process with strategies to maximize the use of clinical and administrative supervision. Explores cultural competency and the scope of diversity in health care. Emphasizes the importance of life-long learning through continuing education and other methods. Includes lectures, presentations, role-plays and other exercises to achieve learning objectives. Prerequisite: Year One Summer and Fall Courses
1.5 credits

HAO 574 Professional Behaviors II

Builds on previously learned material covered in Professional Behaviors I. Students will work on more advanced documentation and communication skills required for entry-level practice. Provides opportunity to discuss professional behavior expectations from their clinical fieldwork assignments. Use of the reflective journal to enhance professional development, and the continuation of the professional portfolio will assist students in developing and documenting their clinical competence. Explores the supervisory process in greater detail, in the context of its use for personal and professional growth. Discusses the role of the occupational therapy assistant as a colleague and collaborator. Continues to emphasize the importance of life-long learning. Lectures, role-plays, presentations and experiential activities will be used to achieve learning outcomes. Prerequisite: Year Two Summer and Fall Courses
1 credit

HAO 575 Professional Transitional Seminar

Discusses issues related to transition of student to entry-level practitioner role. Presents information on licensure, certification exam preparation, NBCOT certification, AOTA specialty examinations, models of supervision, mentoring, job search strategies, marketing skills, malpractice, continuing competency, professional organizations, networking and career goal planning. Prerequisite: Successful completion of all prior coursework.
2 credits

HAO 580 Special Topics in Occupational Therapy

Offers students the opportunity to explore and expand knowledge and skills in a practice area of specific interest. Prerequisite: Successful completion of all prior coursework.
2 credits

HAO 585 Disability Studies and Occupational Therapy

Introduces a social model of disability and explores the ethical and psychological issues faced by people with disabilities across their lifespan. Presents historical analysis, healthcare discourse, and cultural critique to understand the evolution of health practice, cultural beliefs and social structures influencing the treatments, services, and opportunities available to people with disabilities in the United States and internationally. Offers students a multi-layered understanding of the issues faced by people with disabilities and their families. Includes assigned readings, films, guest speakers, site visits, and one-on-one interactions with people with disabilities. Prerequisite: Successful completion of all prior coursework.
2 credits

HAO 586 Fieldwork Level IA

The first of three introductory level clinical experiences. Offers the opportunity to identify symptomotology, observe treatment interventions and formulate treatment plans in a psychosocial practice setting. Promotes effective communication skills used with patients and professionals. Uses reflective journals to monitor development of professional behaviors and skills. Prerequisite: HAO 504; HAO 505; HAO 506; HAO 507; HAO 523
1 credit

HAO 587 Fieldwork Level IB

This is the second of three introductory level clinical experiences. It provides students with the opportunity to identify symptomatology, observe treatment interventions, and formulate treatment plans in an adult physical disabilities setting. It is designed to promote effective communication skills used with patients and professionals. Reflective practice journals will be used to monitor professional behaviors and skills. Prerequisites: HAO 508, HAO 586.
1 credit

HAO 588 Fieldwork Level I C

The third of three introductory level clinical experiences. Offers the opportunity to identify symptomotology, observe treatment

interventions and formulate treatment plans in a pediatric practice setting. Promotes effective communication skills used with patients and professionals. Uses reflective journals to monitor development of professional behaviors and skills. Prerequisites: HAO 586, HAO 587
1 credit

HAO 590 Independent Study in Occupational Therapy

Students develop and/or implement their research projects under the mentorship of the course instructor and a faculty advisor who has expertise in their chosen topic. Literature reviews are completed and the project is prepared in a format appropriate for professional publication or presentation.
2 credits

HAO 593 Case Studies

This clinical reasoning seminar focuses on the synthesis of all clinical and academic coursework in formulating a comprehensive plan of care. Emphasis is placed on students responding spontaneously to case presentations in class, much as they would be expected to do in the clinical setting. Prerequisite: Successful completion of all prior coursework.
2 credits

HAO 595 Service Learning and Capstone Project

Incorporates in-depth theoretical and practical knowledge for maximum integration of service and classroom work. Includes discussion, journals, essays and other reflective writing methods. Explores reflection, action skill buiilding, and examination of theory and practice of citizenship as applied though community involvement. Students provide 30 hours of service learning. A scholarly project will be the culminating activity for the program. Students will present outcomes of their service learning project in poster format. Prerequisite: HAO 597 and successful completion of all prior coursework
4 credits

HAO 596 Fieldwork Level IIA

Fieldwork IIA is an in-depth clinical experience in the delivery of occupational therapy services. According to AOTA guidelines, this fieldwork is designed to promote clinical reasoning and reflective practice; transmit values and beliefs that enable the application of ethics related to the profession; enable the student to communicate and model professionalism as a developmental process and career responsibility; and develop and expand a repertoire of occupational therapy assessments and interventions related to human occupation and performance. This first of two level II fieldwork experiences exposes the student to a variety of clinical conditions in a specific practice area for 12 weeks on a full time basis. Prerequisite: Successful completion of all prior coursework.
12 credits, S/F graded

HAO 597 Fieldwork IIB

This second clinical fieldwork experience provides the occupational therapy student with opportunities to apply the knowledge and skills learned thus far in the curriculum. Students will be assigned to a fieldwork site for 12 weeks on a full time basis in a particular area of practice. Prerequisite: HAO 596
12 credits, S/F graded

HAO 599 Fieldwork Continuation

This course is for occupational therapy students continuing with Fieldwork.
0 credit, S/F graded

HAO 600 Foundations and Theory in Occupational Therapy

This course provides students with an understanding of the core principles of occupational therapy using the Occupational Therapy Practice Framework. The primary theories, models, and frames of reference that guide occupational therapy practice are introduced and applied using problem-based learning to facilitate future clinical courses.
3 credits

HAO 601 Group Process, Client Communication, and Therapeutic Use of Self

This course teaches basic group and individual client-therapist interaction skills including methods of establishing rapport, giving feedback and employing therapeutic use of self. Students use frames of reference and practice models to design client-centered groups, write group protocols, analyze activities, implement specific group techniques and evaluate progress of self and group members. Prerequisites: All prior coursework must be completed
2 credits

HAO 603 Occupations Across the Lifespan

The course provides students with knowledge of developmental theories and factors influencing the normal developmental process. Developmental norms and sequences are examined with emphasis on physical (sensory and motor), cognitive, and psychosocial tasks. Cultural and environmental influences on development are also discussed. The coursework covers prenatal, child, adolescent, and adult development. Prerequisites: All prior coursework must be completed
2 credits

HAO 610 Functional Human Anatomy

This course provides an anatomical review of all body systems so that students can acquire a basic working knowledge of the functional structure of the human body. This knowledge is foundational for all other courses in the Occupational Therapy Program. Students will apply this knowledge of anatomy to formulate hypotheses about occupational dysfunction associated with abnormalities within the body's systems. Students will apply anatomical concepts discussed in class to occupational therapy case study examples and will critique and appraise research papers related to anatomical concepts discussed in lecture and lab.
4 credits

HAO 611 Functional Neuroscience

This course describes the role of the nervous system in normal movement, cognition, and emotional functioning across the life span. It builds the foundation for professional theory and practice courses by providing neuroscience knowledge related to motor, sensory, and cognitive systems in order to understand movement and function, relate it to occupational performance deficits in the physical and cognitive domains, and to understand selected pathological conditions. The course presents an integrated approach to the general principles of organization and function of the autonomic, peripheral and central nervous systems. These principles will be presented in a systems approach to Neuroscience. The anatomy of a system will be followed with its physiology, pathophysiology, relation to human function, and clinical relevance to the occupational therapist. Clinical topics will include neurological testing, control of posture and balance, pain, muscle tone and spasticity, feedback versus feed-forward control, reflex versus voluntary control, control of reaching and locomotion, perception, and learning. Prerequisites: All prior coursework must be completed
3 credits

HAO 612 Movement for Occupational Performance

This course is designed to establish a basis of biomechanical principles as well as detailed understanding of the osteokinematics and arthrokinematics of the various joints of the body. Normal and pathological movement is analyzed in relation to the impact on occupational performance. Prerequisites: All prior coursework must be completed
4 credits

HAO 613 Conditions in Occupational Therapy

This first-year occupational therapy course will address clinical diagnoses, symptomatology, and prognosis of many major clinical conditions commonly encountered in current practice. In addition, there will be an emphasis on the impact of disease on individual physical, cognitive and emotional function and on families and society. Case studies will be utilized within this course to enable students to relate major theories and frames of reference to treatment approaches for common diagnoses and medical conditions. Prerequisites: All prior coursework must be completed
2 credits

HAO 620 Assessment and Intervention in Mental Health

This course will explore the psychosocial aspects of disability as they affect the function of the individual, the family, and the community. Lectures and presentations will be related to the recognition of psychosocial problems and how they can be better understood, minimized, or eliminated. The provision of mental health services across all levels of care will be delineated. Multicultural factors will be discussed as they relate to mental illness and the recovery process. The course exposes the occupational therapy student to the Diagnostic and Statistical Manual of Mental Disorders (5th edition) (DSM-V) and the pharmacology of major mental illnesses. Psychosocial theories guiding assessment and intervention will be thoroughly discussed. Interviewing skills are demonstrated and practiced in the lab sessions. The use of group theories, the structure and function of groups in treatment, the analysis of group treatment and group activities, and the therapeutic use of self are the focus of laboratory and lectures. Students will be introduced to and given the opportunity to practice a variety of assessments utilized in psychosocial occupational therapy practice. This course is to provide the student with the knowledge, skills, and attitudes necessary to function as an occupational therapist in a psychosocial/ mental health treatment setting. Prerequisites: All prior coursework must be completed
4 credits

HAO 621 Assessment and Intervention in Physical Rehabilitation

The course focuses on occupational therapy and physical disabilities as they pertain to the adult population. Injury, illness, and disease and the effect on the functioning of the individual in self-care, work, and leisure are explored. It provides students with knowledge, laboratory experiences, and a framework to provide services to adults with physical dysfunction. This course addresses occupational therapy values, theory and practice, including frames of reference, evaluation, treatment planning, and a selection of age-appropriate occupations to support occupational performance, occupational analysis, and discharge planning. Students are provided with opportunities to demonstrate development of entry level documentation skills (evaluation, treatment planning, progress notes, discharge planning) and experiences to develop oral communication skills in preparation for fieldwork. The course is designed with laboratory sessions providing students with varied opportunities to develop an entry level knowledge base and broad-based clinical skills to successfully complete Fieldwork Level I and II experiences with a variety of clients in multiple types of traditional or community-based settings. Prerequisites: All prior coursework must be completed
4 credits

HAO 622 Assessment & Intervention in Young Children

This course will provide an overview of occupational therapy in pediatrics, emphasizing the child from birth to five years of age and their families in the context of the environment, and culture. It will also present occupational therapy theories, assessments, and treatment processes as they pertain to current pediatric practice. This course will also analyze the predominant models of current practice and integrate effective treatment interventions. Abnormal development, acute and chronic medical conditions, and their resulting effects on the central nervous system, orthopedic and musculoskeletal systems will be addressed. Students will select occupation-based activities while adapting age and developmentally appropriate evaluations and treatment intervention strategies. The course material will utilize principles and methods of evaluation to include clinical reasoning, critical thinking, and evidence-based practices. Prerequisites: All prior coursework must be completed
3 credits

HAO 623 Assessment and Intervention in School-Based Practice

This course presents occupational therapy theories, assessments, and treatment processes as they pertain to current pediatric practice for children and adolescents in the school-based setting. The predominant models of current pediatric practice with evidence-based treatment interventions are introduced to the student. Emphasized in the course are abnormal development, acute and chronic medical conditions and their resulting effects on the central nervous system, orthopedic and musculoskeletal systems. The course also reviews major causes of disability, the etiology and prognosis and the impact on the family system and cultural implications. Students learn to select and adapt age and developmental stage appropriate evaluation and treatment intervention strategies. Finally, the students will learn how to analyze occupation-based activities for school aged individuals. Prerequisites: All prior coursework must be completed
3 credits

HAO 624 Assessment and Intervention in Substance Abuse Treatment

This course addresses the physiological, sociological, and psychological effects of substance abuse on the abuser and his/her environment. Drug classifications will be presented, along with effects and withdrawal symptoms. Treatment models, philosophies, and methods are discussed. Students will learn how to design both individual and group interventions. The occupational therapist's role in the evaluation and treatment of substance abuse across the life-span and across disabilities will be explored and discussed in detail. The use of 12-step programs and alternative treatment models will be reviewed, as will prevention programs, such as smoking cessation. Prerequisites: All prior coursework must be completed
2 credits

HAO 625 Physical Agent Modalities

This course presents physical agent modalities utilized as an adjunct to occupational therapy treatment. Modalities include therapeutic applications of thermotherapy, cryotherapy, ultrasound, paraffin, transcutaneous electrical nerve stimulation (TENS), and functional electrical stimulation (FES). The student will have the opportunity to practice the application of each modality on their peers. The physiological effects of physical agent modalities and their clinical uses and precautions/contraindications are addressed. Prerequisites: All prior coursework must be completed
1 credit

HAO 626 Assessment and Intervention of the Older Adult

This course focuses on the role of occupational therapy with older adults in a variety of rehabilitative settings (inpatient, short term rehabilitation, home care, and outpatient), long-term care, community-based programs (health and wellness, fall prevention), alternative housing environments, and hospice. The aging process and its effects are explored, as are common impairments and rehabilitation needs of elders. Students also learn psychosocial and environmental influences on the heterogeneous aging experience of elders, with attention to supporting autonomy and the older person's strengths in any context. Course lectures and activities address evidence-based practice, policy, and legislative issues that affect older adults, with topics including interpersonal relationships, assistive devices and equipment, community mobility, and aging in place. Applying this knowledge, students will develop and demonstrate entry-level skills in evaluation, treatment planning and delivery, documentation, and discharge planning (including collaborative client and family education) of older adults. Finally, this course is designed with laboratory sessions to provide students with varied opportunities to demonstrate knowledge to enhance the occupational participation, performance, and quality of life of older persons. Prerequisites: All prior coursework must be completed
3 credits

HAO 627 Technological Applications in Occupational Therapy

The course centers on adapting the environment to improve the client¿s quality of life and enable societal reintegration. Areas covered include the Americans with Disabilities Act, mobility (power and manual), seating/positioning systems, adapted toys, augmentative communication systems, computer access, environmental control units, independent living aids, and vocational adaptations. The students analyze and integrate concepts of aging in place, functional capacity evaluations, and ergonomics. In addition, the students will be exposed to the different kinds of work settings that occupational therapists are employed in, become aware of federal regulations for work-related programs, and the certification requirements for this emerging practice area. The course material will include virtual environments, electronic medical records and telehealth technology as it relates to assistive technology, Functional Capacity Evaluations (FEC), aging in place, and work programs. Practical application of the principles discussed in lecture will be available during the course. Prerequisites: All prior coursework must be completed
3 credits

HAO 628 Contemporary and Emerging Practices in Occupational Therapy

The course explores the delivery of occupational therapy services in emerging areas of practice. It provides students with knowledge of alternative models of service delivery and occupational therapy roles in care coordination, consulting, and case management. Students will learn about and discuss interprofessional role development and delineation. Further, they will build on their prior knowledge of the scope of occupational therapy to gain an understanding of ethical practice, malpractice and liability concerns, insurance reimbursement, and licensure statutes related to emerging practice areas. Students will participate in the process of identifying opportunities for occupational therapy¿s expansion via contemporary, nontraditional, and emerging practice areas, and will explore opportunities for their advanced doctoral capstone experiences. This course will prepare students to communicate and advocate for occupational therapy practice via various mechanisms and across audiences including potential funders, policy makers, the local/regional public, and interprofessional colleagues. Prerequisites: All prior coursework must be completed
3 credits

HAO 629 Wellness and Health Promotion in Occupational Therapy

This course discusses the role of occupational therapy in wellness and health promotion. Students examine theories and evidence-based occupational therapy practice of health promotion and disease prevention for well and at-risk populations. Also explored is how occupation and lifestyle impact wellness, health, participation, and the prevention of disease and dysfunction in individuals, groups, and populations. Models of health promotion will be discussed and applied to demonstrate knowledge of how environmental contexts and epidemiological factors impact population health and welfare. This course prepares students to design and evaluate health promotion and wellness programs and to advocate for health promotion and wellness in their future practice settings and their own lives. Prerequisites: All prior coursework must be completed
3 credits

HAO 630 Global to Community Practice in Occupational Therapy

This course presents the importance of occupation as a precursor to health, and of occupational therapy as a health promoting profession. Theories and applications of occupational science will be examined through a review of the professional literature and class discussion. This course provides students with an occupational perspective of health that will be the foundation for a community-based practice program. The course will also review social theories, sociocultural and socio-political trends that impact the individual's health status and the delivery of health care services. The student will demonstrate their depth of understanding through the design and presentation of an evidence-based, theoretically grounded, culturally, and temporally situated, community program. Prerequisites: All prior coursework must be completed
2 credits

HAO 631 Professional Behaviors

In this course, the students work on documentation and communication skills for entry-level practice. Each student has the opportunity to discuss professional behavior expectations from their clinical fieldwork assignments. Reflective journaling is used to enhance professional development and to assist students in developing and documenting their clinical competence. The supervisory process is explored in detail, in the context of its use for personal and professional growth. The role of the occupational therapy assistant and other healthcare professionals, as both colleagues and collaborators, is discussed. The importance of life-long learning and advocacy is emphasized. Prerequisites: All prior coursework must be completed
2 credits

HAO 650 Evidence Based Practice in Occupational Therapy

This course will provide students with knowledge on how to conduct literature searches, collect and analyze information to address a well-developed, clear, specific, answerable clinical question as the first step in the development of evidence-based practice. The students will use the literature to identify, assess, and discuss the value of implementing the treatment evidence. Prerequisites: All prior coursework must be completed
2 credits

HAO 651 Introduction to Research Approaches and Designs

This course provides a foundation for future professional and scholarly activities. The importance of research for evidence-based practice is highlighted. Students learn research concepts and qualitative, quantitative, and mixed-methods research. Instruction in how to review and critique published, peer- reviewed research, identify research topics of interest, and initiate the literature review process is presented to the student. Tools needed to critique commonly used assessment tools in occupational therapy and to use and interpret standardized scores are included in the course. Students are required to have training in research ethics, such as "Responsible Conduct of Research" and "Protection of Human Subjects in Research". Professional writing skills, which include writing grant proposals, research protocol development, and research presentations are also introduced in this course. Prerequisites: All prior coursework must be completed
2 credits

HAO 652 Statistics in Occupational Therapy Research

Presents fundamentals of statistics and data analysis. Topics include descriptive statistics, statistical inference, tests for experimental comparisons, correlation, regression, and nonparametric tests. Students learn to use available computer programs for data management and statistical analysis. Discusses validity and reliability of various statistical techniques. Prerequisites: All prior coursework must be completed
2 credits

HAO 660 Healthcare Policy & Advocacy in Occupational Therapy

This course provides students with an overview of trends in health care delivery systems and policymaking in the 21st century. A range of topics is included: health care systems; health policy and advocacy; outpatient and primary care; long-term care; medical technology; determinants of health and health disparities; and health services for special populations, among other current topics. The student will evaluate the human impact of health care policy and articulate the need for and process of advocacy for populations and individual clients. In addition, the student will examine and articulate the distinct value of occupational therapy within the changing healthcare system and understand how occupational therapy functions within different funding mechanisms. Prerequisites: All prior coursework must be completed
2 credits

HAO 661 Management and Business Fundamentals in Occupational Therapy

This course is designed to utilize lectures and activities to assist the learner in creating a business plan for an OT

service. In the course of this process the student will learn skills involved in setting up a business, being a manager of people, budgets, and services, using evidence to guide management, and how to manage for change. This is a hybrid course that will consist of both online coursework, lectures and discussions along with on-site activities. Prerequisites: All prior coursework must be completed
2 credits

HAO 662 Visionary Leadership in Emerging Practice

This course explores innovative, non-traditional and emerging areas of occupational therapy practice. Students meet and dialog with occupational therapy practitioners and/or other health care professionals who have developed private practices, are consultants, and are involved in emerging areas of practice. Students use timely articles concerning health care trends and non-traditional/emerging practice areas to create a potential IPE event for a community. Builds upon student's prior knowledge and coursework and integrates American Occupational Therapy Association (AOTA)'s Standards of Practice, Core Values and Attitudes of OT, and AOTA's Code of Ethics, with attention to current and potential OT/OTA partnerships in community and non-traditional settings. Prerequisites: All prior coursework must be completed
2 credits

HAO 680 FW IA- Mental Health

This course is the first of three introductory level I clinical experiences and offers the student the opportunity to identify symptomatology, observe treatment interventions, and formulate treatment plans in a psychosocial practice setting. In addition, the student will have opportunities to observe effective communication skills used with patients and professionals. This course will also promote the development of professional behaviors and skills by the student. Prerequisites: All prior coursework must be completed
1 credit

HAO 681 Fieldwork IB- Physical Disabilities

The course is the second of three introductory level clinical experiences. It offers the student the opportunity to identify symptomatology, observe treatment interventions and formulate treatment plans in a physical disabilities practice setting. The student will be exposed to effective communication skills used with patients and professionals. The use of reflective journals to monitor development of professional behaviors and skills will enhance the students' growth. Prerequisites: All prior coursework must be completed
1 credit

HAO 682 Fieldwork IC- Pediatrics

This course is the third of three introductory level clinical experiences and offers the student the opportunity to identify symptomatology, observe treatment interventions, and formulate treatment plans in a pediatric practice setting. In addition, the student will have opportunities to observe effective communication skills used with patients and professionals. This course will also promote the development of professional behaviors and skills by the student. Prerequisites: All prior coursework must be completed
1 credit

HAO 683 Fieldwork IIA

Fieldwork IIA is an in-depth clinical experience in the delivery of occupational therapy services. According to AOTA guidelines, this fieldwork is designed to promote clinical reasoning and reflective practice; transmit values and beliefs that enable the application of ethics related to the profession; enable the student to communicate and model professionalism as a developmental process and career responsibility; and develop and expand a repertoire of occupational therapy assessments and interventions related to human occupation and performance. This is the first of two-level II fieldwork experiences that expose the student to a variety of clinical conditions in a specific practice area for 12 weeks on a full-time basis. Prerequisites: All prior coursework must be completed
12 credits

HAO 684 Fieldwork IIB

Fieldwork IIB is an in-depth clinical experience in the delivery of occupational therapy services. According to AOTA guidelines, this fieldwork is designed to promote clinical reasoning and reflective practice; transmit values and beliefs that enable the application of ethics related to the profession; enable the student to communicate and model professionalism as a developmental process and career responsibility; and develop and expand a repertoire of occupational therapy assessments and interventions related to human occupation and performance. This is the second of two-Level II fieldwork experiences that expose the student to a variety of clinical conditions in a specific practice area for 12 weeks on a full-time basis. Prerequisites: All prior coursework must be completed
12 credits

HAO 690 Capstone Project Proposal

This course is the first of the capstone sequence and will prepare students for their Capstone Residency and Project. Students will explore their interest area(s) for their residency and identify relevant projects. Students will create a plan for development of their capstone with clear learning objectives that demonstrate a focus on in-depth knowledge. Prerequisites: All prior coursework must be completed
2 credits

HAO 691 Capstone Residency

The full-time, 14-week doctoral capstone experience is the second course in the doctoral capstone sequence. The capstone residency enables students to achieve specialized skills in one or more of the following areas: clinical practice skills, research skills, administration, leadership, program and/or policy development, advocacy, education, theory development, or other innovative practice. Under the supervision of an expert mentor, students will execute their doctoral capstone plan established in HAO 690 by meeting the individualized objectives and completing a relevant culminating capstone project. Prerequisites: All prior coursework must be completed

14 credits

HAO 692 Capstone Project Completion and Dissemination

This course will conclude the occupational therapy doctoral capstone sequence. Students will complete, present, and disseminate their capstone projects. Prerequisites: All prior coursework must be completed
2 credits

HAP

HAP 501 Community Health and Service Learning for Physician Assistant

Provides opportunities for PA students to learn and reinforce medical knowledge and skills through service to local and international communities. Learning methods will enhance the acquisition of clinical skills, cultural competencies and expand knowledge of community resources for underserved populations. Open to entry-level PA students only.
2 credits

HAP 504 Professional Practice Issues

Provides information critical to understanding the development and organization of the physician assistant profession in the United States. Explores the dynamics of PA practice, including such issues as responsibilities to patients and the public, professional regulation and involvement, team care, cultural diversity, and developing trends in PA practice. Encourages the exploration, critiques, and evaluation of professional practice issues related to the quality, delivery and cost-effectiveness of our nation's health care system. Open to entry-level PA students only.
2 credits

HAP 509 Integrative Systems Physiology

Introduces students to human integrative systems physiology. Includes exposure to physiological control systems, emphasizes in detail each organ system and how homeostasis is maintained. Includes membrane, muscle, central and peripheral nervous system, cardiovascular, respiratory, renal, gastrointestinal, and endocrine physiology. Presents material and incorporates select examples of pathophysiology to emphasize relevance of material. Students will solidify an understanding of the structures and functions across all systems in the human body under normal conditions and select pathophysiology. Knowledge gained of normal function will be applied towards making predictions about physiologic function in response to disease states. Students are expected to gain a cumulative understanding of physiologic function and are challenged to apply this knowledge towards problem solving and interpreting physiologic scenarios.Open to entry-level PA students only.
4 credits

HAP 510 Clinical Laboratory Medicine

Presents fundamental principles of laboratory medicines. Strengthens the student's ability to select, perform and interpret the results of basic clinical laboratory procedures to aid in formulating a preliminary diagnosis and management plan. The course is offered after students have acquired a foundation in human physiology and anatomy. Open to entry-level PA students only.
3 credits

HAP 512 Principles of Clinical Pharmacology

Physician assistant students will learn to rationally and safely prescribe pharmaceuticals for patients in a variety of clinical settings. Emphasizes the integration of pharmacologic principles and properties with the clinical uses of the most commonly prescribed medications and provides an opportunity for students to deepen understanding and application of knowledge in the setting of patient clinical cases. Reinforces and integrates course information with content learned during the Clinical Medicine courses of the PA curriculum. Open to entry-level PA students only.
6 credits

HAP 514 The Problem Oriented Medical Record-History and Physical Examination

The course provides students with an organized, sequential approach to the history and physical examination. Students will be able to perform both complete and directed histories and physical examinations and accurately document their findings. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Open to entry level PA students only.
5 credits

HAP 516 Problem Based Learning (PBL)

Provides students with the opportunity to develop critical thinking and problem solving skills in a seminar, small group environment. Students will learn to connect the knowledge and attitudes developed in behavioral, basic and clinical science courses and apply it to patient care. Increases student capacity to seek and apply knowledge as individual problem solvers and members of a health care team. Open to entry level PA students only.
1 credit, S/F graded

HAP 518 Medical Director Presentation Rounds

Provides students with feedback on oral presentations derived from patient history and physical examinations completed by students. Evaluations are based on student's ability to critique an incomplete history and physical, identify issues that require further discussion in the HPI and physical exam, write a complete problem list, and document an assessment and plan. Open to entry level PA students only.
.5 credit, S/F graded

HAP 521 Clinical Medicine I

Focuses on mastery of the knowledge, skills, and attitudes necessary to construct a comprehensive patient database and management plan. Students are introduced to, and become proficient in, medical interviewing and performing a physical examination. Emphasizes the process of synthesizing data

to formulate a diagnostic plan through learning activities such as lectures, small group process, problem based learning, case studies, and clinical skills laboratories. Teaches data gathering and recording in the problem oriented medical record format. The diagnostic process is taught in an organ systems (or medical subspecialty) approach. Students learn to recognize and manage physical and mental health problems. Students are encouraged to think critically as an integral part of developing a logical, sequential and humanistic approach to their patient responsibilities and mastering medical information. The ultimate goal of these clinical medicine courses is to insure that students are optimally prepared to participate in the delivery of high quality medical care in both an in-patient and out-patient setting. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Open to entry-level PA students only.
5 credits

HAP 522 Clinical Medicine II

Focuses on mastery of the knowledge, skills, and attitudes necessary to construct a comprehensive patient database and management plan. Students are introduced to, and become proficient in, medical interviewing and performing a physical examination. Emphasizes the process of synthesizing data to formulate a diagnostic plan through learning activities such as lectures, small group process, problem based learning, case studies, and clinical skills laboratories. Data gathering and recording are taught in the problem oriented medical record format. The diagnostic process is taught in an organ systems (or medical subspecialty) approach. Students learn to both recognize and manage physical and mental health problems. Students are encouraged to think critically as an integral part of developing a logical, sequential and humanistic approach to their patient responsibilities and mastering medical information. The ultimate goal of these clinical medicine courses is to insure that students are optimally prepared to participate in the delivery of high quality medical care in both an in-patient and out-patient setting. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: HAP 521 (minimum grade of B-). Open to entry-level PA students only.
7 credits

HAP 523 Clinical Medicine III

Focuses on mastery of the knowledge, skills, and attitudes necessary to construct a comprehensive patient database and management plan. Students are introduced to, and become proficient in, medical interviewing and performing a physical examination. Emphasizes the process of synthesizing data to formulate a diagnostic plan through learning activities such as lectures, small group process, problem based learning, case studies, and clinical skills laboratories. Data gathering and recording are taught in the problem oriented medical record format. The diagnostic process is taught in an organ systems (or medical subspecialty) approach. Students learn to recognize and manage physical and mental health problems. Students are encouraged to think critically as an integral part of developing a logical, sequential and humanistic approach to their patient responsibilities and mastering medical information. The ultimate goal of these clinical medicine courses is to insure that students are optimally prepared to participate in the delivery of high quality medical care in both an in-patient and out-patient setting. Prerequisite: HAP 522 (minimum grade of B-). Open to entry-level PA students only.
6 credits

HAP 524 Clinical Medicine IV

Focuses on mastery of the knowledge, skills, and attitude necessary to construct a comprehensive patient database and management plan. Students become proficient in utilizing the history and physical information as they begin to synthesize data to formulate a diagnostic plan. This is emphasized through learning activities such as lectures, small group process, case studies, and clinical skills laboratories. The diagnostic process is taught in an organ systems approach. Students learn to both recognize and manage physical and mental health problems. Students are encouraged to think critically as an integral part of developing a logical, sequential and humanistic approach to their patient responsibilities and mastering medical information. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: HAP 523 (minimum grade of B-). Open to entry-level PA students only.
9 credits

HAP 528 Genitourinary, Sexual and Reproductive Health

A comprehensive introduction to obstetrics and gynecology (OB/GYN), female and male genitourinary system (GU) and human sexuality. Students will learn about structures, function, evaluation and treatments of the various diseases and conditions. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Open to entry level PA students only.
4 credits

HAP 532 Diagnostic Imaging

Provides an overview of common diagnostic imaging modalities and their indications, limitations, benefits and potential risks. Students learn how to utilize plain radiographs and other imaging studies in the diagnosis of disease with an emphasis on recognition of normal findings and their comparison to the abnormalities found in disease processes. Open to entry-level PA students only.
2 credits

HAP 534 Introduction to Clinical Psychiatry

Presents key principles of psychiatric evaluation and interviewing to include the mental status exam. Focuses on psychiatric problems seen in primary care, introduces the differential diagnosis and treatment of major psychiatric disorders such as anxiety, personality and mood disorders, psychosis, substance abuse, and somatoform disorders. Fosters an awareness of social patterns that exert an impact on mental functioning. Open to entry-level PA students only.
3 credits

HAP 545 Ethics and Health Care for Physician Assistants

Provides an overview of ethics in health care in a rapidly changing society. Teaches students to approach ethical dilemmas using theoretical frameworks and decision making

processes. Explores ethical issues surrounding health care reform and public health policy and includes distribution of resources and rationing of services. Introduces students to the ethical perspectives of euthanasia, reproduction, transplants, genetics, research on human subjects, pediatrics, cloning, stem cells and mental health through case studies. Reviews classic cases in health care ethics and their shaping of health policy. Discusses patient education and the Physician Assistant professional codes of ethics and standards. Open to entry-level PA students only.
3 credits

HAP 549 Clinical Skills for the Physician Assistant Student

The clinical skills course provides the physician assistant student with an overview of common clinical procedural skills and their indications, limitations, benefits and potential risks. Students are taught how to perform a number of commonly performed clinical procedures. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Open to entry level PA students only.
1 credit, S/F graded

HAP 551 Research Design and Evidence-Based Medicine

Provides students with basic knowledge and skills needed to formulate research questions and hypotheses, develop research protocols, critically evaluate and analyze scientific and medical journals, and to conduct computerized searches and literature reviews. Describes principals of Evidence-Based Medicine and emphasizes various types of clinical questions and tools available to answer them. By the end of this course, the student will choose a proposed topic for their capstone project. Open to entry-level PA students only.
2 credits

HAP 561 Master's Project I

Students will work with a faculty mentor to develop a clinical question and perform an initial literature search on a topic of interest. Topics should be well-focused and may include psychological, economic or ethical issues in health care as well as diagnostic or treatment-related questions. Following review by a faculty mentor, the student will submit summaries of selected articles as well as a outline. Open to entry-level PA students only. Prerequisite: HAP 551
1 credit

HAP 562 Masters Project II

Students will work with their faculty mentor to refine a clinical question and revise the presentation outline and article summaries submitted at the end of HAP 561. Emphasis will be placed on thoroughness of the literature search and clarity of the presentation. By completion of this course, students should have the presentation in its final form, and have developed a draft of a final paper. Open to entry-level PA students only. Prerequisite: 561
1 credit

HAP 563 Masters Project III

Students will revise the presentation submitted at the end of HAP 562 with input from their faculty mentor, who will guide them in developing a concise, professional-appearing product, suitable for presentation at a professional conference. Students will present this to the faculty and other members of the class, and will be evaluated on the content, visual, and oral components of their work. Students will also complete and submit their final paper. Open to entry-level PA students only. Prerequisite: HAP 562
1 credit

HAP 570 Internal Medicine Clerkship

Provides practical clinical experience in caring for adult hospitalized patients on a medical service. Strengthens the student's skills in developing a comprehensive database with regard to a wide variety of common inpatient medical problems, stressing mastery of cognitive and affective information that enables the student to recognize normal and assess deviation from normal, and effectively consult and refer. Exposure to out-patient care is often included. Students learn to address personal and social issues that influence the care of the medical patient. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Successful completion of preclinical year courses.
5 credits

HAP 571 Obstetrics and Gynecology Clerkship

Provides students with practical clinical experience in the differential diagnosis, evaluation, management, and consultation and referral for normal and abnormal conditions in obstetrics and gynecology. Students will gain skills in obtaining patient histories, physical diagnosis and medical decision making through exposure to a broad base of patients with a wide variety of personal and social issues that influence patient care. Prerequisite: Successful completion of preclinical year courses.
5 credits

HAP 572 General Surgery Clerkship

Provides students with practical clinical experience in the evaluation and management of surgical patients. Through exposure to a broad base of surgical patients, students will master the knowledge, attitudes and skills necessary to obtain focused patient histories and physical exams, construct a differential diagnosis, make sound medical decisions, and effectively consult and refer. Students will learn to address a variety of personal and social issues that influence the care of the surgical patient. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Successful completion of preclinical year courses.
5 credits

HAP 574 Emergency Medicine Clerkship

Provides students with practical clinical experience in the medical care of acutely ill or injured patients. Students will enhance skills in obtaining focused patient histories, performing focused physical examinations, mastering emergency medical management and decision making,

and effective consultation and referral. Emphasis is placed on student recognition of life threatening situations and the response to such situations. Students will learn to address a wide variety of personal and social issues that influence the care of the emergency medical patient. Prerequisite: Successful completion of preclinical year courses.
5 credits

HAP 575 Psychiatry Clerkship

Provides students with practical experience in the recognition, evaluation and management of patients with mental illness. Through clinical interaction with mental health patients and workers, students will develop an understanding of the biological and psychosocial factors that influence a variety of psychiatric conditions, and effectively consult with other professionals and refer patients to the support services that are required to optimize the care of the psychiatric patient. Students will learn to address a wide variety of personal and social issues that influence the care of this patient population. Prerequisite: Successful completion of preclinical year courses.
4 credits

HAP 576 Medicine Preceptorship

Provides students with practical clinical experience working with the ambulatory medical patient. This preceptorship augments and develops directed data collection skills emphasizing a wide range of primary care medical problems and their management. Cognitive and affective skills that enable the student to recognize normal and assess abnormal findings and effectively consult and refer are a key aspect of learning during this experience. Students will learn to address a wide variety of personal and social issues that influence the care of the medical patient. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information. Prerequisite: Successful completion of preclinical year courses.
5 credits

HAP 577 Pediatric Preceptorship

Provides students with practical clinical experience working with ambulatory pediatric patients. Through exposure to a wide variety of primary care pediatric problems, students will develop directed data collection and patient management skills and learn how to effectively consult and refer. The preceptorship stresses those cognitive and affective skills that enable the student to recognize normal findings and assess abnormal findings. Students will learn to address a wide variety of personal and social issues that influence the care of the pediatric patient.
5 credits

HAP 579 Geriatrics Clerkship

Provides students with practical clinical experience in working with elderly patients. Augments and strengthens students' skills in developing a thorough database and enhances student understanding of when to request a consultation or make a referral. Students work with a wide variety of common geriatric problems and learn how to appropriately modify their management approach to the indications, limitations, and methodology of diagnostic procedures and therapeutic regimens in the elderly. Students will also learn to address a wide variety of personal and social issues that influence the care of the geriatric patient. Prerequisite: Successful completion of preclinical year courses.
5 credits

HAP 580 Orthopedic Clerkship

Provides students with practical experience in the care of patients with musculoskeletal disorders and acute injuries in the primary care setting. Students will develop the knowledge, attitudes and skills necessary to obtain directed patient histories, perform focused physical exams, make sound clinical decisions, and effectively consult and refer through exposure to patients with a wide variety of orthopedic problems. Students will learn to address a wide variety of personal and social issues that influence the care of the orthopedic patient. Prerequisite: Successful completion of preclinical year courses.
4 credits

HAP 581 Clinical Elective

Provides students with the opportunity to explore an area of medical or surgical practice beyond basic required rotations. Students are encouraged to choose an area of emerging importance in health care and PA practice and/or a potential employment setting. This elective clerkship further augments and develops patient management skills in the chosen medical or surgical discipline and must be selected in consultation with the student's program faculty advisor. Students will learn to address a wide variety of personal and social issues that influence the care of many patients. Prerequisite: Successful completion of preclinical year courses.
4 credits

HAP 599 Clinical Continuation

This course is for physician assistant students continuing with clinical.
0 credit, S/F graded

HAS

HAS 190 Introduction to the Health Professions

Presents topics of interest to students considering careers as health professionals. Introduces the student to basic concepts of health, factors influencing health care, health care settings, and selected health professions. May not be taken for credit in addition to LHW 102. Open to west campus students.
1 credit

HAS 300 Issues in Health Care

Examines major issues influencing health care delivery. Emphasizes analysis of significance of these issues to the health professions. Covers organization of the delivery system, professional roles, quality control, cost controls, health agencies and alternative delivery models, consumer life-styles, and health statistics. Integrates current trends in managed care, reimbursement, health policy and reform.

Discusses infectious disease and nutrition. Allows for discipline-specific program development and implementation through HSC outreach efforts.
2 credits

HAS 310 Applied Phonetics of English

Provides a foundation for studying the speech sounds used in the production of American English. Discusses the branches of phonetics, classification of speech sounds, sound to symbol transcription using the International Phonetic Alphabet and second language and social/regional dialectical influences.
3 credits

HAS 311 Speech and Language Development

Provides the students with knowledge about a child's speech and language development from birth through adolescence. Topics include theories of speech and language acquisition, neurological basis of speech language development including the motor and perceptual basis, speech and language development during infancy, preschool, school-age and adolescence, speech and language sampling analysis, and the importance of cultural linguistic diversity and environmental influences on development.
3 credits

HAS 312 Anatomy and Physiology of the Speech, Language, and Hearing Mechanism

Provides basic understanding of the anatomy and physiology of the speech, language and hearing mechanism. Students will be able to apply their knowledge of anatomy and physiology of the speech and auditory mechanism to different disorders and diseases. Cannot be taken for credit in addition to LIN 380.
3 credits

HAS 313 Speech Science

Introduces acoustics, psychoacoustics, acoustical and articulatory properties of speech production, theories and models of speech perception and apply theoretical information with current technology and research in the field. Discusses instrumentation used to measure respiratory, laryngeal, velopharyngeal and pharyngeal components. Prerequisite: HAS 312
3 credits

HAS 314 Guided Observations in Speech-Language Pathology

Introduces students to practical and professional issues in the assessment and intervention of children and adults with various communication and swallowing disorders within the context of guided video observations. Students will obtain 25 clock hours of diagnostic and therapy video-guided observations required for entry into a SLP graduate program.
2 credits, S/U grading

HAS 332 Management Concepts for Health Professionals

Addresses the operations within healthcare institutions from macro to micro levels of management. Analyzes the philosophy and significant occurrences affecting healthcare operations in the past, present and future. The divisions within healthcare operations (clinical, support and informational services, nursing, finance and ambulatory care) will address the following aspects of management: financial forecasting and monitoring, staffing, employee productivity and morale, customer service, cost containment, decision making and total quality management. Emphasizes hospital operations and presents nursing home and community healthcare center operations. Open to CLS and RC students only.
1 credit

HAS 335 Medical Ethics

Introduces health professional students to basic concepts and challenges in medical ethics. Uses a framework and decision-making process to help students learn how to approach ethical dilemmas. Explores current topics in health care ethics including advance directives, assisted dying, genetics, cloning, transplants, confidentiality, informed consent, and professional conduct.
1 credit

HAS 350 Introduction to Statistics

Discusses elements of biostatistics, graphs and tables, descriptive statistics, probability, populations of samples, normal distribution, hypothesis testing, and computers.
2 credits

HAS 351 Research Literacy/Research Design

Prepares students to perform a literature search in their respective disciplines to find scientific and health articles and books in the Health Sciences Center Library. Presents research terminology, methods, and design. Provides basic skills to enhance interpretation, evaluation and analysis of research articles, including the hypothesis, literature review, design, methodology, and data analysis.
1 credit

HAS 355 Integrative Systems Physiology

Introduces students to human integrative systems physiology. Includes exposure to physiological control systems, emphasizes in detail each organ system and how homeostasis is maintained. Includes membrane, muscle, central and peripheral nervous system, cardiovascular, respiratory, renal, gastrointestinal, and endocrine physiology. Presents material and incorporates select examples of pathophysiology to emphasize relevance of material. Students will solidify an understanding of the structures and functions across all systems in the human body under normal conditions and select pathophysiology.
4 credits

HAS 363 Computer Literacy for Health Professionals

Surveys the uses of computers for health practitioners. Offers practical experience in literature database searching and use of applications software.

1 credit

HAS 391 Readings in Health

Supplementary specialized readings under faculty supervision. Topics determined by mutual agreement between undergraduate student and faculty and must have the approval of the program director in the School of Health Technology and Management prior to registration.
1-3 credits

HAS 399 Independent Study in Health

A special project involving advanced readings, reports, discussions, research, or special course work on topics or problems of the student's choosing, with the guidance of an assigned faculty member. Projects must have the approval of the program director in the School of Health Technology and Management prior to registration.
1-6 credits

HAS 490 Research Tutorial

An original research project is conducted. Prerequisite: HAS 351
2 credits

HAS 500 SHTM Advanced Standing

Place holder credits for Health Technology and Management students.
0-9 credits, S/F graded

HAS 561 Spanish for Healthcare Professionals

This course combines an overview of intermediate-level Spanish grammar with vocabulary and cultural elements relevant to the healthcare field. Intended for health professional students. Prerequisites: At least 2 semesters of college level Spanish or 2 years of high school Spanish. Please contact the instructor if you are not sure about your proficiency level.
1 credit

HAS 590 Independent Study

Independent study proposals in health sciences. Must have the approval of the Research and Directed Study Committee of the School of Health Technology and Management prior to registration.
1-6 credits

HAS 591 Independent Readings

Supplementary specialized readings for graduate students under faculty supervision. Topics include but are not limited to: community and public health, mental health, health policy, health care management, health care ethics, gerontology, patient education and health economics and policy. Approval must be obtained from the Research and Directed Study Committee of the School of Health Technology and Management prior to registration.
1-3 credits

HAS 592 Special Topics

Presents a comprehensive look at specific aspects of health policy from all relevant perspectives. Synergizes scientific, legislative and ethical points of view and how their relationship to policy formulation and implementation. Students will expand skills to effectively articulate details of the policy and develop an educated position on it. Dynamic discussion, essay writing and debate will be utilized to gauge information comprehension and opinion development.
3 credits

HAS 599 Maintenance of Matriculation

This course is for students who are maintaining matriculation while engaging in consultation with faculty regarding completion of courses and/or master's project. Students will be graded S/F.
0-3 credits, S/F graded

HAT

HAT 210 Introduction to Respiratory Care

Provides an introduction to the science of respiratory care, sleep technology, and cardiac care. Examines current trends in professional practice.Offers each student the opportunity to research and present a topic concerning the contemporary practice of a respiratory therapist, polysomnographic technologist, or cardiovascular technologist. Designed for lower-division four year respiratory care and polysomnographic technology majors. This course is not eligible for the G/P/NC option. Open to west campus students.
1 credit

HAT 304 Cardiopulmonary Physiology

Presents a detailed study of the physiology of human respiration and circulation. Topics include functional cardiopulmonary anatomy, embryology, ventilation, diffusion, blood flow, gas transport, acid-base states, mechanics and regulation of ventilation and basic cardiac function.Prerequisite: Admission to upper division Respiratory Care program.
4 credits

HAT 306 Patient Evaluation

Provides concept of data base, historical information, medical terminology, chief complaint and present illness, and chest physical examination. Applies problem based learning to the study of clinical assessment skills. Prerequisite: Admission to upper division Respiratory Care program.
2 credits

HAT 315 Pharmacology

Covers the basic principles that govern the use of drugs in the clinical practice of Respiratory Therapists and Sleep Technologists. Develops specific knowledge for classes of drugs, important distinctions among members of each class, and both their relation to the organ systems they affect and the diseases they treat, including drug dosages and calculations. Prerequisite: HAT 304
4 credits

HAT 320 Cardiovascular Diagnosis and Treatment I

Provides the basic cardiac function, practical skills of electrocardiography, diagnosis and treatment of arrhythmias, cardiac medications and noninvasive cardiac diagnostic techniques. Examines theory and practical applications of electrocardiography, exercise stress testing, and Holter monitoring. Includes in-depth study of cardiac anatomy and electrophysiology. Prerequisite: HAT 304
3 credits

HAT 330 Pulmonary Pathology

A comprehensive study of the etiology, diagnosis, pathogenesis, pathophysiology, treatment, and prognosis of various types of pulmonary pathologies. Prerequisite: HAT 304
3 credits

HAT 331 Respiratory Care Techniques I

Introduces the history and global significance of the practice of respiratory care, including the beginning skills and therapies that are utilized. Major topics include the global history that led to the creation of the profession; the global need to provide quality respiratory care; principles of infection prevention and control; a review of the basic physics of respiratory care; medical gas storage, delivery and therapy; humidity and bland aerosol administration; bedside monitoring; and lung expansion and airway clearance therapies. Laboratory sessions will provide practical experience in the clinical application of the therapeutic modalities discussed. Prerequisite: Admission to upper division Respiratory Care program.
3 credits

HAT 332 Respiratory Care Techniques II

Course is second in a four part sequence. Continues the review of basic therapeutic modalities of respiratory care. Major topics include drug aerosol therapy, airway pharmacology, airway management, and blood gases. Emphasizes the clinical use of cardiopulmonary rehabilitation, alternative site care, and disease and disaster management. Prerequisitie: HAT 331
3 credits

HAT 333 Pulmonary Diagnostic Techniques

Provides the basic technical skills of pulmonary function testing, including an introduction to the instrumentation and physical principles of clinical measurement; procedures for measuring the lung functions of ventilation, mechanics, diffusion, gas distribution and exchange; and interpretation of tests results and their relation to various pathophysiologies. Prerequisite: HAT 304
3 credits

HAT 335 Medical Ethics

Reviews professional guidelines for ethical conduct and approaches to ethical dilemmas for respiratory therapists and polysomnographic technologists. Explores ethical issues including the distribution of resources and rationing of services. Examines health care services in the United States and the rights of the U.S. citizen under federal and state health care laws. Discusses physician assisted suicide; terminal weaning; brain death; genetics; cloning and euthanasia; advance directives; confidentiality; informed consent; patient rights; professional conduct; and the legal issues that impact healthcare practice in the United States. Prerequisite: HAT 331
2 credits

HAT 350 Basic Respiratory Care Clinical

An introduction to the clinical application of basic respiratory procedures such as oxygen administration, aerosol therapy, positive airway pressure therapy, arterial punctures and other monitoring and diagnostic procedures. Prerequisite: HAT 331 and HAT 332
4 credits

HAT 353 Pulmonary Diagnostic Clinical

Clinical application of spirometry, diffusion studies, blood gas analysis, flow volume loops, body plethysmography, helium dilution, nitrogen washouts, and bronchodilator responses. Prerequisite:HAT 333
2 credits

HAT 410 Introduction to Clinical Education

Introduces clinical teaching to senior students. Modalities include the decision making process, teaching strategies, classroom management, instructional design, and formative and summative evaluation.
2 credits

HAT 411 Clinical Teaching in Respiratory Care

An extension of HAT 410. Develops skills for senior students to conduct clinical teaching strategies under faculty supervision. Prerequisite: HAT 410
4 credits

HAT 415 Respiratory Care Techniques IV

Introduces advanced concepts, equipment and procedures used in adult, pediatric and neonatal critical care. Provides students with decision making skills for initiation and management of advanced ventilator technology. Explores functions, clinical applications and troubleshooting of selected advanced instrumentation. Reviews equipment limitations, quality assurance, equipment maintenance and cost/benefit analysis where applicable. Prerequisites: HAT 420, HAT 431 and HAT 432
2 credits

HAT 420 Cardiovascular Diagnosis and Treatment II

Examines the theory and practical applications of invasive physiologic monitoring, including metabolic and hemodynamic monitoring, Swan-Ganz catheterization, cardiac output measurement and aseptic technique. Also contains an in depth study of the etiology, pathology and treatment of advanced cardiac disease, including congenital heart disease. Prerequisite: HAT 320
3 credits

HAT 431 Respiratory Care Techniques III

Introduces the concepts of advanced airway management and mechanical ventilation used in the respiratory support of the critically ill patient. Emphasizes the physiological basis for ventilator use, indications for ventilation, parameters monitored during ventilation, and ventilator design, function and clinical application. Prerequisite: Admission to upper division Respiratory Care Program; HAT 332
4 credits

HAT 432 Perinatal Respiratory Care

Examines anatomy, physiology, and pathology relating to management of the neonatal/pediatric patient. Includes analysis of neonatal and pediatric ventilator function in terms of mechanics and suitability in clinical application. Gives students the knowledge and skills needed to perform neonatal resuscitation. Prerequisite: HAT 332
4 credits

HAT 450 Critical Care Clinical

Develops clinical skills in the management of the critical care patient. Includes specialized learning experiences in therapeutic modalities, mechanical ventilation, cardiovascular monitoring and home care ventilation. Prerequisites: HAT 350, HAT 431
5 credits

HAT 451 Perinatal Care Clinical

Develops clinical skills in the management of pediatric and neonatal critical care patients. Includes specialized learning experiences in therapeutic modalities, mechanical ventilation, and emphasizes specific technical procedures that differ from the adult patient. Prerequisite: HAT 432
4 credits

HAT 470 Polysomnographic Technology I

Designed to provide entry-level personnel with both didactic and laboratory training in polysomnographic technology. Presents medical terminology, instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues and patient-technologist interactions. Lab sessions will provide practical experience in the skills required of an entry-level polysomnographic technologist. Prerequisites: HAT 331
3 credits

HAT 471 Polysomnographic Technology II

Provides training in more advanced aspects of polysomnographic technology. Students become familiar with the skills and knowledge needed to obtain and evaluate high quality sleep recordings. Covers all the aspects of sleep scoring and event recognition, recording and monitoring techniques, documentation, professional issues, therapeutic interventions, and patient-technologist interactions related to polysomnographic technology. Prerequisite: HAT 470
2 credits

HAT 475 Polysomnographic Technology I Clinical

Provides clinical training in the basics of polysomnographic technology. Familiarizes students with instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues, and patient-technologist interactions related to polysomnographic technology. Provides patient contact in a sleep lab. Presents opportunity to observe, perform (under supervision) and evaluate sleep studies. Prerequisite: HAT 470
2 credits

HAT 476 Polysomnographic Technology II Clinical

Provides clinical training in advanced aspects of polysomnographic technology. Familiarizes students with practical aspects of therapeutic intervention, sleep scoring equipment troubleshooting and artifact recognition. Prerequisites: HAT 470; HAT 471 and HAT 475
2 credits

HAT 482 Physiologic Monitoring Clinical

Provides a clinical experience in the hemodynamic and metabolic monitoring of patients in critical care units/labs. Covers invasive diagnostic cardiovascular procedures, including cardiac catheterization, intra-arterial pressure monitoring, and indwelling arterial catheter insertion and monitoring. Prerequisites: HAT 420, HAT 431
2 credits

HAT 487 Cardiopulmonary Rehabilitation Clinical

A clinical experience concentrating on program planning and evaluation of patients with chronic cardiopulmonary disorders. Includes discharge planning, rehabilitative services, stress testing, graded exercise and other supportive techniques. Prerequisites: HAT 320 and HAT 332
2 credits

HAT 490 Independent Study

Proposals for independent study in respiratory care must be submitted through the program director to the Committee on Research and Directed Study for approval prior to registration for this course.
1-6 credits

HAT 494 Respiratory Care Board Review

A practical discussion and seminar course that prepares the student to take the national certification and registry examinations. Each student will take self-assessment exams that analyze their technical and clinical skills in the areas of data collection and interpretation, as well as decision making skills. Prerequisites: Admission to upper division Respiratory Care Program; HAT 420, HAT 431 and HAT 432
1 credit

HAT 499 Clinical Continuation

Clinical continuation course for respiratory care students only.
0 credit, S/F graded

HAX

HAX 600 Doctoral Seminar

Provides a venue for faculty and doctoral students to discuss all aspects of their research. Researchers will present different branches of translational science and discuss linkage between research agendas. Provides opportunity for data to be viewed and analyzed by investigators with different perspectives and tools for analysis. Offered in the
Fall, 0 credit, S/U grading

HAX 602 Frameworks, Models and Classification Systems in Health and Rehabilitation Sciences

Examines the dynamic interaction between health, disability, and community and contextual factors as identified using different frameworks and models. These frameworks and models will be expounded to recognize the influence of each solely and collectively in terms of health and rehabilitation research, disability studies, and behavioral and community health research. Explores parallels and divergences in approaches with particular attention to analyzing how students in varied concentrations can work together to engage in meaningful translational research within the domains of historical and present-day society and research paradigms.
3 credits

HAX 605 Research Ethics

Presents a broad overview of research ethics and regulation. Conveys the moral bases of scientific ethics, the historical evolution of social science and biomedical research ethics, and the development, implementation and limitations of U.S. human subjects regulations. Includes ethics and morality in science; science in society; scientific integrity; misconduct; whistle blowing; conflicts of interest; collegiality; publication and authorship; peer review; history and development of human experimentation ethics and regulations (HHS, FDA); Institutional Review Boards; informed consent, waivers, vulnerable populations; privacy and confidentiality of records; epidemiology; and research using animal subjects.
3 credits

HAX 620 Rehabilitation and Disability

Introduces the Science of Rehabilitation and the Science of Disability. Presents models of rehabilitation and disability research and discusses controversies and commonalities between these areas. Forms the groundwork of future coursework in rehabilitation and movement sciences.
3 credits

HAX 626 Outcome Measurement in Rehabilitation Research

Introduces outcome measures relating to impairments, functional limitations and disability, general health status, and patient/client satisfaction. These outcome measures are used to guide research outcomes. Explores measurement properties and discusses strategies to appropriately assess and select various outcome measurement scales. Critical appraisal of the literature will provide the basis for making research methodological decisions regarding selection of the most effective outcome measures.
3 credits

HAX 629 Evidence Based Pediatric Rehabilitation Research

Provides students an opportunity to develop an overview of issues related to the health of America's children and adolescents. Emphasizes chronic disease and disability, nutrition, fitness, educational accommodations, and trends in long term health services and health policy. Explores the growing need for evidence based practice and outcomes assessment necessary for the development of strategies for optimal function of children with disease/disability and their families. Students will review and analyze evidence for interventions for a specific pathology/disability.
3 credits

HAX 630 Exercise Physiology and Physical Activity

Provides key elements of exercise physiology and instructs students in measurement techniques for the assessment of exercise capacity and physical activity. Reviews normal physiology of the cardiopulmonary system and presents normal immediate response to exercise, and long-term effects of exercise in the healthy individual. Explores foodstuffs for energy production, metabolic pathways for production of ATP, and energy systems used in aerobic and anaerobic activities. Principles of physical activity assessment and body composition and examines qualitative and quantitative measurement techniques across the lifespan and in disability. Assimilates, via lab manual, literature reviews of articles addressing measurement.
3 credits

HAX 631 Electro/Neurophysiology: Topics for Rehabilitation Research

Introduces basic methodology of clinical electrodiagnostic measures of EEG, EMG, nerve conduction velocity studies (NCV), H-reflex and evoked potentials. Interpretation of these measures provides access to the physiological basis of disability in peripheral or central nerve damage and potentials for recovery. Examines the interventions using peripheral and central electrical stimulation modalities on muscle, bone, cardiovascular and autonomic systems. Includes lab activities of selected modalities such as E-stim, FES, TMS, EEG, EMG, NCV, and H-reflex.
3 credits

HAX 632 Teaching and Learning

This course will introduce students to adult learning principles and strategies for effective teaching of cognitive psychomotor and affective skills and behaviors in academia. Individual teaching/learning philosophical orientations, characteristics of the adult learner, learning styles, self-directed learning, and reflective practice will be explored.
3 credits

HAX 634 Motor Learning and Motor Control

This course will introduce the various theories underlying human motor control. Students will actively synthesize and analyze current theory and research related to motor control and skill acquisition through examination of relevant literature. This course places emphasis on determining the implications of this work for future research, educational and/or clinical practice. Includes early and contemporary theory, skill acquisition facilitation, practice, feedback, transfer of training, modeling, part vs whole training, imagery, implicit learning, explicit learning and memory systems.
3 credits

HAX 635 Biomechanics and Movement I

Introduces students to principles and interrelationships of biomechanics and movement. Includes physical biomechanics of the extremities as a foundation from which to apply biomechanical principles. Involves learning to use mathematical approaches to solving static problems and lay the groundwork for solving dynamic biomechanical problems. Reinforces biomechanical theoretical concepts and mathematical models with lab experiments that involve the manipulation of 3D kinematic, kinetic and EMG data
3 credits

HAX 636 Biomechanics of the Musculoskeletal System and Movement II

Provides advanced concepts of kinetics in the field of biomechanics. Explores biomechanical concepts during lecture and reinforces those applications with associated lab experiments. Provides viscoelastic characteristics of biological tissues as a foundation applied to human motion. Includes mathematical models of the musculoskeletal system and analysis of the dynamics of human motion. Collection and analysis of gait and other movement kinematics, kinetics and muscle activation by electromyography (EMG) are components of lab activities.
3 credits

HAX 637 Orthopedic and Anatomical Principles I

Provides advanced concepts of orthopedics and anatomy. Focuses on best evidence of examination, evaluation, diagnosis, prognosis, and procedures used for a variety of orthopedic conditions of the spine and pelvis. Requires active engagement in problem solving by identifying research problems, searching for evidence, and evaluating and synthesizing the evidence to answer research questions. Includes examination of select advanced procedures and principles to enhance research investigations.
3 credits

HAX 638 Orthopedic and Anatomical Principles II

Continues and expands on advanced concepts of orthopedic interventional research. Focuses on best evidence of examination, evaluation, diagnosis, prognosis, and intervention of orthopedic conditions of the extremities. Requires active engagement in problem solving by identifying research problems, searching for evidence, and evaluating and synthesizing the evidence to answer research questions. Student directed pilot study will incorporate knowledge of select advanced techniques and technologies.
3 credits

HAX 639 Technology and Medical Imaging in Rehabilitation

Examines a range of medical imaging techniques available for use and interpretation in rehabilitation research. Includes radiographs, fluoroscopy, MRI, fMRI,CT, qCT, MEG, TMS and diagnostic US. Synthesizes the technologies and their limitations, the methods of capture and interpretation. Reviews evidence supporting or refuting the sensitivity of these techniques in determining outcomes in rehabilitation.
3 credits

HAX 640 Community Health and Community Based Participatory Research

Provides an overview of critical issues in conducting research in community settings including models of community-based services. Covers the general principles of community-based participatory research, and practical and ethical issues in collaborating with communities, quantitative and qualitative techniques used in community-based participatory research, evaluations, and interventions. Prerequisite: 24 credits of HAXPH core courses or Permission of Instructor¿
3 credits

HAX 641 Community Mental Health

Explores the policies and programs that address mental health needs of individuals with a community health focus. Students will apply models of behavior and health to explore topics of mental health including stigma, marginalization, self-determination. Discusses challenges to service provision. Focuses on the ethics of research with this population as a central theme.
3 credits

HAX 642 Participation and Health in Pediatric and Educational Settings

Explores policies and programs that inform pediatric services and community based research. Focuses on pediatric programs that influence health and community participation. Includes programs that support health, wellness, and community participation as well as those influenced by the Individuals with Disabilities Education Improvement Act (IDEA) that supports children with disabilities from Birth to 21 years. Prerequisites: 24 credits of HAX core courses or permission of Instructor.
3 credits

HAX 643 Healthcare Systems and Policy Analysis

Provides students with an overview of the US healthcare system and major health policy challenges we face. Explores the history and state of the US healthcare system, and circumstances that have given rise to current problems such as employer-based health insurance, challenges in access to and quality of care, and the rising costs associated with the US healthcare model. Discusses ways to improve upon the

system, importantly including the Affordable Care Act, and how this legislation was enacted with close attention paid to the policymaking process, roles of political actors, and the importance of policy analysis.
3 credits

HAX 644 Ethics, Health Disparities and Social Justice

Examines aspects of inequality and health status as an injustice within the context of ethical theories (utilitarian, libertarian, deontological, equalitarian). Determines the influence on case studies of health disparities and inequalities. Discusses cases such as global and U.S. racial, class and gender disparities and in developing countries. Presents ethical issues relative to different methods of measuring health inequalities and related policies.
3 credits

HAX 645 Organizational Theory, Management and Leadership

Examines theoretical and conceptual framework for understanding leadership and management styles of health and human services organizations and how they operate in a broader community. Identifies and applies strategic models to analyze organizational problems, organizational behaviors and processes, formulate strategic solutions, and make sound decisions. This knowledge is critical for the behavioral and community health field to understand how individuals influence and are influenced by organizations.
3 credits

HAX 646 Social Behavior and Community Health Change

Examines the nature of the behavior that takes place within social systems and how to effectuate change in these systems. Analysis of behavior and possibilities for change will be placed in the context of health and public health questions and will draw upon theories of organizational behavior, leadership, and mechanisms for action.
3 credits

HAX 647 Policies and Ethics in Behavioral and Community Health

Explores health care policies of the US health care system and the influence on public health and programs in behavior and community health. Includes access and utilization of health care, barriers to care, prevention programs, and health disparities and ethics. Addresses the perspectives of the consumer, provider and the institution.
3 credits

HAX 653 Research Methods: Design and Statistics

This course presents process and skills needed to develop independent research studies, including but not limited to, formulating a research question or hypothesis, conducting literature searches, critically appraising scientific literature, and selecting appropriate research designs and methods. This information will be presented in the context of protecting human subjects and health information based on the policies and procedures of the Committee on Research Involving Human Subjects (CORIHS) and IACUC.
3 credits

HAX 656 Qualitative Research

Students will learn the basic principles and techniques of effective analysis and interpretation of the merits of qualitative data. Examines how qualitative research captures complex phenomena that span the international classification of function (ICF) and impact on quality of life, illness/injury experience and recovery. Students will learn the strengths and limitations of qualitative analysis and how it complements quantitative analysis. Emphasizes several methods to represent data, such as the mixed method approach, and students will apply a range of analysis techniques through research exercises.
3 credits

HAX 663 Disability, Occupation and Community

Inspired by disability justice social movements in the US and abroad, this course presents politically engaged critical approaches to disability that intersect community organizations, the arts and academic fields including occupational therapy, disability studies and anthropology. Broader than a medical category, disability identity recognizes the political and economic dimensions of disability inequity as it related to other forms of inequality and disadvantage. Themes include all permutations of the concept of occupy;disability justice/decolonization; [participation and training for collaborations; marginalization and minoritization; technology; struggle, creativity, and change.
3 credits

HAX 664 Conceptual Foundations of Disability Studies 1890s-1990s

Present conceptual foundations of disability studies beginning with the 19th and early 20th century theories and scholarships. Theorists from the 1960s and 1970s who influenced the theoretical development of the new field of disability studies will be discussed. The course will explore foundational disability studies scholarship of the 1980s and 1990s as the field established itself first in the social sciences and then the humanities.
3 credits

HAX 665 Disability, Participation and Justice

Explores concepts of "Participation" and "Justice" as they relate to disability experience. Introduces research strategies, participatory methods and methodologies for disability studies research in the applied social and health sciences. Discusses ethical issues in disability research and what it means to disabled people in daily life. Examines social analysis, healthcare discourse, and research on the evolution of healthcare practices, cultural beliefs, and social structures influencing the treatments, services, and opportunities available to disabled people in the United States and internationally.
3 credits

HAX 667 Disability Studies Language, Narrative and Rhetoric

Focuses on how language and rhetoric frame how disability is perceived, experienced, and treated. Included critical and rhetorical analysis of professional discourses as well as personal disability narratives and memoirs. The society for Disability Studies, an interdisciplinary organization, says in its mission statement, disability is a key aspect of human experience.So is language. This course explores the interdisciplinary nature of disability studies and the roles language and rhetoric play in representations of disability. Some questions to be explored include: In what ways do clinical or professional discourses and personal narratives reveal experience of power and powerlessness? How is the bodily experience of disability described in professional contexts as compared to personal narratives? How does description and perception influence the practice of professionals and quality of life for people with disabilities? What assumptions about disability are revealed through rhetorical analysis? These questions will frame our attention to representations of disability in a variety of texts: academic, professional, literary, clinical, personal, and visual. Not to be taken for credit with ESL 592
3 credits

HAX 668 Emerging Topics in Disability Studies

Focues on the intersections of disability with other emerging area studies such as gender, class, sexuality, race and global studies. Encompass study of different emerging disciplinary areas of disability studies in the social sciences, health sciences, humanities, business, and technology. Explores the connections between disability activism, art, and scholarship in the 21 century. Traces emerging regional distinctions in disability studies research and scholarship, especially between Northern and Southern Countries
3 credits

HAX 669 Disability and Health in Local and Global Contexts

Critically examines the experiences of people with disabilities in a local and global context and examines the connections between the two contexts. Utilizes policy documents, ethnographies, memoirs, program evaluations, and multi-media and provides the tools to critically evaluate local and global disability experiences as well as programs and interventions.
3 credits

HAX 690 Independent Study in Health and Rehabilitation Sciences

Independent study proposals in health and rehabilitation sciences. Approval of independent study proposal and credit hours required prior to registration.
1-3 credits

HAX 693 Directed Readings

Provides faculty directed readings and guided discussion to synthesize selected content related to the current course curriculum and/or to the students' research interests. Through the guided readings, the students will learn foundational and advanced theoretical constructs that will be important underpinnings of their future studies and doctoral research. Specifically, studies may focus in the concentration areas of rehabilitation and movement science, disability studies or behavioral and community health. A critical analysis of readings may include theoretical constructs, methodologies, and/or interpretation of results. The course will include analytical writings and a summative paper.
3 credits

HAX 699 Dissertation Research On Campus

Dissertation research under direction of advisor. Prerequisite: Advancement to candidacy (G5). Major portion of research must take place on SBU campus.
1-9 credits, S/U grading

HAX 700 Dissertation Research Off Campus- Domestic

Dissertation research under direction of an advisor. Prerequisite: Advancement to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
1-9 credits, S/U grading

HAX 701 Dissertation Research Off Campus International

Dissertation research under direction of an advisor. Prerequisite: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver by the second week of classes. The charge will only be removed if other plan is deemed comparable. All international students must receive clearance from an International Advisor.
1-9 credits, S/U grading

HAX 800 Summer Research

Prerequisite: Pre-approved participation in health rehabilitation sciences (HAX) department activity. S/U Grading. May be repeated for credit.
0 credit

HAY

HAY 500 Neuroscience for Physical Therapy

Presents an integrated approach to the general principles of organization and function of the autonomic, peripheral and central nervous system. Presents principles in a systems approach to neuroscience. Follows the anatomy of a system,

its physiology, pathophysiology and clinical relevance to the physical therapist. Introduces clinical topics as they relate to neuroscience including neurological testing; control of posture and balance; pain; muscle tone and spasticity; feedback versus feedforward control; reflex versus voluntary control; control of reaching and locomotion; perception and learning. Engages students in discussions identifying variant and invariant characteristics from one system to another and how systems work. Prerequisites: First Year Summer Courses
4 credits

HAY 501 Growth and Development Across the Life Span

Provides students with foundational knowledge of typical human development. Examines developmental sequences with emphasis on biophysical changes, motor skills, cognition, and psychosocial issues across the lifespan. Discusses the impact of social, cultural, and environmental differences on typical development. Integrates didactic information with observation experiences in order to prepare them for future coursework that requires application of these skills to the atypical population. Prerequisites: First Year Courses
3 credits

HAY 502 Psychosocial Aspects of Disability

Examines the psychological and social factors that directly or indirectly affect an individual with a disability. Topics include identification of pre-morbid factors that contribute to the adjustment or responses to disability; impact of disability on family roles; the effects of pain on the individual; the influence of culture and spirituality on individual and family expectations of the health care system; and the economic, sexual, and societal aspects of disability. Explores the interactions of the individual with disability within the community. Focuses on concerns of the individual beyond physical rehabilitation. Topics include mental health disorders; motivation and adherence; humor in medicine; terminal illness; substance abuse; eating disorders; self-injurious behavior; and interpersonal abuse. Emphasizes the utilization of psychosocial information in the establishment of the plan of care for patients across the life span. Prerequisite: Second Year Fall Courses
2 credits

HAY 504 Neurological Physical Therapy I

The first of a three course series designed to prepare second year physical therapy students to evaluate and treat patients with neurological dysfunction during their clinical experiences. Prepares students to examine, assess, and establish problem lists for individuals with various neurological disorders. Examines fundamental testing and assessment skills for sensation, musculoskeletal function, tone, reflexes, coordination, motor control, balance, postural stability, and function. Students will gain experience choosing appropriate outcome measures and gain competence in performing these measures. Justification for clinical decisions will be highlighted throughout. Prerequisites: First Year Courses
2 credits

HAY 505 Neurological Physical Therapy II

The second of a three course series designed to prepare second year physical therapy students to evaluate and treat patients with neurological dysfunction during their clinical experiences. Fundamental assessment skills will include: PNF, bed mobility and trunk control, advanced gait, and motor control of the extremities. Introduces various treatment approaches and integrates approaches to create a comprehensive and patient-centered plan of care. Skills will be developed through role playing, videotape analyses, and clinical patient experiences. Lab experiences will require written and verbal justification for student clinical decisions. Prerequisites: Second year summer courses
2 credits

HAY 506 Neurological Physical Therapy III

The last of a series of three courses designed to prepare second year physical therapy students to evaluate and treat patients with neurological dysfunction during their clinical experiences. Offers continued practice and synthesis of examination data during the evaluation process, however, major emphasis is to develop and implement appropriate intervention strategies based on the best available evidence for people with neurological or neuromuscular disorders. Prerequisites: Second Year Fall Courses
4.5 credits

HAY 507 Orthopedic Physical Therapy I

The first of three courses within the musculoskeletal sequence. Explores neuromusculoskeletal concepts within the patient/client management model. Introduces orthopedic physical therapy practice emphasizes clinical decision-making and problem solving through on-going hypothesis generation and testing. Provides content that students will apply to paper cases as they establish goals, organize subjective and objective exams, and practice screening skills. Information that is obtained during typical physical therapy exams is utilized in discussions to practice the evaluation process including ruling out red flags, identifying yellow flags, establishing a physical therapy diagnosis, developing a problem list, and generating an intervention plan. Prerequisites: First Year Courses
2 credits

HAY 508 Orthopedic Physical Therapy III

The last of three courses within the musculoskeletal sequence. Explores neuromusculoskeletal concepts within the patient/client management model. Orthopedic physical therapy practice of the upper extremities and spine is explored with an emphasis on clinical decision-making and problem solving through ongoing hypothesis generation and testing. Asked to apply content to paper cases and establish goals, organize subjective and objective exams, and practice screening skills. Information that is obtained during typical physical therapy exams is utilized in discussions to practice the evaluation and intervention process including ruling out red flags, identifying yellow flags, establishing a physical therapy diagnosis, developing a problem list, generating and implementing an intervention plan. Prerequisite: Second Year Fall Courses
4 credits

HAY 509 Pediatric Physical Therapy

Emphasizes the study of atypical movement patterns in children. Presents developmental and long-term effects of neuromuscular and musculoskeletal dysfunction as they relate to movement. Students learn examination and interventions for subtle and complex movement dysfunctions resulting from a variety of musculoskeletal and neuromuscular diagnoses, conditions, and syndromes including but not limited to preterm birth, torticollis, developmental hip dysplasia, OBPI, cerebral palsy, Down syndrome, autism, developmental coordination disorder (DCD), Spina Bifida and Duchenne Muscular Dystrophy. Explores strategies for working with children presenting at the opposite ends of functional abilities (severe/multiple vs minimal handicapping conditions. Addresses the role of the physical therapist during transitions between delivery settings. Prerequisite: Second Year Fall Courses
4.5 credits

HAY 512 Prosthetics and Orthotics in Physical Therapy

Provides a theoretical knowledge base as a framework for clinical intervention when providing treatment using orthotic and/or prosthetic devices for clients across the lifespan who present with amputations, diabetes, neurological disorders, and pathokinesiologic deficits of the musculoskeletal system. Presents course materials that reinforces course work from earlier basic science courses. Students will be expected to recall pertinent content from previous courses, apply that information in a clinically relevant manner, and critically solve problems covering client examination, evaluation, diagnosis, and treatment when presented with a variety of clinical scenarios. Prerequisites: First Year Fall Courses
3 credits

HAY 513 Orthopedic Physical Therapy II

The second of three courses within the musculoskeletal sequence. Explores neuromusculoskeletal concepts within the patient/client management model. Evaluation skills are sharpened as clinical decision-making and differential physical therapy diagnosis, prognosis and intervention are introduced in the framework of neuromusculoskeletal dysfunction. These general skills are then applied to various neuromusculoskeletal dysfunctions of the lower extremity. Functional anatomy, including the osteokinematics, arthrokinematics, myology and neurology of the lower extremity are explored as they relate to surgical and non-surgical neuromusculoskeletal conditions. Prerequisites: Second Year Summer Courses
2 credits

HAY 515 Foundations of Kinesiology

Explores the essential topics of Kinesiology and establishes a basis for future study of applied kinesiology. Introduces the study of normal human movement including topics such as movement description, muscle function, and biomechanics.
1 credit

HAY 517 Exercise Physiology

Provides a general background in exercise physiology. Topics include an introduction to energy systems and how they are recruited during different forms of exercise; an introduction to cardiopulmonary physiology and the response to exercise challenge; and the monitoring of cardiorespiratory and temperature vitals. Students will be expected to gain a general understanding of skeletal muscle physiology and recruitment, describe aerobic and anaerobic training effects, and understand exercise stress testing and prescription. Prerequisites: First Year Summer Courses
1 credit

HAY 518 Foundations of Exercise and Movement in PT

Presents an introduction to the fundamental principles of strength and flexibility. Fundamentals of muscle and connective tissue function from microstructure to macrostructure are considered in health and dysfunctional states through the life span. These basic principles will be expanded to explore the concept of myofascial mobility, extensibility and length. Explores muscle function including strength, muscle endurance, power, and control throughout the trunk and extremities. Students will combine the skills learned in Kinesiology with those learned in this course to begin the process of examination, evaluation and designing intervention programs for the movement dysfunction. Prerequisites: First Year Summer Courses
3.5 credits

HAY 519 Kinesiology

Explores the kinetics and kinematics of normal, purposeful human movement. Integrates knowledge of human anatomy, physiology and biomechanics as it applies to movement of the extremities and spinal column. Includes evaluation procedures such as manual muscle testing, measurement of joint range of motion, and gait assessment. Direct patient contact is scheduled. Prerequisites: First Year Summer Courses
4.5 credits

HAY 524 Health, Wellness and Prevention in Physical Therapy

Presents issues related to promotion of health and wellness and concepts of integrative, complementary and preventive medicine. Examines and integrates general fitness, nutrition and complementary medicine into exercise prescriptions for the following chronic diseases and conditions: cardiovascular disease; endocrinology and metabolic disorders; pulmonary disease; oncology; disorders of the bones and joints; spinal cord injury; stroke; depression; and intellectual disability. Based upon the findings of screens and individual client goals, students will develop, implement and assess the effectiveness of an individualized wellness program. Prerequisites: Second Year Courses
2 credits

HAY 525 Advanced Therapeutic Exercise

Provides students with the opportunity to apply and analyze therapeutic exercise techniques in order to formulate exercise programs for diverse patient and client populations. Students will be encouraged to discuss and build upon their knowledge of basic therapeutic techniques attained from previous coursework and clinical training experiences. Advanced techniques will be demonstrated and practiced in lab. Students will evaluate, set goals, develop therapeutic exercise programs and measure outcomes. Issues regarding

frequency, intensity and duration of treatment will be discussed throughout the course. Prerequisites: Second Year Courses
3 credits

HAY 526 Clinical Medicine and Pharmacology I

Provides a foundation in medicine and differential diagnosis. Introduces the concepts of the International Classification of Functioning, Disability and Health (ICF), the Patient/Client Management Model and outcomes management that guide the process of clinical decision-making. Integrates principles of pharmacology, medical imaging and laboratory diagnostic testing to facilitate safe and effective patient management. Familiarizes students with medical terminology and abbreviations for efficient and effective chart review and documentation. Common health conditions will be explored, focusing on epidemiology, pathophysiology, histology, as well as primary and secondary clinical characteristics. Discusses medical and surgical management and integration to formulate appropriate physical therapy interventions, precautions and contraindications related to each common health condition. Prerequisites: First Year Summer Courses
4.5 credits

HAY 527 Foundations of Patient Care

Emphasizes patient care in the acute care environment. Prepares students for functional mobility training for patients in all settings. Applies the laws of physics to body mechanics in order to safely and effectively assist patients with bedside functional mobility training. Prepares students to effectively guard patients during ambulation and engage in gait training with assistive devices. Students will perform initial evaluations, create physical therapy plans of care, and use vital signs and lab data to guide clinical decision making. Engages students in simulation-based learning experiences and integrated clinical experiences with patients of varying diagnoses and complexity to prepare them for their first clinical education experience. Prerequisite: First Year Fall Courses
4 credits

HAY 528 Clinical Medicine and Pharmacology II

Continues to build a critical foundation for Clinical Education I and the remainder of the professional curriculum by establishing a foundation in medicine and differential diagnosis. Students are expected to utilize the concepts of evidence-based practice, the ICF model of disablement, and the Patient/Client Management Model as frameworks for clinical decision-making. In-depth exploration of frequently encountered health conditions across the life span will be the continuing format. Presents epidemiology, pathophysiology, etiology, clinical characteristics with subsequent medical, pharmacological and surgical management of each health condition. Students will continue to build a repertoire of medical terminology, medical abbreviations and clinical outcome measures to promote efficient and effective chart review and documentation. Prerequisites: First Year Fall Courses
5 credits

HAY 534 Motor Learning and Motor Control

Establishes a context for the major explanatory concepts applied to the issues of coordination and skill and learning. Foundational material from Neuroscience will support the application and theory addressed throughout the course. Uses academic rationalization and cognitive processing philosophies to develop and refine intellectual processes. Students learn from historical perspectives of motor control to develop skills necessary to pose and solve problems, to infer, to hypothesize, and to locate needed resources for theoretically sound clinical judgments. Students read original research papers and current literature pertaining to motor learning, motor programs and dynamic pattern theory. Student will analyze papers examining loss of function related to disease or injury. Prerequisite: First Year Fall Classes
3 credits

HAY 543 Integumentary and Vascular Physical Therapy

Presents principles of skin anatomy and physiology, normal and abnormal would healing, and the anatomy and role of both peripheral vascular system and lymphatic systems. Discusses physical therapy assessment and interventions. Includes focused practice in myofascial mobility and extensibility, lymphedema management, wound assessment, debridement, would dressing choices, and other available modalities. Engages students in practical skills during interactive lab sessions to demonstrate competence and integrate information in a clinically relevant manner to provide a framework for future safe and effective intervention with clients. Prerequisite: First Year Fall Courses
2 credits

HAY 544 Biophysical Agents in Physical Therapy

Introduces various physical, mechanical and electrotherapeutic biophysical agents. Covers the role of such agents in the management of impairments and pathology involving the musculoskeletal, neuromuscular, cardiopulmonary, and integumentary systems. Explores evidence-based informed decision making for each of these agents through the analysis of appropriate literature. Prerequisites: First Year Summer Courses
3 credits

HAY 545 Ethics and Health Care for Physical Therapists

Provides an overview of the ethics of health care in a rapidly changing society. Explores ethical issues surrounding health care changes and public health policy. Includes an overview of ethics within patient education and discusses the professional code of ethics and standards. Students will learn how to approach ethical dilemmas using theoretical frameworks and decision-making processes. Introduces the student to the ethics within physical therapy and other health care professions through the use of case studies. Includes a review of classic cases in health care ethics, involving issues such as euthanasia and organ transplants from an ethical, legal and historical perspective. Prerequisites: Second Year Courses
2 credits

HAY 552 Research Methods for Physical Therapists

First of three courses designed to prepare students to search for and critically appraise scientific literature as well as understand the fundamentals of research methods, design, and statistics. Includes principles of evidence based practice, use of electronic data bases to search for evidence, research and measurement reliability and validity, research design, descriptive statistics, statistical inference, tests for experimental comparison, correlation, regression, and nonparametric tests. Addresses the relationship between statistics and research design by introducing relevant research articles in the healthcare field. Prerequisites: First Year Fall Courses
3 credits

HAY 557 Introduction to Evidence Based Practice

Second of three courses that introduce the concepts of evidence informed decision making by exploring the evidence based practice (EBP) model and the five steps of the EBP process. Builds upon the integration of research concepts that allow for the critical analysis of varying levels of research literature. Review of physical therapy literature will be used as a tool to integrate critical inquiry skills, depth of knowledge, and related clinical significance. Prerequisite: Second Year Fall Courses
1.5 credits

HAY 558 Evidence Based Practice Seminar

Final of three courses that explore a broad spectrum of research literature examining physical therapy practice. Literature will be used as a tool to integrate student's critical inquiry skills and depth of knowledge. Students judge the strength of the evidence of each paper and draw conclusions regarding its clinical significance. When lacking evidence, challenges student to suggest ways to strengthen the current evidence. Prerequisites: Second Year Courses
1-3 credits

HAY 560 Professional Practice I: Foundations

First of two courses regarding the developing physical therapy professional. Discusses historical, ethical and legal foundations and current and emerging issues affecting change within the profession. Introduces the format and function of the APTA at the national and state levels. Examines the roles and responsibilities of the physical therapist, the physical therapist assistant and the physical therapist aide in the present healthcare environment. Explores dynamics of professional interactions with patients, families and other healthcare providers.
1.5 credits

HAY 561 Professional Practice II: Clinical Education

Taught concurrently with theoretical and practical coursework in the curriculum to prepare the students for their first clinical experience. Offered before HAY 595 Clinical Education I to prepare students for patient and caregiver instruction and to provide students with knowledge of the roles and responsibilities of the student and the clinical instructor within the healthcare environment. Examines different learning and teaching styles and their effect on the learning environment. The fundamentals of teaching as they apply to patient education, professional inservices, and clinical education are presented and practiced. Students are introduced to aspects of verbal and nonverbal communication, with opportunity to work in small groups for application of these principles. Preparation for the first clinical education experience, specifically clinical site and academic program expectations, professional behavior, and student responsibilities, are discussed in detail. Prerequisites: Second Year Summer Courses
1.5 credits

HAY 580 Practicum

A limited number of students may enroll in 3-6 credits of independent study in research, education, clinical practice, or management/administration. Each practicum project is uniquely designed to meet the needs of the student. Mentored by faculty with expertise in the area of study. Acceptable projects must include design, implementation and analysis phases. 3-6 credits by permission of the Program Director.
3-6 credits

HAY 589 Case Studies I

Integrates material from prior coursework and focuses on development of communication skills during physical therapy interactions with patients and other members of the interdisciplinary team. Students will engage in simulation-based learning experiences to help them develop their communication skills related to building relationships, opening a discussion, gathering information, understanding the patient perspective, sharing information, reaching agreement, providing closure, demonstrating empathy, and communicating accurate information. Students will also develop their skills related to self-reflection and feedback. Prerequisites: First Year Courses
.5 credit, S/F graded

HAY 590 Case Studies II

Integrates material from prior coursework and requires students to hypothesize mechanisms of injury to develop an evidence-based evaluation plan for patients with orthopedic dysfunction. Students will engage in simulation-based learning experiences to help them understand the relationship between pathophysiology and signs and symptoms, choose and perform appropriate assessments, evaluate clinical data, determine a differential diagnosis, respond to changes in patient status, and make appropriate recommendations for interventions for patients with orthopedic dysfunction. Prerequisites: Second Year Fall Courses
1 credit, S/F graded

HAY 595 Clinical Education I

An eight-week full time clinical experience course and the first of four clinical experiences in the curriculum. Allows the student to apply and integrate the academic knowledge, skills, and professional behavior acquired in the curriculum. Students are expected to demonstrate advanced beginner

to intermediate level competency in all categories of the Clinical Performance Instrument (CPI) at the conclusion of the course. A licensed physical therapist, with a minimum of one year clinical experience, will provide close supervision and guidance during the learning experience. Pre-requisites: All coursework prior to HAY 595.
8 credits, S/F graded

HAY 602 Issues in Health Care Administration

Provides a theoretical basis of successful management principles, as well as practical implementation strategies for these principles as they apply to the field of physical therapy. Emphasizes the basic management principles of planning, organizing, leadership, and controlling/coordination; marketing theory; business plan development; change management, total quality management/continuous quality improvement; regulatory agency and public policy impact; enhancement and maintenance of quality care including outcome analysis; emerging health care reimbursement models; and consulting approaches. Prerequisites: Second Year Courses
1-3 credits

HAY 620 Cardiopulmonary Physical Therapy I

Introduces students to the interpretation of data from various diagnostic tests commonly encountered in patients with cardiac and/or pulmonary dysfunction. Engages classroom and laboratory activities designed to promote clinical decision making skills regarding the titration of exercise and the development of physical therapy interventions, including airway clearance techniques. Concentrates on the psychomotor skills needed to treat this patient population and the clinical reasoning skills required to ensure patient safety and improve patient outcomes. Prerequisites: Summer Year 2 Courses
2 credits

HAY 621 Cardiopulmonary Physical Therapy II

Integrates material from prior coursework and utilizes information to develop an evidence-based total plan of care for patients with cardiac and/or pulmonary dysfunction. Students engage in simulation-based learning experiences to help understand the relationship between pathophysiology and signs and symptoms; choose and perform appropriate assessments; evaluate clinical data; design and perform physical therapy interventions; respond to changes in patient status; and make appropriate recommendations for equipment and community programs for patients with cardiac and/or pulmonary dysfunction. Prerequisites: Summer Year 3 courses.
2 credits

HAY 692 Clinical Education II

A nine-week full time clinical experience course and the second of four clinical experiences in the curriculum. Allows the student to apply and integrate the academic knowledge, skills, and professional behavior acquired in the curriculum. Students are expected to demonstrate intermediate level competency in all categories of the Clinical Performance Instrument (CPI) at the conclusion of the course. A licensed physical therapist, with a minimum of one year clinical experience, will provide close supervision and guidance during the learning experience. Pre-requisites: All coursework prior to HAY 692.
9 credits, S/F graded

HAY 693 Clinical Education III

An eight-week full time clinical experience course and the third of four clinical experiences in the curriculum. Allows the student to apply and integrate the academic knowledge, skills, and professional behavior acquired in the curriculum. Students are expected to demonstrate intermediate level competency in all categories of the Clinical Performance Instrument (CPI) at the conclusion of the course. A licensed physical therapist, with a minimum of one year clinical experience, will provide close supervision and guidance during the learning experience. Pre-requisites: All coursework prior to HAY 693.
8 credits, S/F graded

HAY 694 Clinical Education IV

A full time ten-week clinical experience course and the final clinical experience in the curriculum. Allows the student to apply and integrate the academic knowledge, skills, and professional behavior acquired in the curriculum. Students are expected to demonstrate entry level competency in all categories of the Clinical Performance Instrument (CPI) at the conclusion of the course. A licensed physical therapist, with a minimum of one year clinical experience, will provide close supervision and guidance during the learning experience. Pre-requisites: All coursework prior to the HAY 694.
8-12 credits, S/F graded

HAY 699 Clinical Continuation

This course is for physical therapy students continuing with clinical.
0 credit, S/F graded

HBA

HBA 325 Anatomical/Bio Illustration

This course is intended to develop skills and approaches to design, scientific visualization and illustration not specific to any particular academic background or intended career path. It encourages the development of analytical observational skills and better brain/eye/hand coordination, providing an opportunity to explore the specialist rendering techniques used in scientific illustration. It is open to students with either a science or art background. It includes a historical overview of medical, biological, archaeological, botanical, technical, geological, paleontological, and anatomical illustration, but the focus is on student projects. Grading is on an individual basis, rather than against absolute standards, and students are expected to show that their skills have improved during the course by providing evidence of their work in the form of sketchbooks, preparatory studies as well as more finished pieces. This course is offered as both HBA 325 and ARS 355.
Summer, 3 credits

HBA 398 Research Project in Anatomical Sciences

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. Open to juniors and seniors. May be repeated. HBA 398 (Fall offering), HBA 399 (Spring offering); 2-4 credits; S/U grading
2-4 credits, S/U grading

HBA 399 Research Project in Anatomical Sciences

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. Open to juniors and seniors. May be repeated. HBA 398 (Fall offering), HBA 399 (Spring offering); 2-4 credits; S/U grading
2-4 credits, S/U grading

HBA 461 Regional Human Anatomy for Respiratory Therapists

A lecture and laboratory course that includes dissections of the entire human body. The course is organized in three modules: (1) thorax and abdomen; (2) head and neck, including neuroanatomy; and (3) limbs. It covers regional and conceptual information on the gross anatomy of all organ systems in the human body. There is a lab fee associated with this course.
Summer, 5 credits

HBA 521 Gross Anatomy of Head, Neck, and Trunk

Tutorial laboratories with emphasis on dissections of the human head, neck, and trunk.
8 credits, Letter graded (A, A-, B+, etc.)

HBA 531 Nervous System

This course provides an integrative overview of the structure and function of the mammalian nervous system with an emphasis on the human brain, the cranial nerves and the neurobiology relevant to the oral cavity. It begins with a series of lectures centered on cellular foundations, basic principles of cell signaling/neurophysiology and nervous system development. The major structures of the central and peripheral nervous system and their functions are also introduced. These sessions build foundations for more in-depth investigations at systems levels; sensory, motor, higher order, homeostatic and cranial systems are emphasized. For most topics, basic principles are reinforced using clinical examples from different dental disciplines and the interactive lectures are complemented and extended in student working group sessions that use the primary literature, case-based problem solving and other forms of active learning to solidify learning and make clinical connections. This course represents a coordinated teaching effort from the Departments of Neurobiology and Behavior, and Anesthesiology.
8 credits, S/F graded

HBA 540 Human Anatomy for Physical Therapists

A lecture and laboratory course that includes dissections of the entire human body. The course is organized in three modules: (1) thorax and abdomen, (2) head and neck, including neuroanatomy, and (3) limbs. It covers regional and conceptual information on the gross anatomy of all organ systems in the human body. There is a lab fee associated with this course.
Summer, 5 credits, Letter graded (A, A-, B+, etc.)

HBA 541 Evolutionary Anatomy

A lecture and laboratory with emphasis on dissection of the entire human body. Includes functional and comparative anatomy with special emphasis on the musculoskeletal morphology of humans and higher primates. This course is offered as both DPA 541 and HBA 541. There is a lab fee associated with this course. 8 credits, Letter graded (A, A-, B +, etc.)
8 credits, Letter graded (A, A-, B+, etc.)

HBA 542 Advanced Human Anatomy for Physical Therapists

Regional approach to the gross anatomy of the lower limb for physical therapy graduate students (DPT). The course is presented in conjunction with HYA519, Kinesiology for Physical Therapists. This module will offer an expanded view of the functional anatomy and arthrology of the hip, thigh, leg and foot. Labs will be three hours, one day per week. Enrollment will be limited to DPT students.
Fall, 0 credit, S/U grading

HBA 550 Vertebrate Evolution

Survey of the fossil record of vertebrate evolution. The course emphasizes the origin, phylogeny, comparative and functional morphology, biogeography, and paleontology of vertebrate animals. Laboratory included. The lectures and laboratories will utilize an extensive collection of comparative anatomical material, fossil casts, and slides.
Spring, alternate years, 4 credits, Letter graded (A, A-, B+, etc.)

HBA 551 Phylogenetic Systematics, Biogeography and Comparative Methods

This course will provide students with a familiarity in the practical application of modern phylogenetic methods and the use of phylogenies in framing evolutionary hypotheses. The course will have both a lecture and laboratory component with lectures including in-class discussions of assigned readings. Lab exercises will be devoted to hands-on experience with available software for phylogenetic and comparative methods. Comparative methods examined will include a focus on historical biogeography as well as ancestral state reconstruction, rates of evolution and diversification, and analysis of adaptation and key innovations.
Spring, 4 credits, Letter graded (A, A-, B+, etc.)

HBA 560 Regional Anatomy for non-Healthcare students

A lecture and laboratory course that includes dissections of the entire human body covering regional and conceptual information on the gross anatomy of all organ systems in the human body. In the Fall, this course is presented in conjunction with The Body Course (MED 500A); in the Summer, it is presented in conjunction with Advanced Regional Anatomy for Physical Therapists and for Physician Assistants (HBA 540 and 561). There is a lab fee associated with this course. This course is not for students in a Healthcare Professional Program. Prerequisite: Permission of Instructor
Fall, Summer, 3-8 credits, Letter graded (A, A-, B+, etc.)

HBA 561 Human Gross Anatomy for Physician Assistants

A lecture and laboratory course that includes dissections of the entire human body. The course is organized in three modules: (1) thorax and abdomen; (2) head and neck, including neuroanatomy; and (3) limbs. It covers regional and conceptual information on the gross anatomy of all organ systems in the human body. There is a lab fee associated with this course.
Summer, 5 credits, Letter graded (A, A-, B+, etc.)

HBA 563 Aspects of Animal Mechanics

An introduction to biomechanics. Covers freebody mechanics and kinetics as applied to vertebrate locomotion. Considers the structure and physiology of muscle as it relates to adaptations of the musculoskeletal system. This course is offered as both HBA 563 and DPA 563.
Spring, odd years, 2 credits, Letter graded (A, A-, B+, etc.)

HBA 564 Primate Evolution

The taxonomic relationships and evolutionary history of primates as documented by their fossil record and structural and chemical evidence. Emphasis on primates prior to the origin of the human lineage. This course is offered as ANT 564, DPA 564 and HBA 564. 4 credits, Letter graded (A, A-, B +, etc.)
4 credits, Letter graded (A, A-, B+, etc.)

HBA 565 Human Evolution

A survey of the fossil record of hominid evolution through the Pliocene and Pleistocene with emphasis on the morphological structure and function of locomotor, masticatory, and neural systems. Includes utilization of comparative anatomical material and an extensive cast collection. This course is offered as ANT 565, DPA 565 and HBA 565. 4 credits, Letter graded (A, A-, B+, etc.)
4 credits, Letter graded (A, A-, B+, etc.)

HBA 566 Studies in Functional Morphology

Introduction to the theory and methods of functional morphology. Various methods of analysis and the application of experimental techniques such as electromyography or bone strain analysis are discussed as they pertain to the understanding of the interaction between form and function. Special emphasis is placed on the analysis of human and nonhuman primate morphology, and the application of this analysis to interpretation of the fossil evidence for human and nonhuman primate evolution. This course is offered as both HBA 566 and DPA 566.
Spring, even years, 2 credits, Letter graded (A, A-, B+, etc.)

HBA 582 Comparative Primate Anatomy

The comparative anatomy of living primates. Laboratory dissection with emphasis on relating structural diversity to behavior and biomechanics. This course is offered as both HBA 582 and DPA 582. 4 credits, Letter graded (A, A-, B+, etc.)
4 credits, Letter graded (A, A-, B+, etc.)

HBA 590 Projects in Anatomical Sciences

Individual research projects on anatomical sciences topics closely supervised by faculty members to be carried out in staff research laboratories.
Fall and Spring, 1-6 credits, S/U grading

HBA 690 Graduate Seminar

Seminars by graduate students on current literature in the areas of the anatomical sciences.
Fall and Spring, 1-2 credits, S/U grading

HBA 692 Advanced Topics in Anatomical Sciences Literature

Tutorial readings in anatomical sciences with periodic conferences, reports and examinations arranged with the instructor.
Fall and Spring, 1-4 credits, S/U grading

HBA 695 Practicum in Teaching

Practical instruction in the teaching of anatomical sciences carried out under faculty supervision. 1-4 credits, S/U grading
1-4 credits, S/U grading

HBA 699 Dissertation Research on Campus

Original investigation under supervision of thesis adviser and committee.
Fall, Spring, and Summer, 1-9 credits, S/U grading

HBA 700 Dissertation Research off Campus - Domestic

Prerequisite(s): Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
Fall, Spring, 1-9 credits, S/U grading

HBA 701 Dissertation Research off Campus - International

Prerequisite(s): Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered

by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver be second week of classes. The charge will only be removed if other plan is deemed comparable.
Fall, Spring, 1-9 credits, S/U grading

HBA 800 Full-Time Summer Research

Full-time laboratory research projects supervised by staff members. 0 credit, S/U grading
0 credit, S/U grading

HBC

HBC 331 Introductory Biochemistry

An introduction to biochemistry including all aspects of metabolism and the synthesis, structure, and function of DNA, RNA, and protein stresses the medical significance of these aspects of biochemistry. Prerequisite: Organic Chemistry
3 credits

HBC 531 Molecular Foundations of Medicine

An integrated course covering the important aspects of biochemistry, cell biology, human and molecular genetics, and histology. Includes lectures, small group conferences and laboratories and stresses the clinical relevance of the basic science material.
8 credits, Letter graded (A, A-, B+, etc.)

HBH

HBH 330 Fundamentals of Pharmacology I

HSC Bulletin InformationCovers the basic principles that underlie the action of drugs on physiological processes. These principles are applied to the specific action of drugs on the autonomic nervous system. In addition, the pharmacology of cardiovascular drugs are covered in detail.
2 credits

HBH 331 Fundamentals of Pharmacology II

A continuation of HBH 330. Covers the action of drugs on individual systems as well as drug-drug interactions emphasizing the mechanisms of drug action. Surveys therapeutic applications and adverse drug reactions.
3 credits

HBH 333 Principles of Pharmacology

This course presents the basic scientific principles that underlie the mechanism of action of the major classes of various drugs and their effects on patho-physiologic processes in humans. A prototype approach is used to assist students in organizing and learning the major drug classifications. A major emphasis is placed on the development of clinical decision-making and critical thinking skills as essential components of the role of the baccalaureate-prepared registered professional nurse.
4 credits

HBH 396 Research Project in Pharmacology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project. May be repeated. May not be taken for credit in addition to BCP 487.
0-6 credits

HBH 398 Research Project in Pharmacology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project. May be repeated. May not be taken for credit in addition to BCP 487.
1-6 credits

HBH 399 Research Project in Pharmacology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project. May be repeated. May not be taken for credit in addition to BCP 487.
1-6 credits

HBH 501 Principles of Pharmacology

Basic principles and mechanism of drug distribution, absorption, metabolism and elimination. Principles of chemical carcinogenesis and tumor promotion. Autonomic, Smooth Muscle and CNS Pharmacology. Pharmacology of specific drugs of historical interest including alcohol, antibiotics, aspirin, nicotine and morphine. Review of anticoagulants & thrombolytic agents, antiparasitic, and drugs for the treatment of allergic conditions and gout. Includes discussion of specific cases taken from clinical practice and a presentation based on a set of selected readings. Crosslisted with BCP 401
Fall, 4 credits, Letter graded (A, A-, B+, etc.)

HBH 502 Advanced Principles of Pharmacology

Advanced concepts of drug metabolism, pharmacokinetics, biochemical and molecular mechanisms of drug action and drug resistance in human disease states. Toxicological agents and environmental pollutants. The pharmacology of autocoids, anti-inflammatories, immunosuppressants and anti-asthmatics. Rational drug design and drug receptor interactions using computer molecular modeling techniques. Includes discussion of specific cases taken from clinical practice and a presentation based on a set of selected readings. Cross-listed with BCP 402
Spring, 4 credits, Letter graded (A, A-, B+, etc.)

HBH 505 Pharmacology to Pharmacy: Practical Clinical Aspects for Non-Clinicians (Didactic)

This course, to be offered exclusively online, is designed for students interested in health care (either basic medical

science-oriented or clinical). The class introduces many aspects of clinical pharmacology, but is geared toward non-clinicians. Clinical Vignettes and case discussions will be presented. Several medical procedures will be first described and then demonstrated. Understanding these procedures will be integral to appreciating the vignettes and clinical case discussions. The multidisciplinary course faculty will include physicians, scientists, educators, nurses and pharmacists. Enrolled students will have the opportunity to ask questions directly through online chats.
0-3 credits, S/U grading

HBH 506 Graduate Pharmacology Colloquium

Research seminars in pharmacology and toxicology presented by faculty and distinguished scientists from academic and industrial institutions. A 1 hr. Journal Club/Discussion Session precedes seminar to review a reference paper relevant to the research concepts to be presented. Students are expected to develop an understanding of the scientific principles given in the colloquium. Students are required to give a formal presentation. Co-scheduled with BCP 406. Offered
Spring, 2 credits, Letter graded (A, A-, B+, etc.)

HBH 510 Practical Clinical Exposure for Translational Basic Scientists Hospital Clinical Rotations-Physician

Course faculty will arrange two, two-week-long rotations (four weeks total). The following services are committed to participate: Anesthesiology-students will be offered opportunities in operating room (OR) observation; pre-admission patient evaluations; pain management clinic; and others depending upon availability. Internal Medicine-students will be offered opportunities in the medical intensive care unit (MICU); coronary care unit (CCU); medical oncology; and others depending upon availability. Others-depending upon availability. Student will be expected to spend 3-4 hours daily in their assigned clinical activates (15-20 hours weekly; 60-80 hours for the course). In addition, they will be asked to participate in special medical exercises arranged for them on an ad hoc basis by course faculty, both in the hospital pharmacy and elsewhere. Finally all students will attend weekly case conferences, 2hr each for all 4 weeks. At these conferences, students will be asked to prepare and present two clinical cases, based on two of the patients they have seen on their clinical rotations. It is expected that each student will be responsible for at least two presentations during the four-week course. Presentations will be graded by course faculty, S (satisfactory) or U (unsatisfactory). The final grade for the course, also S or U, will be determined both by these grades as well as by overall attendance at all course activities.
0-3 credits, S/U grading

HBH 531 Pharmacology-Dental

Basic principles that underlie actions of drugs on physiological processes with particular reference to their therapeutic and toxic actions. For medical and dental students. Prerequisites: Physiology, biochemistry, permission of instructor and admission to Graduate Health Sciences Center Program.
Modules 4-6,
5 credits, Letter graded (A, A-, B+, etc.)

HBH 545 Biochemical Laboratory Techniques

Introduces theoretical principles and experimental techniques used in modern biochemical research. Lectures and homework assignments explore topics in basic molecular and cellular techniques. Prerequisites: Admission to Health Sciences Center program.
Fall, 1 credit, Letter graded (A, A-, B+, etc.)

HBH 546 Biochemical Laboratory Techniques

Continuation of HBH545. Lectures and demonstrations present topics in chromatography, mass spectrometry, protein sequencing, sedimentation, electrophoresis, ligand binding, basic pharmacological methods and statistical analysis of data. Includes procedures for the safe handling of toxic chemicals and radioisotopes. Prerequisites: Permission of instructor, admission to graduate Health Sciences Center program.
Spring, 1 credit, Letter graded (A, A-, B+, etc.)

HBH 549 Legal ; Regulatory Issues in Clinical Research combined with Ethics;Professionalism in Clin. Rsrch.

Some of the sessions are part of the SBU course on Responsible Conduct of Research and Scholarship (RCRS, formerly known as GRD 500). During the course, major contemporary issues in legal and regulatory arenas associated with scientific research are discussed. The course introduces students to the history behind the regulations that safeguard human subjects, and educates students in detail about their responsibilities as clinical investigators. Using an interactive case based format the topics covered include: justification for human research and reasonable balance of risk versus benefits; the use of animals in research; informed consent; the ethical challenges of clinical research; ethical concerns associated with genetic testing and screening; research in minors and adults of questionable capacity to consent; conflict of interest; investigator responsibilities with regard to fulfilling government regulation; scientific fraud and whistle blowing; the scientific community and mentoring; authorship and attribution; special populations and inclusion of minorities; and emergency research-related special requirements.
1 credit

HBH 550 Statistics in Life Sciences

This course covers statistical concepts and issues in the life sciences. Basic algebra is assumed as a prerequisite. Topics covered include: descriptive statistics, foundation of statistical inference, sampling distribution, point estimate and confidence internal, comparison of independent and paired samples, analysis of categorical data, correlation, ANOVA, linear regression, and nonparametric test.
1 credit, S/U grading

HBH 560 Proposal Preparation in Regulatory Biology

A literature-based course focusing on major research areas in molecular and biochemical pharmacology. The first part of the course will expose students to a series of examples of recent grant proposals. The second part of the course will feature student presentations of their research proposals. Due to the coordination of this course with the Qualifying Exam, registration is limited to Pharmacology graduate students.
Fall and Spring, 2 credits, S/U grading

HBH 580 Selected Topics in Pharmacology

Student seminars and readings on topics arranged through consultation with staff.
0-1 credits, Letter graded (A, A-, B+, etc.)

HBH 585 Advanced Structural Biology/ Structural Methods in Drug Discovery

This course is designed for students that want to gain theoretical and practical experience in macromolecular structure determination through NMR spectroscopy and/ or X-ray crystallography. The course is organized into two modules: NMR spectroscopy and X-ray crystallography. Students may elect to take one or both modules. Emphasis will be placed on practical aspects of structural determination, including sample preparation, data collection and processing. In each of the modules, students will be guided through a complete structural determination project. A final project report per module will be required. Familiarity with Linux is desirable. Students are encouraged to contact instructors prior to enrolling. Crosslisted as BSB580 and HBH585.
Spring, 0-4 credits, S/U grading

HBH 590 Pharmacology Seminars

Advanced research seminars by staff and visiting lecturers.
Fall and Spring, 0-1 credits, S/U grading

HBH 599 Graduate Research in Pharmacological Sciences

Original research projects under faculty supervision.
Fall, Spring, and Summer, 0-12 credits, Letter graded (A, A-, B +, etc.)

HBH 601 Practicum in Teaching Pharmacology

Practical experience and instruction in the teaching of pharmacology carried out under faculty orientation and supervision.
Fall and Spring, 0-1 credits, S/U grading

HBH 631 Graduate Pharmacology I

Basic principles of pharmacology will be discussed including pharmacokinetics and pharmacodynamics in both normal and various disease states. Major problems in human pharmacology will be considered including obesity, diabetes, hypertension and heart failure. Underlying physiology as well as pathophysiologic background will be presented. Drug design and development will be discussed from both scientific and socio-economic perspectives.
Fall and Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HBH 632 Graduate Pharmacology II

This course introduces second-year graduate students to chemotherapy agents used to combat bacterial and viral infections as well as cancers. The course develops a detailed understanding of the strategies involved in identifying drug targets in these two diverse therapeutic settings. The antibacterial lectures emphasize the problem of drug resistance and the need to develop new agents to combat resistant organisms. The anti-cancer lectures begin with a comprehensive analysis of the molecular basis of cellulartransformation leading to neoplastic disease. Lectures on cancer therapy emphasize the contrast between conventional cytotoxic chemotherapy and novel therapeutic approaches guided by recent developments in cancer research. Novel computational biology and structural biology approaches are featured throughout the course. Each student is expected to make two formal journal-club style presentations during the course and to actively participate in group discussion.
0-3 credits, Letter graded (A, A-, B+, etc.)

HBH 633 Quantitative Methods in Pharmacology

This course introduces second-year graduate students to the quantitative approaches that underlie modern research in Pharmacology. Students will be exposed to tools and techniques that are widely applied in different fields of biomedical research. Students will receive an introduction to the command line, coding and statistics, and learn to apply these tools to pharmacokinetic compartmental analysis, molecular modeling, image analysis, structural biology, biological big data analysis and genomics. Students will be actively engaged in data analysis and will be expected to participate in group discussion.
3 credits

HBH 655 Neuropharmacology

An advanced course for graduate students interested in developing an understanding of neuropharmacology and research on this topic. Following a general introduction to the nerve cell structure, synaptic and chemical transmission, three themes receptors, receptors as channels, and G-protein-coupled receptors are developed. Recent advances in cell and molecular biology provide the framework for instruction and discussion. This course is offered as both HBH 655 and BNB 655. Prerequisiste: Admission to Graduate Health Sciences Center Program.
Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HBH 656 Cell Biology

Introduction to the structural and functional organization of cells and tissues and to the way structure relates to function. Particular emphasis is placed on nuclear and chromosomal structure, signal transduction, protein translocation, the cytoskeleton and the extracellular matrix. The interaction of cellular structures and components and their regulation is stressed as is the organization and interaction of cells in tissues. The course is comparative and includes examples of cells and tissues from vertebrates, invertebrates, plants, and prokaryotic systems. Prerequisites: matriculation in graduate program or permission of instructor.

Spring, 3-4 credits, Letter graded (A, A-, B+, etc.)

HBH 699 Dissertation Research in Campus

Original investigation undertaken as part of the Ph.D. program under supervision of thesis adviser and committee. Prerequisites(s): Advancement to candidacy (G5); permission of thesis advisor. Major portion of research must take place on SBU campus, at Cold Spring Harbor, or at the Brookhaven National Lab.
Fall, Spring, and Summer, 0-9 credits, S/U grading

HBH 700 Dissertation Research off Campus - Domestic

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
Fall, Spring, 1-9 credits, S/U grading

HBH 701 Dissertation Research off Campus - International

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver be second week of classes. The charge will only be removed if other plan is deemed comparable.
Fall, Spring, 1-9 credits, S/U grading

HBH 800 Full-Time Summer Research

Full-time laboratory research projects supervised by staff members. Summer Term. Prerequisites: Full-time pharmacology graduate status.
0 credit, S/U grading

HBI

HBI 398 Research Projects in Biomedical Sciences

An independent research project under faculty supervision. Emphasizes the principles of experimental design, data collection, evaluation of findings and reporting of results. Project report required. May be repeated.
2-4 credits

HBI 599 Graduate Research in Radiation Oncology Medical Physics

Original research projects under the faculty supervision in areas of medical physics relating to radiation oncology.
1-8 credits, Letter graded (A, A-, B+, etc.)

HBM

HBM 320 General Microbiology

A study of the molecular structure, functional anatomy, growth, genetics, and pathogenic mechanisms of microbial agents, with an emphasis on bacteria and viruses. Non-specific and specific host defenses and the control of microorganisms will also be covered. Not for credit in addition to BIO 315. Satisfies the microbiology requirement for admission to most allied health, nursing, optometry, and veterinary medicine professional schools.
3 credits

HBM 321 General Microbiology Laboratory

Complementing the lecture material of HBM 320, this optional laboratory covers basic and applied microbiological methods. Students are introduced to methods for isolating pure cultures, microscopy and staining, quantitation of bacteria and determination of sensitivity to antimicrobial agents. This laboratory is limited to pre-allied health, pre-nursing, and pre-veterinary students. This course has an associated fee. Please see www.stonybrook.edu/coursefees for more information.
1 credit

HBM 398 Research Project in Microbiology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. Project report required. May be repeated.
0-4 credits

HBM 399 Research Project in Microbiology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. Project report required. May be repeated.
0-4 credits

HBM 503 Molecular Genetics

Introduces the classical work and current developments in lower and higher genetic systems. Covers gene structure and regulation in prokaryotic and eukaryotic organisms, mutational analysis and mapping, transposable elements, and biological DNA transfer mechanisms. Bacteriophage as well as lower and higher eukaryotic systems are used to illustrate aspects of molecular genetic structure and function. This course is offered as both MCB 503 and HBM 503. Prerequisites: matriculation in graduate program or permission of instructor
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HBM 509 Experimental Microbiology and Immunology

An introduction to modern microbiological research. The selection of laboratories is made in consultation with the student's advisory committee. By taking part in ongoing

projects the student will learn experimental procedures and techniques and become acquainted with research opportunities in the department.
Fall, 1-8 credits, S/U grading

HBM 510 Experimental Microbiology and Immunology: Lab II

An introduction to modern microbiological research. The selection of laboratories is made in consultation with the student's advisory committee. By taking part in ongoing projects the student will learn experimental procedures and techniques and become acquainted with research opportunities in the department.
Spring, 1-8 credits, S/U grading

HBM 522 Biology of Cancer

A short course with the emphasis on cancer as a disease of man. Lectures address human cancer as seen by the clinician and as basic research relates to human disease. This course provides students with a link between courses in cell and molecular biology and the application of this basic information to tumor management. Offered as HBM 522 and HPH 659.
Offered Spring
2 credits, Letter graded (A, A-, B+, etc.)

HBM 599 Graduate Research in Microbiology and Immunology

Original investigations under faculty supervision.
Fall and Spring, 1-9 credits, S/U grading

HBM 640 Molecular Mechanisms of Microbial Pathogenesis

This course covers the principles and molecular mechanisms of pathogenesis of a selected group of the best understood viral and bacterial pathogens. A major focus of the course relates to pathogen modification of host extracellular and intracellular signalling events, as well as pathogen-host interactions pertaining to the innate, humoral and cellular responses to infection. The material is presented by invited lecturers who are leaders in their fields. This courses is directed to graduate students, post-doctorate and medical fellows, and advanced medical students, who are are contemplating careers in infectious disease research.
Prerequisites: HBM, BMO 503 and BMO 520
3-4 credits, Letter graded (A, A-, B+, etc.)

HBM 691 Readings in Microbiology and immunology Literature

Readings in microbiology literature covering areas of molecular biology and genetics.
Fall, 1 credit, Letter graded (A, A-, B+, etc.)

HBM 692 Experimental Methods in Microbiology and Immunology

The goal of this course is to introduce students to the rationale underlying the wide array of new methods in biology, as well as to promote the critical analysis of scientific literature. Lectures will be given about various scientific methods and approaches, and journal articles relating to the concepts introduced will be assigned. A separate discussion section will be held to review and critique the articles, to be led by the students.
1 credit, Letter graded (A, A-, B+, etc.)

HBM 693 Research Proposal Preparation in Molecular Genetics and Immunology

A course, based upon the literature in molecular genetics and microbiology, to instruct students in scientific writing and the preparation of research proposals. The course will be organized in three parts. In the first section of the course, students will become familiar with the components of the research proposal and will read and evaluate proposals written by the training faculty. Lectures given by the course co-directors will cover the basics of scientific writing, research proposal preparation and the problems and concerns commonly voiced by reviewers of research proposals. In the second section, students will develop two short proposals in the area of molecular genetics and microbiology that are unrealted to their graduate research. One of these short proposals will be selected for development into a full proposal. In the third section, students will develop and write the full proposal. The students' skills in proposal preparation will be enhnaced by critiquing the short and full proposals presented by other students in the second and third sections of the course.
Spring, 1-3 credits, Letter graded (A, A-, B+, etc.)

HBM 696 Professional Development in Microbiology and Immunology

In a joint credit-bearing course, 12 students (at the advanced Bachelor and beginning Master level) from three partner institutions will develop a 360 degree view of six different pandemics that occurred in human history. Tuberculosis, Influenza, Dengue, SARS/Covid 19, HIV, antimicrobial resistance. Each pandemic will be covered by one expert who also serves as a mentor for the students. Expert-mentors will be recruited from the partners' networks. Six international student pairs will each explore one pandemic and compare its consequences as well as measures taken against them in different parts of the world. In addition, students will gain insights into public health institutions (WHO, CDC, RKI etc.). Students will get different perspectives on pandemics, which are of global concern, while measures against them are usually taken on a national level.
0-3 credits, Letter graded (A, A-, B+, etc.)

HBM 697 Pandemics in Human History

In a joint credit-bearing course, 12 students from three partner institutions will develop a 360°-view of six different pandemics that occurred in human history: Tuberculosis, Influenza, Dengue, SARS/Covid 19, HIV, antimicrobial resistance. Each pandemic will be covered by one expert who also serves as a mentor for the students. Expert-mentors will be recruited from the partners¿ networks. Six international student pairs will each explore one pandemic and compare its consequences as well as measures taken against them in different parts of the world. In addition, students will gain insights into public health institutions (WHO, CDC, RKI etc.). Students will get different perspectives on pandemics, which are of global

concern, while measures against them are usually taken on a national level.
1-2 credits, Letter graded (A, A-, B+, etc.)

HBM 699 Dissertation Research in Microbiology and Immunology

For the student who has been advanced to candidacy (G5); permission of dissertation advisor.
Fall, Spring, and Summer, 1-9 credits, S/U grading

HBM 700 Dissertation Research off Campus - Domestic

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
Fall, Spring, Summer, 1-9 credits, S/U grading

HBM 701 Dissertation Research off Campus - International

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver be second week of classes. The charge will only be removed if other plan is deemed comparable.
Fall, Spring, 1-9 credits, S/U grading

HBM 800 Full-Time Summer Research

Full-time laboratory research projects supervised by staff members.
0-1 credits, S/U grading

HBP

HBP 310 Pathology

A study of the basic mechanisms of disease and the pathophysiology of the important human illnesses. Primarily for Health Sciences Center students; others admitted with special permission.
3 credits

HBP 393 Special Topics from Pathology Literature

Tutorial readings in pathology, with periodic conferences, reports, and examinations arranged with the instructor. May be repeated.
1-2 credits

HBP 394 Special Topics from Pathology Literature

Tutorial readings in pathology, with periodic conferences, reports, and examinations arranged with the instructor. May be repeated.
1-2 credits

HBP 398 Research Project in Pathology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. May be repeated.
0-4 credits

HBP 399 Research Project in Pathology

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. May be repeated. Prerequisite: Laboratory experience.
0-4 credits

HBP 511 Pathobiology for Graduate Health Care Practitioners

For graduate students who have obtained primary health care baccalaureate degrees through the case study approach. Covers the underlying principles of modern experimental pathology. Focuses on the clinical aspects of the body system, including relevant underlying biochemistry, structure, or pathophysiology at the organ, tissue, cell or molecular level.
Fall and Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HBP 533 Immunology

Principles of immunology for graduate students in the biological sciences, including definition of antigens and antibodies, specificity of the immune response, immunoglobulin structure, the genetics of immunoglobulin synthesis, cellular cooperation in the immune response, hypersensitivity, tolerance immunogenetics. Open to advanced undergraduates.
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HBP 556 Laboratory Medicine

A four-week full-time (6 hr, day) course dealing with clinical laboratory decision making and the basis for the laboratory evaluation of human evaluation of human disease. Didactic and practical presentations by interdepartmental faculty. Intended principally for senior medical students, but also for advanced microbiology or biochemistry students interested in clinical applications.
Spring, 6 credits, Letter graded (A, A-, B+, etc.)

HBP 590 Seminars in Immunology

A series of monthly seminars focusing on research in progress by the participants, current journal articles in the field of immunobiology, and prepared reviews of specified areas in the general field.
Fall and Spring, 1 credit, S/U grading

HBP 622 Clinical Pathologic Correlations: Gross Pathology

Correlative exercises in clinical pathology and human gross anatomic pathology including surgical biopsy material. Open to students in medical sciences.
Fall, 1-3 credits, Letter graded (A, A-, B+, etc.)

HBP 691 Journal Club in Pathology

Provides students with a forum for acquiring skills involved in the critical analysis and presentation of scientific data by active participation in seminars of major topics in cellular and molecular pathology, and critical discussion of selected topics with presentation of papers from the literature.
Fall and Spring, 1 credit, Letter graded (A, A-, B+, etc.)

HBP 966 Hematology Conference

Teaches a given aspect of hematology, oncology or immunology. Staff from medicine, pathology, and nuclear medicine participate, and usually presents a case to introduce the subject. Various teaching aids, such as review of pathological material, are used. Primarily for health sciences professionals.
1-3 credits, Letter graded (A, A-, B+, etc.)

HBP 967 Tumor Conference

Considers problems in the management of patients with a malignancy and recommendations for a course of therapy for each patient including a review of a particular aspect of cancer treatment or natural history in depth. Functions as the link between the hospital and the Eastern Oncology Cooperative Group. Primarily for health science professionals.
1-3 credits, Letter graded (A, A-, B+, etc.)

HBP 968 Advanced Clinical Pathologic Correlations: Gross Pathology

Postgraduate correlative exercises in human gross pathologic anatomy that emphasize the gross pathologic basis for altered function and clinical manifestations of disease. Open to physicians and others with advanced degrees in medical sciences.
1-3 credits, Letter graded (A, A-, B+, etc.)

HBP 969 Anatomical and Surgical Pathology for Residents in Pathology

To provide practical and clinical experience in tissue pathology. During the four week elective the student is given the opportunity to participate in all aspects of autopsies as well as gross and microscopic examination of surgical specimens. There is ongoing review of general and organ system pathology to reinforce structural-functional correlations. This elective is selected by students who plan a career in pathology as a "hands-on" introduction to the specialty. The elective is also chosen by others, particularly individuals who will enter radiology, and who seek to correlate radiographic and pathologic anatomy. Students who are sufficiently interested and motivated may become involved in relatively independent work-up of selected cases. Primarily for health sciences professionals.
1-3 credits, Letter graded (A, A-, B+, etc.)

HBP 971 Renal Clinicopathologic Correlations

A case-oriented, postgraduate course in renal biopsy interpretation and its relationship to patient management.
1 credit, Letter graded (A, A-, B+, etc.)

HBY

HBY 350 Physiology

The normal functioning of human tissues and organs and their regulation by the nervous and endocrine systems. Special emphasis is given to physiological control systems and the preservation of the constancy of the internal environment. Lectures, conferences, demonstrations. Only for Health Sciences Center students.
4 credits

HBY 390 Topics in Physiology

Seminar in advanced topics taught in conjunction with HBY 350 Physiology. Only Fall.
1 credit

HBY 393 Special Topics from Physiology and Biophysics Literature

Tutorial readings in physiology and biophysics and periodic conferences, reports, and examinations arranged with the instructor. May be repeated. Only Fall.
1-2 credits

HBY 394 Special Topics from Physiology and Biophysics Literature

Tutorial readings in physiology and biophysics and periodic conferences, reports, and examinations arranged with the instructor. May be repeated. Only Fall.
1-2 credits

HBY 398 Research Project in Physiology and Biophysics

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. May be repeated. Only Spring.
0-6 credits

HBY 399 Research Project in Physiology and Biophysics

An independent research project under faculty supervision, with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. May be repeated. Only Spring.
0-6 credits

HBY 500 Short Term Research Projects in Physiology and Biophysics

Short term research project (rotation) under the supervision of a staff member.
Spring, 1-12 credits, Letter graded (A, A-, B+, etc.)

HBY 501 Physiology

Introduces normal function of human tissues and organs and their regulation by nervous and endocrine systems. Emphasizes the organization and function of physiological control systems and the maintenance of a constant internal environment. Enrollment restricted to fully matriculated graduate students, with permission of instructor. Only Fall.
4 credits, Letter graded (A, A-, B+, etc.)

HBY 530 Cellular Physiology and Biophysics

Cellular structure and function. Topics include ion channels, excitability, transport, energetics and metabolism, contraction, secretion, and communication within and between cells. Emphasizes quantitative analysis of cellular processes.
1-3 credits, Letter graded (A, A-, B+, etc.)

HBY 531 Medical Physiology

A graduate-level introduction to the physiology of the organ systems with ultrastructural correlations. Ultrastructural correlations are demonstrated in a laboratory setting using histological preparations in conjunction with electron micrographs illustrating the relevant ultrastructure needed to understand the normal functioning of tissues and organs. The physiology of the major organ systems is addressed in a lecture format with the emphasis on problem solving. Relevant clinical correlations are addressed at the end of each block in so far as they illustrate how symptoms and signs of disease result from disordered physiology. Organ Systems addresses the structure and function of the cardiovascular, respiratory, renal, gastrointestinal, endocrine, skeletal, reproductive, and integumenary systems. Prerequisites: Admission to medical or dental school and permission of instructor. Only Spring.
8 credits, Letter graded (A, A-, B+, etc.)

HBY 554 Principles of Neuroscience

The aim of this course is to highlight and create an understanding as to how the human nervous system operates.
3 credits, Letter graded (A, A-, B+, etc.)

HBY 557 Advanced Physiology

This course is designed to introduce students to integrative approaches in biomedical research. Emphasis will be placed on the primary physiological concepts of control, communication, signal processsing, metabolism and replication. Prerequisites: Systems Physiology, Biochemistry and Permission of Instructor.
Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HBY 561 Statistical Analysis of Physiological Data

Statistical methods useful in analyzing common types of physiological data. Topics include probability, data distributions, hypothesis testing with parametric and non-parametric methods, ANOVA, regression and correlation, and power analysis. Emphasis is on experimental design and appropriate, efficient use of statistical software.
Spring, 1 credit, Letter graded (A, A-, B+, etc.)

HBY 562 Model-based Analysis of Physiological Data

The analysis of common biochemical and physiological data by non-linear regression of data models and biophysical models of physiological and biochemical processes. Examples include binding kinetics, compartmental mass transfer and spectral analysis.
Fall, 1 credit, Letter graded (A, A-, B+, etc.)

HBY 564 Experimental Techniques in Systems Physiology

A series of lectures and laboratory exercises designed to introduce students to in vivo experimental techniques used in systems physiology. Emphasis will be placed on the ethical use of rodents in biomedical research and the measurement of physiological variables. Data acquisition and analysis procedures used in cardiovascular, respiratory, neural, and renal physiology will also be covered. Only
2 credits, Letter graded (A, A-, B+, etc.)

HBY 570 Student Journal Club

Graduate student presentation on a selected topic with faculty consultation.
1 credit, Letter graded (A, A-, B+, etc.)

HBY 590 Special Topics in Physiology and Biophysics

Students seminars on topics to be arranged through consultation with faculty members. Prerequisites: Permission of instructor.
Fall and Spring, 1 credit, S/U grading

HBY 591 Physiology and Biophysics Research

Original investigation under the supervision of a staff member.
1-12 credits, Letter graded (A, A-, B+, etc.)

HBY 690 Seminar in Physiology and Biophysics

Seminars and discussions on major topics in physiology and biophysics by students, staff, and visiting scientists. Prerequisites: Permission of instructor
0-1 credits, S/U grading

HBY 695 Practicum in Teaching in Physiology and Biophysics

Practical experience and instruction in the teaching of physiology and biophysics carried out under faculty orientation and supervision.
1 credit, Letter graded (A, A-, B+, etc.)

HBY 699 Dissertation Research on Campus

Original (thesis) research undertaken with the supervision of a member of the staff. Prerequisites: Advancement to candidacy

(G5); permission of thesis advisor. Major portion of research must take place on SBU campus, at Cold Spring Harbor, or at the Brookhaven National Lab.
1-9 credits, S/U grading

HBY 700 Dissertation Research off Campus - Domestic

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
1-9 credits, S/U grading

HBY 701 Dissertation Research off Campus - International

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed.
1-9 credits, S/U grading

HBY 800 Full-Time Summer Research

Full-time laboratory research projects supervised by staff members.
0 credit, S/U grading

HCB

HCB 501 Compassionate Care, Medical Humanities, and the Illness Experience

This course will introduce students to major interpretations of the illness experience, to several classical biographical and autobiographical accounts of illness, and to the important dynamic of compassionate care in the healing relationship. The patient-as-person will be emphasized throughout, as well as the ways in which respect for and empathy toward the patient impacts diagnostic accuracy, patient adherence, and patient and professional satisfaction. Some emotional dynamics of the illness experience will be addressed, such as hope, through the work of eminent physician-writers such as Jerome Groopman, MD. The dynamics of medical mistakes and forgiveness will be explored through psychiatrist Aaron Lazarre's influential writings on effective medical apologies. Some philosophical and metaphysical aspects of personhood and self-identity will be introduced.
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 502 Landmark Cases in Bioethics

What is a life worth living? How do we decide, and who decides, when to use medical technologies such as incubators, ventilators, transplants and reproductive technologies? This is an intensive introduction to some of the cases in medical ethics that have changed the ways that we are born, cared for, and die in American hospitals. Examples of topics include: vaccination and public health; eugenics and human subjects research ethics; the right of privacy and health care; end-of-life planning and treatment; women's bodies and fetal rights; disability rights; religious beliefs and health care; triage and allocation of scarce resources; mental illness and individual rights; global clinical trials; and, bioethics and culture.
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 503 Traditions and Values in Bioethical Conflicts

This course serves as an introduction to Western moral and religious traditions and to the positions about killing, saving, and enhancing that these traditions have informed. It explores the interface between religion and biomedical ethics and then delves into specific issues in health care in light of more general normative concerns such as justice, love, autonomy and rights, utilitarianism, self-sacrifice, gender, virtue, and community. The issues with which the course deals address the plights of real people, in the concrete, who come from particular backgrounds and whose set of values may make them sometimes recalcitrant to possibilities that technology has made (or is just now making) available.
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 504 Special Topic in Biotechnology

Just because we can do it, does this mean that we should do it? This course takes a focused look at controversial practices in health care settings, such as organ donation and enhancements, which have been (and are continuing to be) made available with the advancement of technology. Ought we to regard that which technology makes available as uncontroversially good? If not, why not? What sorts of new issues regarding distributive justice, autonomy, utility, and compassion are ours to consider carefully because of the changing world in which we live?
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 510 Literature, Compassion, and Medical Care

How does literature help us understand the nature of human illness and suffering? Can written works of art, ancient and contemporary, that depict moments of compassion and compassionate acts lay bare the moral, spiritual, psychological, and physical reality of suffering? There is a long association between literature and medicine, from the viewpoint of physician-writers, such as Anton Checkov and William Carlos Williams, whose literary skills have eclipsed their medical backgrounds. Sherlock Holmes and Doctor Watson were the creations of a physician-writer, Arthur Conan Doyle. Physicians portrayed in literature, such as Dr. Bernard Rieux, in Albert Camus The Plague, have also explored the relationship between patient and doctor, the nature of healing. This semester-long course will study these relationships through reading of poetry, drama, fiction, memoir, and essay and reflect on the nature of suffering, the intrinsic human need for compassion, and the implications for health and healing.
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 511 Bioethics, Disability and Community

Most people will experience disability at some point in their lives, and for some it will shape their social, personal, family, educational, and employment experiences. Viewpoints on disabilities which have emerged in policy and the broader culture have been explicitly challenged by emerging communities of people with disabilities who seek to speak for themselves and claim full inclusion in society. In this context, bioethicists and disability scholars have found points of both common cause and stark disagreement over issues such as neonatal and end-of-life care, the value and values inherent medical decisions and their outcomes. These bioethical debates occur in the context of debates over the rights of individuals with disabilities to self-determination, accommodations for work and schooling, and the potential for people with disabilities to make unique contributions because of--rather than despite--their disabilities. This course will consider major debates in bioethics in light of recent scholarship in disability studies, drawing on perspectives from philosophy, literature and narrative, history, and sociology.
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 512 Altruism and Bioethics

What is altruism, and what are its evolutionary roots as a moral dynamic? What impact does altruistic action have on the human agent? Does it impact flourishing and health? When is it experienced as overwhelming by medical professionals? Where does altruism fit within medical and nursing professionalism? How is it related to compassionate care? What about the duty to treat in time of epidemic, auto-experimentation, pro-bono medical treatment, high-risk provision of healthcare in time of conflict, healthcare activism, and the commitment to the patient's good as a guiding professional ideal? How does the practitioner strike a balance between the care of patients and the care of the nearest and dearest or the care of the self? How does altruism correlate with pro-social behavior, happiness, and health?
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 513 Disease and Society

What is disease? How do the beliefs, politics, and economies of particular societies shape how diseases are defined, experienced, and treated? In this seminar, students will explore these questions by analyzing historical documents, scientific reports, and historical scholarship. We will look at disease from multiple perspectives as a biological process, clinical entity, population phenomenon, historical actor, and personal experience. We will pay special attention to how diseases have been recognized, diagnosed, named, classified and counted in different times, places, cultures, and settings based on different environmental and social conditions, medical ideas, diagnostic technologies, and available treatments. The course will begin with a review of major approaches to understanding the manifold relationships between disease and society. The remainder of the course will view disease and society relationships through the lens of specific issues, such as epidemic disease, consumption and affluence, globalization, and risk.
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 514 Global Bioethics

Bioethics is an American invention. Ideas about medicine and morality, of course, go back to antiquity and are documented as medical ethics in Europe, medical morality in China, and under many other names in cultures around the world. Recently, the process of globalization of ideas, medical practices, clinical trials, and migration of patients has led to clashes of culture around issues such as the appropriate standards and control groups for clinical trials, organ transplantation, brain death, and end-of-life care. Issues of religion, morality, public policy, disability rights and policy, and health system structure and payment all shape how particular societies decide to manage divisive issues such as the beginning and end of life. This course will draw on a growing literature on global and transnational cases, policies, and traditions in the ethics of health, public health, and health care.
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 515 Health Policy, History and Ethics

Who gets sick? Who gets health care, what kind, and in what setting? This course covers the major health policy issues of the United States today, including the health status of the U.S. as a whole, the social and economic determinants of health, the role of personal and public health services in affecting health, the organization and financing of health services, and the multiple factors affecting health policies. We will explore the evolution of the US health care system in the past century, and debates about rights to health care or lack thereof, health disparities, conflicts of interest, and the ethics of health policy and practice.
Offered in Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 516 Ethical Issues in Human Reproduction

New technologies have modified human reproduction in numerous ways, raising profound questions about the moral status of human life and the nature of parental and sibling obligations. This course will investigate the values that attach to different relationships, both familial and general. It will cover questions around the treatment of infertility, surrogate mothering, the commodification of the body, and the elevated expectations of familial obligations that correspond to new reproductive technologies.
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 517 The Problem of Evil: Philosophical, Biological, and Social Dimensions

What is the nature of evil? Can it be the result of brain malfunction, something that is genetically predetermined? Or, is evil something which is part of or at least necessary to know the good? Alternatively, is evil an arbitrary designation, a perspective from which we can wrest ourselves given the right sort of reinvention? In this class, we shall address the problem of evil from scientific, social-scientific, and philosophical perspectives, using fiction and non-fictional sources. Examples of medical evil, such as the Nazi doctors or Tuskeegee, can be introduced as case studies.
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 518 Empirical Bioethics

The formal study of bioethics attempts to define ethical courses of action in a world ever increasing in complexity. But in day to day practice, ethical outcomes are expressed through the individual decisions and resulting actions--of human agents. How do individuals form these judgments? How do people become motivated to engage in behaviors that are designed to benefit someone else? We will explore current scientific approaches to these questions with several areas of emphasis, including a) the neuroscience of compassionate care and altruism, b) cognitive and neuroscientific approaches to understanding judgment and decision making in ethical domains, and c) empirical approaches to quantifying the effects of ethically based policy decisions.
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 519 Public Health Law

This course is a survey of legal and policy issues that have special relevance for public health professionals. Topics may vary, but typically will include many of the following: structure of the U.S. legal system; power of state and federal governments in matters affecting health care; governmental power and the right to privacy; constitutional issues in social welfare benefits; governmental regulation of health care providers and payers; the scope and discretion of administrative agencies in health care; the antitrust laws; the fraud and abuse laws; and negligence in the delivery and financing of health care. The course is taught primarily by Socratic method.
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HCB 520 Bioethics and Film

Film and television, both fiction and nonfiction, capture man of the human tragedies, challenges, and possibilities that are debated in bioethics books, articles, newspapers, on hospital ethics committees, and in daily clinical care. This course will explore themes of birth, death, hope, fear, faith, finitude and resource allocation through watching, analyzing, and reading about bioethics issues in visual media. The course will draw on material from philosophical ethics to history, health policy, and film criticism to place these issues and their portrayals in context.
3 credits, Letter graded (A, A-, B+, etc.)

HCB 521 Clinical Ethics Practicum

As difficult as settling abstract ethical issues in medicine may be, the delivery of ethical care presents its own set of difficulties. This course aims to introduce students to the practices hospitals employ to ensure the care they deliver meets the relevant legal and moral requirements. At the end of this course, students will have been exposed to many basic, and some advanced, aspects of clinical ethics theory and practice. They will be able to identify, describe, and analyze ethical dilemmas in clinical cases, and will develop an appreciation for the complexity and multi-disciplinary nature of ethical dilemmas in clinical medicine and will be able to apply what they have learned to assess ethical, social, and legal aspects of cases.
3 credits, Letter graded (A, A-, B+, etc.)

HCB 522 The Role of Virtue Ethics in Medicine

Aristotle's Nicomachean Ethics and the role of virtue ethics are central to many religious traditions including Buddhism, Christianity, Confucianism, and the philosophical traditions. Key virtues include honesty, courage, generosity, prudence, justice, compassion, benevolence, loyalty, and hospitality. This course explores the real and potential role of virtue on the development of virtuous physicians. The course's texts offer two diametrically opposed views on the role of virtue in medicine, i.e., one is that virtue can be channeled into the training of medical professionals, whereas the other is that bioethics has extracted virtue from medicine. Through readings, documentaries, dialogue and active leadership of sessions by students, the course will interrogate the claims as well as possibilities for a role of virtue in medicine.
3 credits, Letter graded (A, A-, B+, etc.)

HCB 523 Special Topics in Medical Humanities

As with all multidisciplinary pursuits, the medical humanities project is characterized by an ongoing negotiation among its practitioners over methods, scope and goals. This course will examine, in detail, one of the latest debates within the field.
3 credits, Letter graded (A, A-, B+, etc.)

HCB 524 Special Topics in Bioethics

Bioethicists are frequently asked to consider the ethical ramifications of new research findings and emerging technologies as they arise. This course will examine one such issue in close detail.
3 credits, Letter graded (A, A-, B+, etc.)

HCB 597 Independent Study (Permission Only)

3 credits, Letter graded (A, A-, B+, etc.)

HCB 598 Independent Study

3 Credits, ABCF Grading
0-4 credits, Letter graded (A, A-, B+, etc.)

HCB 599 Special Projects Capstone Course

This course, to be offered in the second (spring) semester, is designed to satisfy the special projects requirement of our program. The first part of the course will be devoted to readings and discussions that further illuminate the methodologies of the interdisciplinary field of medical humanities, compassionate care, and bioethics. Students will develop an appreciation for the standards of high quality scholarship and research through review of carefully selected readings. This will prepare them for the second part of the course, where they pursue and present their own research based on the existing literature. This capstone course will be highly collaborative, entail substantial peer review, and be organized around the development of significant student projects which are intended to represent the beginnings of publishable papers. Our entire faculty will be involved in these projects according to their specific areas of expertise.
Offered in Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HD

HD 95 Dental Assisting I September - December (Fall Term)

First course in two part series to complete the 11 month program in Dental Assisting.
0 credit, S/F graded

HD 96 Dental Assisting II January - June (Spring Term)

Second course in two part series to complete the 11 month program in Dental Assisting.
0 credit, S/F graded

HD 97 Dental Assisting Tutor-Summer

Dental Assisting Summer Clinical
0 credit, S/F graded

HD 322 Summer Research: Oral Biology Pathology

Summer Research: Oral Biology Pathology
2-4 credits

HD 422 Summer Research Oral Biology and Pathology

Summer Research: Oral Biology and Pathology
2-4 credits

HD 495 Research Fellowship for Entering Dental Students

This course is a research fellowship program designed for students who have been accepted into the DDS program and will matriculate in the fall semester. The students in the fellowship program will work closely with their mentor to carry out a literature review, develop a research study design and/or participate in an ongoing study. The students will be required to formulate a specific aim and a hypothesis based on a research question. They are also required to present a poster or oral presentation from their results, based on the literature and on preliminary data from their research at the annual Student Research Day.
0 credit, S/U grading

HD 500 DENTL MEDICNE I FALL

DENTL MEDICNE I FALL
0 credit, S/U grading

HD 501 DENTAL MEDICINE II SPRING

DENTAL MEDICINE II SPRING
0 credit, S/U grading

HD 502 DENTL MEDICNE I SUMR

DENTL MEDICNE I SUMR
0 credit, S/U grading

HD 600 DENTL MEDCNE II FALL

DENTL MEDCNE II FALL
0 credit, S/U grading

HD 601 DENTAL MEDICINE II SPRING

DENTAL MEDICINE II SPRING
0 credit, S/U grading

HD 602 DENTL MEDCNE II SUMR

DENTL MEDCNE II SUMR
0 credit, S/U grading

HD 700 DENTLMEDCNE III FALL

DENTLMEDCNE III FALL
0 credit, S/U grading

HD 701 DENTAL MEDICINE II SPRING

DENTAL MEDICINE II SPRING
0 credit, S/U grading

HD 702 DENTLMEDCNE III SUMR

DENTLMEDCNE III SUMR
0 credit, S/U grading

HD 800 DENTL MEDCNE IV FALL

DENTLMEDCNE III FALL
0 credit, S/U grading

HD 801 DENTL MEDCNE IV SPRG

DENTL MEDCNE IV SPRG
0 credit, S/U grading

HD 802 DEN MED CLN TUTOR IV

DEN MED CLN TUTOR IV
0 credit, S/U grading

HD 803 DENTAL STUDIES

Dental Medicine Clinical Tutorial continued
1-12 credits, S/U grading

HD 805 Summer Research

Continuation of Year II Research Selective
0 credit, S/U grading

HD 900 FALL SEMESTER V *HR

FALL SEMESTER V *HR
0 credit, S/U grading

HD 902 Summer Semester V

Summer Semester V
0 credit, S/U grading

HDC

HDC 601 Introduction to Pediatric Dentistry

This course offers an introduction to pediatric dentistry taught in units of growth and development in preparation for clinical responsibilities and general practice. The course consists of lectures, problem-based discussions, Simulation Laboratory exercises, and self-learning/assessment programs on Blackboard.
0 credit, Letter graded (A, A-, B+, etc.)

HDC 612 Introduction to Orthodontics

Introduction to Orthodontics is taught in units of growth and development in preparation for clinical responsibilities and general practice. The course will be taught in lecture format with interactive projects. Concurrent with the lecture there is a self-learning module through Blackboard. There is a laboratory session for the construction of orthodontic appliances.
0 credit, Letter graded (A, A-, B+, etc.)

HDC 612 Introduction to Orthodontics

Introduction to Orthodontics is taught in preparation for clinical responsibilities and general practice. The course will be taught in lecture format with interactive projects. Concurrent with the lecture there is a quiz module through Blackboard. There is a laboratory session for the construction of orthodontic appliances. Lectures will take on a variety of formats. It is expected that you are prepared for discussion. Attendance is taken and once class begins, we request that everyone remains in the lecture until the end of the session. Each two-hour session should include a 10 minute break at 50 minutes past the hour and end 50 minutes past the hour. If the session precedes a clinic period, the session should end at 45 minutes past the hour
0 credit, S/U grading

HDC 621 Year II Children's Dentistry Clinic

Provides clinical experience for the preventive, interceptive, corrective, operative, surgical treatment of children. Faculty supervision.
0 credit, Letter graded (A, A-, B+, etc.)

HDC 701 Advanced Pediatric Dentistry

Advanced Seminars in Children's Dentistry builds on the foundation of Comprehensive Pediatric Oral Health and allows students to build competence and confidence through active learning and case based presentations. The three didactic units are behavior management, special needs patients, orthodontic diagnosis, and trauma management. Prerequisite: HDC 601
0 credit, Letter graded (A, A-, B+, etc.)

HDC 702 Advanced Orthodontic Concepts

Advanced Seminars in Orthodontics builds on the foundation of Introduction to Orthodontics and allows students to build competence and confidence through active learning and case presentations.
0 credit, Letter graded (A, A-, B+, etc.)

HDC 702 Advanced Orthodontic Concepts

Advanced Seminars in Orthodontics builds on the foundation of Introduction to Orthodontics and allows students to build competence and confidence through active learning.
0 credit, S/U grading

HDC 721 Year III Children's Dentistry Clinic

Year III Children's Clinic is a full year clinical experience in pediatric dentistry through patient care in the Dental Care Center's Pediatric Dental Clinic. Students will perform the full range of pediatric procedures and advanced behavior management. Prerequisite: HDC 621
0 credit, Letter graded (A, A-, B+, etc.)

HDC 821 Year IV Clinic Special Needs Dental Care

Persons with developmental disabilities often present with medical and behavioral issues which require treatment planning skills that differ from management of the "well" patient. This course teaches the provision of comprehensive dental care for the developmentally disabled individual. Students learn to assess the risks to oral disease, develop treatment plans appropriate to the developmentally disabled patient's profile and provide treatment in a clinic setting, learning specific behavioral modification and management techniques. The course consists of lectures and clinical experience.
0 credit, Letter graded (A, A-, B+, etc.)

HDE

HDE 540 Year I Summer Session DC

HDE 541 Year 1 Fall Session N

HDE 542 Year 1 Spring Session T

HDE 543 Year I Summer Session 0

HDE 615 Introduction to Endodontics

The goal of this course is to provide the student with knowledge of classic and contemporary endodontic science. Students will develop an overall understanding of endodontic pathosis, its diagnosis, as well as management.
0 credit, Letter graded (A, A-, B+, etc.)

HDE 640 Year II Summer Session DC

0 credit, Letter graded (A, A-, B+, etc.)

HDE 641 Year 2 Fall Session N

0 credit, Letter graded (A, A-, B+, etc.)

HDE 642 Year 2 Spring Session T

0 credit, Letter graded (A, A-, B+, etc.)

HDE 643 Year II Summer Session 0

0 credit, Letter graded (A, A-, B+, etc.)

HDE 711 Endodontic Technique

This course focuses on the biology and pathology of the pulpal and periapical tissues. A particular concentration is placed on the basic principles of endodontic procedures aimed at diagnosis and management of pulpal and periapical pathology. The application of endodontic procedures is performed on mounted simulated teeth, simulating clinical situations.
0 credit, Letter graded (A, A-, B+, etc.)

HDE 725 Year III Endodontics Clinic

This course is designed to give students hands on experience in diagnosis, radiographic interpretation, endodontic anesthesia, and management of patients with pulpal and periradicular diseases. The selection and use of endodontic instruments and materials are demonstrated and discussed during clinic sessions.
0 credit, Letter graded (A, A-, B+, etc.)

HDG

HDG 299 Introduction to Research in General Dentistry

This course provides an introduction to research in general dentistry with initial training in study design, and clinical and/or laboratory procedures, under the guidance of a faculty member in the Department of General Dentistry. May be repeated up to a maximum of 12 credits.
0-3 credits, S/U grading

HDG 399 Supervised Research in General Dentistry

This course provides training in clinical and/or laboratory techniques and procedures used in dental research, under the direct supervision of a faculty member in the Department of General Dentistry. May be repeated up to a maximum of 12 credits.
0-6 credits, S/U grading

HDG 499 Independent Research in General Dentistry

This course is for students interested in carrying out independent research projects under the auspices of a faculty member in the Department of General Dentistry. The student must propose, design, and carry out the research project, as well as analyze and write up the results in a form acceptable to the sponsor.
0-6 credits, Letter graded (A, A-, B+, etc.)

HDG 505 Clinic I

The purpose of this course is to reinforce foundation knowledge with an introduction the dental clinical setting. The students will be paired with an upper class student and have opportunity to practice the clinical procedures they learned in the prerequisite course, Patient I, as well as observe many procedures within the whole spectrum of dentistry. In addition, the course will reinforce doctor-patient management and communication practices discussed in Patient I within a patient- centered treatment model.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 511 Dental Morphology and Occlusion

This module emphasizes tooth morphology and basic concepts of dental occlusion. It includes both theoretical and practical involvement. The course incorporates tooth identification, waxing/carving techniques, and digital scanning with CAD/CAM.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDG 512 Operative Dentistry I

HDG 512 is a pre-clinical course in operative dentistry. This course introduces basic principles and techniques of tooth preparation as well as restoration of a tooth structure damaged by caries, fractures or trauma, with direct restorative materials. This course also introduces variations of tooth preparations based on the extent of the lesion, the restorative materials selected, and functional and/or esthetic requirements.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 521 Clinical I: Inroduction to Patient Care

The purpose of this course is to reinforce foundation knowledge with an introduction the dental clinical setting. The students will be paired with an upper class student and have opportunity to practice the clinical procedures they learned in the prerequisite course, Patient I, as well as observe many procedures within the whole spectrum of dentistry. In addition, the course will reinforce doctor-patient management and communication practices discussed in Patient I within a patient- centered treatment model.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 522 Cariology

Cariology is a preclinical course taught in Year 1. This course introduces basic principles of cariology such as caries etiology and progression, different methods of diagnosis and classification of lesions. This course also focuses on control of caries progression, describing home and office fluoride treatment, dietary control, oral hygiene, patient education and motivation. Surgical treatment is introduced in this course as concepts and practical exercises of caries removal with hand and rotary instruments in extracted teeth. Caries Management by Risk Assessment (CAMBRA) is presented in this course based on a critical discussion of risk indicators, risk factors, destructive and protective factors associated with caries to determine interventions.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 614 Operative Dentistry II

This course focuses on conservative esthetic treatments, indirect esthetic posterior preparations and cementation, and CAD/CAM technology. Prerequisites: HDG 512, HDI 505, HDG 521.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 621 Year II Operative Dentistry Clinic

HDG 621 is the student's introduction to the General Dentistry Clinic and patient treatment in operative dentistry. This course focuses on patient-centered comprehensive Operative Dentistry. It is designed to prepare students to practice

operative restorative dentistry by providing experiences in adult patient oriented care. Prerequisites: HDG 512, HDG 521, HDI 505.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 704 Practice Development I

This course is designed as the introduction to Clinical Practice Management. A series of 2 hour lectures will present the introductory concepts for developing a business plan for a successful dental practice. In addition, this course is designed to instruct the student to utilize and train dental auxiliary personnel in order to practice dentistry in an efficient and productive manner. Techniques of four-handed dentistry, infection control, patient management, and duty delegation will all be blended to provide a format for dental practice which is ergonomically sound. The concepts discussed will build upon those presented in the Health Care Systems courses and will provide foundational knowledge and skills necessary to obtain competency in the Year 4.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 706 Implantology

This course focuses on the utilization of the osseous integrated implant in routine clinical practice. Students will learn the theory of osseous integration to bio-acceptable materials. They will learn how to treatment plan prospective cases utilizing clinical examinations, study models and radiographs including computerized tomography. Students will learn the fabrication of radiographic and surgical stents. Students will have the full surgical techniques explained for partially edentulous patients. The general dentist is capable of restoring many of the implant prosthesis. Students will learn many of the techniques needed to restore the various oral scenarios as well as the selections criteria for the appropriate treatment. Overall, this course is designed to prepare the general practitioner to serve as the team leader in the osseous integrated prosthesis oral restoration.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 708 Advanced Esthetic Concepts

The treatment of dental esthetic issues is a necessary part of current dental education and comprehensive care given to patients. In this course, the students will familiarize themselves with the available approaches to creating harmony and beauty in a smile. The available cosmetic restorations on the market will be covered: their indications, contraindications, advantages, disadvantages, and techniques. Porcelain laminate veneers will be covered, particularly preparation design. Treatment planning, and then getting the desired results will also be covered. Prerequisites: HDR 611, HDR 613, and good standing as a Year III student.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 721 Year III Operative Clinic

This course focuses on patient-centered comprehensive Operative Dentistry. It is designed to prepare students to practice operative restorative dentistry by providing additional experience in adult patient oriented care. Students develop the skills necessary to perform comprehensive restorative dentistry in a preventive general practice environment. Emphasis is on the development of clinical judgment and expertise through experience of a wide range of clinical procedures. Students will work with faculty dentists and perform the full range of operative dental procedures, including diagnosis, treatment planning, consultation, comprehensive operative restorative treatment, basic patient management skills and basic communication skills. Prerequisites: HDG 621.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 803 General Dentistry Seminar IV

This course is designed to evaluate the student's ability to access, critically appraise, demonstrate applicability, and communicate scientific and lay literature as it relates to the provision of evidence-based general dentistry. Using skills attained in HDI 601, and three years of clinical practice experience the students will select, research, and present a current topic to their peers and an interdisciplinary panel of faculty members. The topics selected will cover a range of subjects that affect the practitioner's daily performance and are critical to the practitioner's knowledge base. The course will also serve to provide the students with further experience in researching, preparing, and presenting to their colleagues.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 804 Practice Development II

Practice Development II consists of two main components. The first component is a lecture series designed to provide the student with an in-depth understanding of practice management concepts introduced in Practice Development I. The second component to this course is a group project and presentation. The class is divided into 20 groups, with each group to present an assigned topic. The topics cover a spectrum of issues/concepts necessary to start and operate a successful private practice.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 805 Care of Medically Complex and Geriatric Patients

The didactic and clinical components of the Year IV course Care for the Medically Compromised Patient HDG 805 gives instruction and practice in managing the unique needs of the medically frail elderly. Students will also have unique interprofessional educational experiences focusing on health promotion and disease prevention in medically complex and geriatric patients. The didactic component of HDG-805 consists of small group discussion with quizzes related to the assigned readings. The course provides the pre-doctoral dental student with the knowledge necessary to deliver dental care for the medically complex older adult.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 808 Year IV Geriatrics Elective - Geriatrics

This elective will provide students with unique interprofessional educational experiences focusing on health promotion and disease prevention in medically complex and geriatric patients. Interprofessional student team triads (DDS/NP/SW) will utilize a patient-centered approach to collaboratively assess patient's oral health, clinical prevention and social service needs, and develop a coordinated plan of care with supervision of IPE clinical faculty (DDS/NP/

SW). They will incorporate the USPSTF evidence-based recommendations for clinical preventive services by utilizing the Electronic Preventive Services Selector (ePSS); an application designed to provide primary care clinicians timely decision support regarding appropriate screening, counseling, and preventive services, taking into account patient characteristics (age, gender) and behavioral risk factors.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 821 Clinic IV: General Practice Program I

The General Practice Program is the major clinical experience of the dental students during their fourth year. The course is designed to prepare the student for the practice of general dentistry after graduation. It integrates all disciplines of dentistry. Students work with general dentists and are referred to dental specialists in a mode that resembles the private practice of dentistry. Students are assigned responsibility for patients whom they treat comprehensively. The General Dentistry faculty supervise all aspects of care. They direct the students to seek consultation from specialist dentists in developing plans of treatment and in delivering aspects of care as appropriate for individual students and patients. Principles of basic science, medicine and dentistry are integrated. Prerequisites:HDG 721.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 822 Clinic IV: General Practice Program II

The General Practice Program is the major clinical experience of the dental students during their fourth year. The course is designed to prepare the student for the practice of general dentistry after graduation. It integrates all disciplines of dentistry. Students work with general dentists and are referred to dental specialists in a mode that resembles the private practice of dentistry. Students are assigned responsibility for patients whom they treat comprehensively. The General Dentistry faculty supervise all aspects of care. They direct the students to seek consultation from specialist dentists in developing plans of treatment and in delivering aspects of care as appropriate for individual students and patients. Principles of basic science, medicine and dentistry are integrated. Prerequisites:HDG 721.
0 credit, Letter graded (A, A-, B+, etc.)

HDG 824 Year IV Clinical Management of Dental Emergencies II

The fourth year dental student will be assigned rotations to the Urgent Care Center to attain clinical experience in the ability to triage, differentially diagnose, treat and/or refer patients who present themselves with dental and/or orofacial emergencies. Students will treat patients under the supervision of assigned faculty. Consultation with Specialists and /or referrals will be made when necessary.
0 credit, Letter graded (A, A-, B+, etc.)

HDH

HDH 301 Independent Readings and Research

The student conducts his or her research project under the supervision of one or more members of the Department of Dental Health. The student is expected to submit a written report detailing his or her research activities and conclusions. This course is offered for undergraduate students who demonstrate an interest in the health care delivery system of the United States.
3 credits

HDI

HDI 501 Foundations in Dental Professional Development I

This course is the first of a series of four yearly offerings that are designed as a vertically integrated stream within the predoctoral dental curriculum. As a continuum, the four courses build on competencies related to professionalism and ethics (CODA predoctoral standards 2-20-2.22). This first year course will feature interactive lectures, panel discussions, case-based teaching, required readings and journal reflection. The course will meet four times over the academic year. Principal course content areas will include: 1) defining the roles of "doctor" and "professional;" 2) honesty and academic integrity; 3) formative moments of a doctor; and 4) general ethical principles related to health care and patients (beneficence, nonmaleficence, autonomy, justice and veracity).
0 credit, Letter graded (A, A-, B+, etc.)

HDI 502 Community I: Population, Oral Health and Epidemiology

This course is part of a major, vertically integrated stream within the four-year predoctoral dental curriculum (patient and community-centered care). The course will focus on those competencies related to epidemiology (2-13, 2-15, 2-21, 2-23d, version for implementation in 2013). The course will constitute 16 hours and will feature interactive lectures and small group discussion seminars.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 505 Patient I: Communication and Examination

The purpose of this course is to provide students with an introduction to patient-centered clinical dental care. The first unit focuses on communication strategies and developing rapport, and introduces students to psychosocial factors that influence the etiology, diagnosis, and treatment of oral diseases. The second unit provides an introduction to the clinical setting with instruction in electronic record, patient charting, infection control procedures, and HIPPA and OSHA policies. Simulation sessions will provide students the opportunity to practice clinical procedures and protocol and prepare them for patient care in the Clinic I course.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 601 Evidenced Based Dentistry and Critical Thinking

This course consists of eight 2 hour learning modules designed to develop in dental students the basic skills needed to recognize the quality of evidence and journals it is published in, to carry out evidence-based analysis of the literature; to formulate hypotheses and design, analyze data, and give an effective power point presentation. Each module will begin with a brief 15 minute power point orientation by the facilitator, followed by student participation in small groups, lead by a student group leader, selected by the group.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 602 Year II Research Selective

This course is a lab-, clinic- or IT-based practical course that begins in the summer of Year II (as students transition from Year I to Year II). There will be a formal selection process, based on academic eligibility, administered by the Office of Research and Faculty Development, in conjunction with Academic Dean's office and the Academic Standing Committee. Students will be selected in April and May preceding the summer. Participants, with the assistance of the Office of Research and Faculty Development, will obtain necessary regulatory approvals/training to conduct human, animal research or handle biohazardous materials. Students will choose a lab and mentor from among a list provided by the Office of Research and Faculty Development and spend approximately 2 months in the summer and continue into year 2, to carry out a clearly defined research project.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 603 Implantology I

To introduce the 2nd year students to the study of Implantology, their origins and development until present day. To teach the concept of osseointegration, clinic history, implant planning, patient selection, evaluation of implant site, pre-surgical requirements, implant surgery and stability, implant restorative aspects, and maintenance of implant-supported restorations.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 604 Foundations in Dental Professional Development II

This course is the second in a series of four courses that focus on competencies related to professionalism and ethics (CODA predoctoral standards 2-17 and 2-20). The course will feature formal lectures, small group discussions, case-based teaching, and journal reflection and will meet two times per semester (approximately 1.5 hours per session). The topics to be included in the course are: 1) the impact of culture on the Doctor-Patient Relationship; 2) the historical development of bioethics; 3) medical mistakes; and 4) ethics related to research involving human subjects.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 605 Patient II: Team-Based Oral Diagnosis

"Patient II" expands on the knowledge and skills acquired in the "Patient I" course, and provides a solid foundation for Diagnosis and Treatment Planning skills throughout the pre-doctoral curriculum. The course will focus on competencies related to behavioral sciences (standards 2-15 and 2-16), biomedical sciences (standard 2-13, 2-14), critical thinking and problem-solving (standard 2-9), practice management and health care systems (standard 2-19), and clinical sciences (standard 2-22, 2-23a, b, c, d, k, m). The course will consist of lectures, seminars, and small group sessions.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 606 Community II Health Care System & Clinical Practice

The purpose of this course is to provide students with: an introduction to the organization and component aspects of the health care delivery system of this country, as well as an awareness of professional ethics and responsibilities. a focus on competencies related to practice management, health systems, ethics and professionalism. An introduction to contemporary issues concerning the oral health care team including scope of practice of various team members as determined by the state dental practice laws and regulations. An introduction to the many government and community agencies that affect practice arrangements in providing health and social services. A general introduction to principles of insurance, health insurance and other forms of insurance. A general introduction to legal concepts, through didactic training and formative clinical experiences, students learn the definition, classifications, purposes, characteristics, theory and sources of law. An understanding of the relationship between individual actions and the laws governing professional practice. Through discussions of the laws, principles of ethics and the processes of civil and criminal litigation, students come to an understanding of their professional obligations, as well as the consequences of not fulfilling those professional obligations.
0 credit

HDI 609 Community I: Population, Oral Health and Epidemiology

This course is part of a major, vertically integrated stream within the four-year predoctoral dental curriculum (patient and community-centered care). The course will focus on those competencies related to epidemiology (2-13, 2-15, 2-21, 2-23d). The course will feature interactive lectures and small group discussion seminars.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 631 Off-site Clerkship

0 credit, Letter graded (A, A-, B+, etc.)

HDI 703 Implantology II

To prepare the 3rd year students for the clinical components of Implantology, including implant planning, implant impressions, fabrication of surgical guides, surgical techniques, and fabrication of implant restorations.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 704 Foundations in Dental Professional Development III

The course utilizes interactive lectures and small group activities to illustrate various ethical and professional

dilemmas faced by dental practitioners. Guest lecturers with expertise in ethics and professionalism will provide an introduction to the core principles underlying ethical behavior and conduct. A model of ethical decision making will be presented followed by opportunities for the analysis of various case situations important to dental and medical practice.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 705 Patient III: Interdisciplinary Treatment Planning

The skills of developing and delivering a comprehensive treatment plan is an essential step in providing care to patients. This course expects each student to develop and present a comprehensive treatment plan to his/her fellow students and faculty. The student is expected to consider the existing medical, dental, psychological, and financial considerations including the patient's desires in formulating diagnoses, etiology, prognosis, and treatment plan options. These skills will be tested to competency using standardized cases in the Comprehensive Treatment Planning Competency. In addition, the ability to communicate with the patient and deliver a treatment plan will be tested to competency in a videotaped standardized patient encounter. The Health Science Simulation Center utilizing scripted patient (actors) offers a unique platform for this educational experience.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 707 Radiology Selective

The student will participate in performing basic acquisition and primary processing of cone-beam CT studies under apppropriate supervision. Describe major findings and construct a consistent imaging diagnosis based on a cone-beam CT study. Recognize a selection of more subtle appearances of pathology and normal anatomic variants as apparent in case conference cases; discuss major findings and trends in the current scientific literature in oral and maxillofacial imaging.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 802 Community I: Population, Oral Health and Epidemiology

This course provides an introduction to public health and the relationship of dentistry to the health care industry in the United States. A global perspective will be presented so that students can understand the epidemiology of oral diseases in the United States as compared to other countries. The social and community context of healthcare will be presented utilizing the principles of public health so that students will able to assess the needs of their patients and their communities.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 804 Foundations in Dental Professional Development IV

The course utilizes small group activities to illustrate various ethical and professional dilemmas faced by dental practitioners. This course continues Foundations in Dental Professional Development III where students were provided with an introduction to the core principles underlying ethical behavior and conduct. Students will meet (four class sessions) with members of the American College of Dentists where there will be opportunities for the analysis of various case situations important to dental and medical practice. The course concludes with a competency examination where students will independently evaluate a case utilizing the model of ethical decision making presented in Foundations in Dental Professional Development III.
0 credit

HDI 806 Year IV Elective Ethics and Professionalism

The seminar will address pressing ethical/professional challenges concerning the delivery of health care and profession of dentistry in the 21st century. It will be structured as an advanced introduction to professional dental ethics designed to afford the interested senior student an opportunity to meaningfully discuss and seek a reasoned position on an assortment of challenging ethical issues currently facing our profession. Selections from the current literature and relevant case studies will be utilized.
0 credit, S/U grading

HDI 831 Off-site Clerkship

0 credit, S/U grading

HDI 832 Community II: Service Learning Experience

The student will participate in the delivery of dental health care services appropriate to the site and the experience level of the student. The student will be exposed to and interact with patients who may have diminished access to health care due to socioeconomic or cultural backgrounds, medical conditions, or disabilities. Depending on the site, students may be immersed in a culture that is unfamiliar to them.
0 credit, Letter graded (A, A-, B+, etc.)

HDI 840 Year IV Children's Dentistry Selective

Clinical observation and self-study experience to gain an understanding of the operations of the CFCP Center and patient management of children born with craniofacial and cleft palate deformities by various specialists of the CPT.
Prerequisite: HDC 721
0 credit, S/U grading

HDI 841 Year IV Dental Anesthesiology Selective

0 credit, S/U grading

HDI 842 Year IV Endodontics Selective

This course exposes the 4th year dental students to advanced topics in endodontics with particular focus on evidence-based literature supporting these concepts. Students are also provided opportunity to manage endodontics patients utilizing technology seen in the contemporary endodontic operatory (e.g. surgical operating microscope, active irrigation, rotary instrumentation, ultrasonic instrumentation, warm obturation techniques). The student will participate in endodontic seminars at the postdoctoral level.
0 credit, S/U grading

HDI 843 Year IV Oral and Maxillofacial Surgery Selective

The senior selective in oral and maxillofacial surgery offers the student opportunities to perform more complex oral and maxillofacial surgical procedures, and to assist oral and maxillofacial surgery attendings and residents in advanced procedures in the clinic, emergency room, and operating room settings.
0 credit, S/U grading

HDI 844 Year IV Orthodontics Selective

Advanced selective course in the treatment of dental malocclusions.
0 credit, S/U grading

HDI 845 Year IV Periodontics Selective

The Selective in Periodontics exposes the 4th year dental students to advanced topics in periodontology. The students will read and be prepared to discuss selected periodontal articles, literature reviews, and clinical reports and critically analyze the findings with the assigned faculty. The students will have the opportunity to attend surgical seminars at the postdoctoral level and to perform limited periodontal surgical procedures under direct faculty supervision. The selective students will also gain teaching experience by participating in the pre-clinical exercises of the second year dental students, teaching periodontal probing, scaling and root planing and ultrasonic instrumentation. Hands on exercise will be included based on the student needs.
0 credit

HDI 846 Year IV Research Selective

This course is a lab-, clinic- or IT-based practical course that begins in the summer of year 4 (as students transition from year 3 to year 4). There will be a formal selection process, based on academic eligibility, administered by the Office of Research and Faculty Development, in conjunction with Academic Dean's office and the Academic Standing Committee. Students will be selected in April and May preceding the summer. Participants, with the assistance of the Office of Research and Faculty Development, will obtain necessary regulatory approvals/training to conduct human, animal research or handle biohazardous materials. Students will choose a lab and mentor from among a list provided by the Office of Research and Faculty Development and spend approximately 2 months in the summer and continue into year 4, to carry out a clearly defined research project. The summer will be devoted to developing the skill-set needed for the project and will continue throughout the year, culminating in a Research Presentation on Student Research Day, during the spring semester. The quality of the presentation will be judged by peers and by faculty attending. There will be a 1st, 2nd & 3rd place awards.
0 credit

HDM

HDM 500 Transition to Medical & Dental School

Transition to Medical and Dental School is an eight-day course that is designed to foster new medical and dental students' transition from a lay person to a healthcare professional in training.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 501 Gross Anatomy of the Head, Neck and Trunk

A lecture and laboratory with emphasis on dissections of the human head, neck, and trunk. Includes functional and topographic anatomy, embryology, clinical correlations, and an introduction to radiology.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 502 Molecular Foundations of Medicine

Molecular Foundations of Medicine covers fundamental principles and concepts of biochemistry, molecular biology, cell biology, and human genetics. The material in this course is presented within a framework of human health and disease. It provides the fundamental building blocks of knowledge for learning about pathology, pathophysiology and pharmacology, and is essential for future physicians and dentists.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 503 Pathogens & Host Defense

Introduces the nature and causes of disease, death, reaction to injury, and repair. Analyzes associated structural changes in cells and tissues, with reference to their functional correlates.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 504 Basic Mechanisms of Disease

The Basic Mechanisms of Disease component of the Biomedical Building Blocks is divided into several thematic areas: basic cell and tissue histology, general mechanisms of disease including cell injury and repair, cell death, and environmental disease, neoplasms, including tissue changes in response to cancer, molecular mechanisms of cancer, carcinogenesis tumor invasion and metastasis, and tumor immunology; hematology, including components of hemostasis (control of the coagulation pathway including bleeding and thrombosis), components of blood, and pathophysiology of anemias, leukemias, lymphomas, and stem cell malignancies; and characteristics of diseases of the skin (dermatology) including inflammatory, infectious, neoplastic and pigment disorders.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 505 Nervous System

Surveys functional neural systems integrated with laboratory studies of the structure and organization of the human central nervous system. Topics include sensory and motor systems and the autonomic nervous system.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 506 PHYSIOLOGY

A graduate-level introduction to the physiology of the organ systems with ultrastructural correlations. Ultrastructural correlations are demonstrated in a laboratory setting

using histological preparations in conjunction with electron micrographs illustrating the relevant ultrastructure needed to understand the normal functioning of tissues and organs. The physiology of the major organ systems is addressed in a lecture format with the emphasis on problem solving. Relevant clinical correlations are addressed at the end of each block in so far as they illustrate how symptoms and signs of disease result from disordered physiology. Medical Physiology addresses the structure and function of the cardiovascular, respiratory, renal, gastrointestinal, endocrine, skeletal, reproductive, and integumentary systems.
3 credits, Letter graded (A, A-, B+, etc.)

HDM 601 Pharmacology-Dental

Basic principles that underlie actions of drugs on physiological processes with particular reference to their therapeutic and toxic actions. For medical and dental students. Prerequisites: Physiology, biochemistry, permission of instructor and admission to Graduate Health Sciences Center Program.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDM 602 Nutrition

This course encompasses a life-span approach of nutritional requirements, with a focus on nutrition principles and concepts relative to oral health. The important relationships between nutrition and oral health will be discussed, including implications of nutritional deficiencies and inadequacies, effects of nutrients on periodontal disease, concerns of patients with special needs, and factors contributing to nutrition and oral related health disparities among minorities and underserved communities.
0-3 credits, Letter graded (A, A-, B+, etc.)

HDO

HDO 320 Research: Oral Biology and Pathology

Fall, 2-4 credits

HDO 321 Oral Biology Research II

The student conducts an independent research project under the supervision of one or more members of the Department of Oral Biology and Pathology. The student is expected to submit a written report detailing experimental methods, results, and conclusions. A copy of the student's transcript must be submitted with the application to the Department. Fall or Spring research.
2-4 credits

HDO 322 Summer Research: Oral Biology Pathology

Summer Research: Oral Biology Pathology
2-4 credits

HDO 420 Oral Biology Research III

The student conducts a research project under the supervision of one or more members of the Department of Oral Biology and Pathology. The student is expected to submit a written report detailing experimental methods, results, and conclusions. A copy of the student's transcript must be submitted with the application to the Department. Fall or Spring research.
2-4 credits

HDO 421 Oral Biology Research IV

The student conducts a research project under the supervision of one or more members of the Department of Oral Biology and Pathology. The student is expected to submit a written report detailing experimental methods, results, and conclusions. A copy of the student's transcript must be submitted with the application to the Department. Fall or Spring research.
2-4 credits

HDO 422 Summer Research Oral Biology and Pathology

Summer Research: Oral Biology and Pathology
2-4 credits

HDO 500 Biology of the Oral Mineralized Tissues

This course deals with the basic chemistry, crystallography, ultrastructure, and metabolism of the calcium phosphates involved in the formation and physiological and pathological resorption of the various mineralized tissues found in or associated with the oral cavity (enamel, dentin, cementum, bone). Ectopic calculus formation will be examined. Prerequisites: HDO 560, 561, 562, and 563 or their equivalent. Fall and Spring
3 credits, Letter graded (A, A-, B+, etc.)

HDO 501 Oral Biology I

Oral Biology is taught in Years I, II and III and is divided into 7 Units. In Year I there are 2 Units: Unit I (Development of the Face/Oral tissues and tooth histology and pathology) and Unit 2 (Bone Biology and Pathology).
0 credit, Letter graded (A, A-, B+, etc.)

HDO 510 Salivary Metabolism and Secretion

Consideration is given to the normal and abnormal structure and function of the glandular systems found in the oral cavity. The composition, regulation, and functions of the secretions from the major and minor salivary glands will receive particular attention.
3 credits, Letter graded (A, A-, B+, etc.)

HDO 520 Oral Microbial Systems

Consideration is given to the structural composition, metabolism, and environmental relationships of the bacterial systems formed on and in association with the oral hard and soft tissues. Specific and mixed bacterial populations, such as those resident on extra-oral mucosal surfaces and the skin and their role in oral disease will be dealt with. Prerequisite: HDO 560, 561, 562, and 563 or their equivalent. Fall and Spring
3 credits, Letter graded (A, A-, B+, etc.)

HDO 530 Molecular Biology and Pathology of the Periodontium

This course deals with the ultrastructure and biochemical composition of the periodontal tissues, remodeling of the extracellular matrix with an emphasis on the role of metalloproteinases; the microbial interrelations with the organic and inorganic components of the periodontal tissues, the biochemical dynamics of gingival inflammation and wound healing, and the metabolic processes responsible for the composition and flow of gingival crevicular fluid. Prerequisites: HDO 560, 561 and 563 or their equivalent. Fall and Spring. Please note that this may be taken twice for a total of 4 credits.
2 credits, Letter graded (A, A-, B+, etc.)

HDO 531 Normal and Reparative Tissue Development in the Oral Cavity

This course includes a series of lectures and student-led discussions dealing with specific oral tissues, biologic mineralization, osseointegration, hard and soft tissue development, and tissue regeneration. The molecular aspects leading to oral cancer and osteonecrosis will also be presented and discussed.
2 credits, Letter graded (A, A-, B+, etc.)

HDO 532 Host-Parasite Interaction

This course includes a series of lectures and student-led discussions dealing with specific oral tissues, growth factors, ctyokines, prostaglandins, biologic mineralization and wound healing. The biology of the immune system and phagocytic cells is presented, including the relationship of nutrition to inflammation and oral health. The microbiology of the oral cavity in health and disease as well as oral mucosal infections is presented as the basis of the understanding of immunopathobiology of dental caries and periodontal disease. The oral manifestations of pharmacologic agents are reviewed in terms of both their immunologic and non-immunologic mechanisms of pathology. Finally, antimicrobial chemotherapy and principles of infection control are reviewed in terms of clinical practice of dentistry.
2 credits, Letter graded (A, A-, B+, etc.)

HDO 533 Regional Anatomy, Orofacial Neuroscience and Pain Control

This course includes a series of lectures and discussions dealing with head and neck gross anatomy and microanatomy and biochemistry of orofacial pain. It will provide an in-depth understanding of the underlying neuroanatomy and biochemical events leading to the perception of acute and chronic orofacial pain.
2 credits, Letter graded (A, A-, B+, etc.)

HDO 534 Research Design and Biostatistics

This course aims to improve the understanding of basic research methods and statistical concepts and principles and introduce some fundamental statistical tools, in the context of oral health research. The first part of this course covers basic assumptions and concepts of clinical and biomedical research, research methodologies, critical thinking, and evidence based dentistry. Residents will develop the skills needed to recognize the quality of the scientific evidence and the quality of various publications, the ability to conduct an evidence-based analysis of the literature, and the ability to present an evidence-based presentation on a controversial topic related to dentistry. The components of a research proposal and the basic elements of compliance will be discussed. The second part of the course covers concepts from statistics such as: summarizing, organizing, and presenting different types of sample data; simple probability; discrete and continuous probability distributions such as the Binomial and Normal distributions; the mean and variance of a probability distribution; sampling distributions; hypothesis testing; statistical significance; confidence intervals; non-parametric techniques; ANOVA; correlation and regression; categorical data analysis, tests for proportions, and Chi-Squared tests. Students will apply the techniques learned in class on a given data set, where they will analyze the data and perform statistical testing. The third part of the course students will discuss and evaluate the statistical methods used in relevant papers as well as in proposed students projects.
1 credit, S/U grading

HDO 535 Epithelial Keratinization and Differentiation

The course examines the growth and differentiation of stratified sqamous epithelia. Particular emphasis is placed on molecular events involved in the differentiation program. Consideration is also given to mechanisms involved in oral and cutaneous disorders. Prerequisites: Permission of instructor required; HBP 531 suggested; students must have had a background in cellular biochemistry molecular biology. Fall and Spring, 2 credits, Letter graded (A, A-, B+, etc.)

HDO 540 Research Design and Laboratory Techniques Biomedical

This course aims to introduce theoretical principles and experimental techniques used for laboratory investigation in biomedical research. Students will familiarize themselves with the instrumentation and techniques used to investigate different molecular and cell biological problems through a combination of lectures and demonstrations. Various topics will be covered such as tissue culture and isolation and characterization of DNA, RNA and proteins using various techniques. Students will be introduced to recombinant DNA technology including cloning in various non-viral and viral vectors that allow modulation of gene expression. Transgenic mice technology and Cre-lox system and gene editing technologies will be introduced. In addition, the use of mass spectrometry, microarray and DNA deep sequencing to understand biological processes will be discussed..
3 credits, Letter graded (A, A-, B+, etc.)

HDO 541 Principles of Mucosal Immunology

The mucosal immune system is essentially the primary site of interaction between invading pathogens and the immune system. The overall aim of this graduate course is to facilitate a deeper understanding of the fundamentals of the immune system at mucosal surfaces. It will provide a broad overview of several core mucosal immunology topics and has been designed for graduate students and post-docs who have recently entered the field. This class will provide in-depth

analysis of the structural features that distinguish the mucosal immune system from the peripheral immune system. Features of innate and adaptive immunity as they relate to mucosal immune responses will also be covered. As well as delivering in depth lectures on relevant and emerging topics the course will engage participants in interactive discussions on topics in an informal setting. The course content is based on the "Principles of Mucosal Immunology" textbook.
3 credits, Letter graded (A, A-, B+, etc.)

HDO 550 Oral Diagnostics and Therapeutic Technology, Lectures and Laboratory Techniques

Recent advances in the use and development of research technology for the early diagnosis and treatment monitoring of oral and systemic disease. Special attention is paid to the principles of technology transfer including patents and patenting; searching of on-line databases is a key component. The course includes relationships of dry mouth to salivary physiology, diabetes, and drug medications; salivary film measurements, wetting of oral surfaces, viscoelasticity and lubricity; the use of the Periotron and enzyme assays for the diagnosis of gingivitis and periodontal disease; instrumentation used in sensitive teeth measurement and evaluation of treatment effectiveness using oral compositions and iontophoresis; oral candidiasis and denture stomatitis and early detection and causes of dental caries; oral malodor measurements including use of the Halimeter and its use in the formulation of oral compositions. Application to clinical practice and clinical studies is covered.
3 credits, Letter graded (A, A-, B+, etc.)

HDO 560 Oral Biology and Pathology I

The first of four comprehensive courses on molecular structure, biochemical and physiological function, developmental anatomy and pathology of the various systems that constitute the oral apparatus. Covers the embryological development of the face and oral cavity and the biology and pathology of the oral mineralized tissues. Prerequisites: Undergraduate degree in basic science; permission of instructor. Fall and Spring
3 credits, Letter graded (A, A-, B+, etc.)

HDO 561 Oral Biology and Pathology II

The second of four comprehensive courses on molecular structure, biochemical and physiological function, developmental anatomy and pathology of the various systems that constitute the oral apparatus. Covers the biology and pathology of the periodontal structures and the microbiology of the oral cavity. Prerequisites: Undergraduate degree in basic science; permission of instructor. Fall and Spring
3 credits, Letter graded (A, A-, B+, etc.)

HDO 562 Oral Biology and Pathology III

This course is the third of four comprehensive courses on molecular structure, biochemical and physiological function, developmental anatomy, and pathology of the various systems that constitute the oral apparatus. The course consists of' the following two units of instruction; (1) the biology and pathology of the salivary glands and their products and (2) the biology and pathology of the periodontal structures, Prerequisites: Undergraduate degree in basic science and permission of instructor Fall and Spring
3 credits, Letter graded (A, A-, B+, etc.)

HDO 563 Oral Biology and Pathology IV

This course is the last of four comprehensive courses on molecular structure, biochemical and physiological function, developmental anatomy and pathology of the various systems that constitute the oral apparatus. Covers the biology and pathology of the oral sensory systems and the biology and pathology of oral motor systems. Prerequisites: Undergraduate degree in basic science and permission of instructor. Admission to Graduate Health Sciences Center Program.
3 credits, Letter graded (A, A-, B+, etc.)

HDO 590 Research Projects in Oral Biology and Pathology

Individual laboratory projects closely supervised by faculty members to be carried out in their research laboratories.
3 credits, Letter graded (A, A-, B+, etc.)

HDO 599 Graduate Research

Original investigations undertaken with supervision of a faculty member.
1-12 credits, Letter graded (A, A-, B+, etc.)

HDO 601 Oral Biology II

Year II Oral Biology is a continuation of Year 1 oral biology concepts with an additional four units.
0 credit, Letter graded (A, A-, B+, etc.)

HDO 690 Oral Biology and Pathology Seminar

Research seminars by students, staff, and visiting scientists which may include review of current literature and presentation of student research. Prerequisites: Enrollment in the MS or PhD program in Oral Biology and Pathology. Fall and Spring. 1 credit, Letter graded (S/U) May be repeated for credit.
1 credit

HDO 695 Oral Biology and Pathology Teaching Practicum

Practice instruction in the teaching of oral biology and pathology at the undergraduate level carried out under faculty orientation and supervision.
3 credits, Letter graded (A, A-, B+, etc.)

HDO 699 Thesis Research Oral Biology and Pathology

Dissertation Research, Prerequisites: Advancement to Candidacy Passing,
Fall, Spring, and Summer, 1-9 credits, Letter graded (A, A-, B +, etc.)

HDO 700 Dissertation Research off Campus - Domest

Prerequisite(s): Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
Fall, Spring, 1-9 credits, S/U grading

HDO 704 Translational Oral Biology

Covers the biochemical, physiological, microbiological and electronic principles involved in a variety of techniques used as aids in the diagnosis of oral diseases.
0 credit, Letter graded (A, A-, B+, etc.)

HDO 706 Oral Facial Genetics

Focuses on the utilization, preparation and analysis of basic human genetics in clinical situations. Covers genetic disorders of the craniofacial complex and dentistry for the multiple handicapped patient. 30 course hours Prerequisite: HD 501 or permission of instructor
0 credit, Letter graded (A, A-, B+, etc.)

HDO 805 Summer Research

SUMMER RESEARCH
0 credit, S/U grading

HDP

HDP 320 Introduction to Periodontal Research

The student is taught various techniques and procedures used in current periodontal research. The student is expected to undertake a small research project implementing these techniques.
0-4 credits

HDP 321 Introduction to Periodontal Research

The student is taught various techniques and procedures used in current periodontal research. The student is expected to undertake a small research project implementing these techniques.
0-4 credits

HDP 322 Introduction to Periodontal Research

The student is taught various techniques and procedures used in current periodontal research. The student is expected to undertake a small research project implementing these techniques.
0-4 credits

HDP 420 Research in the Biology and Pathology of Periodontium

An independent research project under faculty supervision with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. Open to upper-division students. May be repeated up to a maximum of eight credits.
0-4 credits, S/U grading

HDP 421 Research in the Biology and Pathology of Periodontium

An independent research project under faculty supervision with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. Open to upper-division students. May be repeated up to a maximum of eight credits.
0-4 credits, S/U grading

HDP 422 Research in the Biology and Pathology of Periodontium

An independent research project under faculty supervision with emphasis on the principles of experimental design, data collection, evaluation of findings, and reporting of results. The student is expected to prepare a report on the project and be able to discuss his or her work. Open to upper-division students. May be repeated up to a maximum of eight credits.
0-4 credits, S/U grading

HDP 501 Introduction to Periodontics

This course utilizes lectures and problem-based cases to introduce the student to the field of periodontology. The first part of the course introduces the student to the clinical presentation of the normal periodontium, gingivitis and periodontitis. Lectures continue with a discussion of histopathology of gingivitis and periodontitis, the bacterial composition of plaque in health and disease, and the pathologic mechanisms of bacterial virulence factors in altered connective tissue remodeling and alveolar bone loss. The potential activities of virulence factors including endotoxin are described in the context of the environmental influences of the gingival crevice and its contents. The response of the host elicited by plaque and bacterial virulence factors is then presented in a series of lectures which review the dynamics of gingival crevicular fluid, effector molecules (prostaglandins and cytokines). The neutrophil and innate defense factors, and the immune system.
0 credit, Letter graded (A, A-, B+, etc.)

HDP 540 Year I Summer Session DC

0 credit, Letter graded (A, A-, B+, etc.)

HDP 541 Year 1 Fall Session N

0 credit, Letter graded (A, A-, B+, etc.)

HDP 542 Year 1 Spring Session T

0 credit, Letter graded (A, A-, B+, etc.)

HDP 543 Year I Summer Session 0

0 credit, Letter graded (A, A-, B+, etc.)

HDP 601 Diagnosis and Treatment of Periodontal Diseases I

Lectures, problem-based cases, laboratory, and clinical exercises are utilized to review the etiology, pathogenesis, treatment, and prevention of periodontal diseases. The first component of the course uses lectures, problem-based cases and clinical exercises to provide students the knowledge and skills required to provide patient care. The knowledge and skills acquired include the ability to obtain data necessary to formulate a periodontal diagnosis, diagnose periodontal diseases including gingivitis, stage I, stage II, stage III and stage IV periodontitis, develop an individual, comprehensive, sequenced treatment plan using diagnostic and prognostic informatin which also incorporates patient's goals, values, and concerns, and provide patient education regarding preventive oral health procedures. Non-surgical treatments of periodontal disease including scaling and root planing (hand and ultrasonic instrumentation), and utilization of antimicrobial rinses, and local drug delivery are reviewed using lectures, video clips, laboratory and clinical exercises. Lectures utilize the basic science component of the course as a foundation to discuss the etiology, pathogenesis, and treatment of various clinical conditions related to the periodontium including molar-incisor pattern of periodontitis (formerly known as aggressive), necrotizing ulcerative gingivitis, gingival overgrowth, herpetic and apthous lesions. Oral manifestations of systemic disease as well as the relationship between certain systemic disease and periodontal disease and treatment will be reviewed. The role of occusion iwth regard to periodontitis is discussed. Lectures and problem-based cases are used to expose students to various surgical procedures including gingivectomy, gingivoplasty, and periodontal flap surgery. The course will culminate in a series of presentations focused on treatment planning and relevant current literature.
0 credit, Letter graded (A, A-, B+, etc.)

HDP 621 Year II Periodontics Clinic

Applying didactic knowledge to actual clinical situations is required as the student examines the patient, formulates a treatment plan, and renders treatment. In this regard, the student should be able to determine the chief complaint of the patient, obtain a detailed past and present medical history, family medical history, past personal and family dental history, social history including patient's attitude towards his/her dentition and expectations of treatment. The student should be able to obtain vital signs and perform extra-oral (head and neck) and intra-oral examinations. The intra-oral examination will consist of a hard and soft tissue exam including the teeth and the periodontium. In addition, an examination of the patient's occlusion and the temporomandibular joints will be completed. The student is expected to interpret the radiographic findings detected in the panoramic, bite-wings and periapical radiographs, and determine whether they are normal or abnormal. The student will correlate the radiographic finding with the clinical findings and then arrive at the diagnosis of the patient's condition. The student will identify the etiological factors (local and systemic) which contribute to the development of disease and prognosticate the patient's overall dental and periodontal condition as well as that of the individual teeth. Subsequently, the student should be able to formulate an adequate treatment plan, render periodontal treatment (whether preventive or therapeutic) as outlined, evaluate the outcome of the treatment, and schedule periodontal maintenance. At the periodontal maintenance appointment, the student should be able to update the medical history, conduct a clinical examination to determine periodontal health status, obtain additional radiographs when necessary, review or institute corrective measures for plaque control and render adequate treatment when deemed necessary.
0 credit, S/U grading

HDP 640 Year II Summer Session DC

0 credit, S/U grading

HDP 641 Year 2 Fall Session N

0 credit, S/U grading

HDP 642 Year 2 Spring Session T

0 credit, S/U grading

HDP 643 Year II Summer Session 0

0 credit, S/U grading

HDP 701 Diagnosis and Treatment of Periodontal Disease II

At the conclusion of HDP 601 the basic surgical techniques used to treat periodontal diseases were introduced. HDP 701 will continue to discuss in greater depth the surgical component of periodontal therapy. Evidence-based presentations by cases and problem-based learning will discuss the indications, contraindications, and success rates reported for various surgical techniques including osseous grafts, hemisection, root resection, and guided tissue regeneration procedures. Aspects of periodontal wound healing will be discussed prior to the introduction of guided tissue regeneration procedures. The interrelationship between the periodontium and restorative dentistry will be examined including a discussion of dental implants and pre-prosthetic surgical procedures such as crown lengthening and ridge augmentation procedures. Periodontal plastic procedures performed to prevent or correct anatomical, developmental, traumatic, or plaque induced defects of the periodontium will be discussed. Common acute periodontal conditions will also be examined including a discussion on the diagnostic criteria utilized to differentiate between pathology of periodontal or endodontic origin. Referral guidelines including reasons and criteria for referral will be discussed in a case based format.
0 credit, Letter graded (A, A-, B+, etc.)

HDP 702 Periodontal Clinical Seminar

Lectures and problem-based cases are used to integrate and reinforce the didactic and clinical information covered in previous periodontal courses. An interactive forum is used in which students and periodontal faculty and residents discuss in greater depth advances achieved in periodontics and their relevance to clinical practice.
0 credit, Letter graded (A, A-, B+, etc.)

HDP 721 Year III Periodontics Clinic

Applying didactic knowledge to actual clinical situations is required as the student examines the patient, formulates a treatment plan, and renders treatment. In this regard, the

student should be able to determine the chief complaint of the patient, obtain a detailed past and present medical history, family medical history, past personal and family dental history, social history, including patient's attitude towards his/her dentition and expectations of treatment. The student should be able to obtain vital signs and perform extra-oral (head and neck) and intra-oral examinations. The intra-oral examination will consist of a hard and soft tissue exam including the teeth and the periodontium. In addition, an examination of the patient's occlusion and the temporomandibular joints will be completed. The student is expected to interpret the radiographic findings detected in the panoramic, bite-wings and periapical radiographs, and determine whether they are normal or abnormal. The student will correlate the radiographic finding with the clinical findings and then arrive at the diagnosis of the patient's condition. The student will identify the etiological factors (local and systemic) which contribute to the development of disease and prognosticate the patient's overall dental and periodontal condition adequate treatment plan, render periodontal treatment (whether preventive or therapeutic) as outlined, evaluate the outcome of the treatment, and schedule supportive peirodontal treatment visits. At the maintenance visit, the student should be able to update medical history; conduct a clinical examination to determine periodontal health status, obtain additional radiographs when necessary, review or institute corrective measures for plaque control and render adequate treatment when deemed necessary.
0 credit

HDP 740 Year III Summer Session DC

0 credit

HDP 741 Year 3 Fall Session N

0 credit

HDP 742 Year 3 Spring Session T

0 credit

HDP 743 Year III Summer Session 0

0 credit

HDP 821 Year IV Clinic: Periodontics I

The fourth year component of clinical periodontics continues to develop and reinforce the student's ability to recognize and diagnose periodontal diseases. In a simulated general practice environment, the student provides comprehensive care including periodontal therapy under the supervision of general dentistry faculty. This experience enables students to understand the role of general dentists in treating and managing patients presenting with various levels of disease including referral to a specialist when appropriate. Students are required to seek consultation with periodontal faculty when patients exhibit clinical and radiographic findings consistent with periodontitis such as probing depth measurements # 5 mm. The periodontal faculty provides coverage for consultation, competency exams, and periodontal surgical procedures.
0 credit

HDP 822 Year IV Clinic: Periodontics II

The fourth year component of clinical periodontics continues to develop and reinforce the student's ability to recognize and diagnose periodontal diseases. In a simulated general practice environment, the student provides comprehensive care including periodontal therapy under the supervision of general dentistry faculty. This experience enables students to understand the role of general dentists in treating and managing patients presenting with various levels of disease including referral to a specialist when appropriate. Students are required to seek consultation with periodontal faculty when patients exhibit clinical and radiographic findings consistent with periodontitis such as probing depth measurements # 5 mm. The periodontal faculty provides coverage for consultation, competency exams, and periodontal surgical procedures.
0 credit

HDR

HDR 503 Radiology I

This course introduces the fundamental principles of radiation physics, radiation biology and protection, radiographic image production and interpretation as applied to dental radiographic imaging. Students gain knowledge of the intraoral and extraoral radiographic techniques commonly used in dental practice, of the principles and techniques of film processing, digital imaging, image quality assurance, and radiation protection; students learn to recognize normal intraoral and panoramic anatomy and to interpret and stage caries and marginal periodontal status based on their radiographic appearance. In small group rotations at the conclusion of the course, students learn to set up the operatory for intraoral radiographic examinations, to take intraoral film radiographs on the mannequin, to develop radiographs using an automatic film processor and they review the appearance and causes of film imaging artifacts based on provided cases. Pre-req: Successful completion of Gross Anatomy: Head, Neck & Trunk course.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 540 Year I Summer Session DC

SUMMER II: YEAR I
6 credits, S/U grading

HDR 541 Year 1 Fall Session N

6 credits, S/U grading

HDR 542 Year 1 Spring Session T

6 credits, S/U grading

HDR 543 Year I Summer Session 0

6 credits, S/U grading

HDR 606 Advanced Imaging Techniques

Three-dimensional imaging is increasingly utilized in maxillofacial diagnosis and treatment planning. The advanced imaging course builds upon knowledge of conventional

diagnostic imaging and gives students a working knowledge of current advanced imaging modalities utilized in dentistry: multi-detector CT, magnetic resonance imaging, ultrasound and, with particular emphasis, cone-beam CT (CBCT). Through a series of lectures, hands-on demonstrations, case discussions and individual project assignments, students acquire a working knowledge of operation principles of advanced imaging modalities, CBCT anatomy, common incidental finding on CBCT images, selection criteria for CBCT imaging, and basic processing of the CBCT volume. Pre-req: Successful completion of HDR 503 (Radiology I) and good standing as a year 2 student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 611 Fixed Partial Prosthodontics Technique

The purpose is to provide an understanding of basic diagnostic skills and restorative techniques in fixed prosthodontics that will enable students to begin patient care in Year III Clinic. Prerequisites: Successful completion of all Year I dental courses and good standing as a Year II student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 613 Removable Prosthodontics Technique

This course provides an understanding of basic diagnostic skills and restorative techniques used in complete and partial removable prosthodontics that will enable students to provide patient care in the discipline of removable prosthodontics. Prerequisites: Successful completion of all Year I dental courses and good standing as a Year II student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 622 Year II Radiology Clinic

In this clinical radiology course students apply the principles of intraoral imaging techniques and radiation safety presented in the didactic course Radiology I to clinical situations. Additional emphasis is placed on small groups discussions on radiologic anatomy, diagnosis, and treatment implications. Prerequisites: HDG521, HDR503, and good standing as a Year II student.
0 credit

HDR 640 Year II Summer Session DC

0 credit

HDR 641 Year 2 Fall Session N

0 credit

HDR 642 Year 2 Spring Session T

0 credit

HDR 643 Year II Summer Session 0

0 credit

HDR 707 Comprehensive Prosthodontics

Didactic instruction in clinical applications of removable and fixed prosthodontics. These hours are used for the review and reinforcement of subjects previously taught, and the introduction of new concepts and techniques. The topics are selected to be of benefit to students who have begun to treat patients in this discipline. Instruction will include evidence-based recall and maintenance of fixed and removable prostheses. Pre-req: Successful completion of HDR 611 and HDR 613
0 credit, Letter graded (A, A-, B+, etc.)

HDR 709 Oral and Maxillofacial Radiologic Interpretation

The Oral and Maxillofacial Radiologic Interpretation course consists of didactic and seminar components that build on the basic notions of image interpretation acquired in Radiology I and Year II Radiology Clinic courses. This course focuses on the interpretation of intraoral images utilized in dental practice, and the rationale, design and execution of intraoral radiographic examinations. After successful completion of the course, students will be coompetent to determine the need for imaging, select the best imaging to meet the diagnostic task, and interpret caries., periodontal disease, and pulpal and pathosis of the craniomandibular complex and appropriate modalities for their imaging. Prerequisite: HDG 622, good standing as a Year III student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 722 Year III Fixed Partial Prosthodontics Clinic

During this course the student treats patients who require relatively simple fixed prosthodontic therapy. The student should develop the judgment and insight necessary to provide fixed prosthodontic treatment, which is coordinated with the other disciplines of General Dentistry, Periodontics and Oral Surgery. Techniques performed will be based on skills in the preceding clinical and laboratory courses. Prerequisites:HDR 611, HDG 621 and good standing as a Year III student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 723 Year III Removable Prosthodontics Clinic

HDR 723 is the initial clinical experience in removable prosthodontics and provides the student with the clinical experience in this discipline. Emphasis is placed on the development of clinical judgment and expertise gained through providing a range of clinical treatment modalities in removable prosthodontics, such as: complete dentures, removable partial dentures, immediate dentures, over dentures, transitional and/or interim dentures, repairs, relines, and tissue treatments. Prerequisites: HDG 613, HDG 621 and good standing as a Year III student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 726 Year III Radiology Clinic

Year III Radiology Clinic builds on the basic technical and image interpretation material from Radiology I and Year II Radiology clinic, emphasizing adequate selection and execution of radiographic examinations; integration of imaging information in the treatment planning process; recognition of the need for any further imaging, additional examinations, or specialty consultation based on the patient's individual circumstances. Prerequisite: HDG 622 and good standing as Year III student.

0 credit, Letter graded (A, A-, B+, etc.)

HDR 740 Year III Summer Session DC

0 credit, Letter graded (A, A-, B+, etc.)

HDR 741 Year 3 Fall Session N

0 credit, Letter graded (A, A-, B+, etc.)

HDR 742 Year 3 Spring Session T

0 credit, Letter graded (A, A-, B+, etc.)

HDR 743 Year III Summer Session 0

0 credit, Letter graded (A, A-, B+, etc.)

HDR 804 Year IV Esthetic Dentistry Elective

This is an advanced course for those students who want more thorough knowledge, skill, and general preparation to practice esthetic dentistry. Various lecturers elaborate in their particular areas of expertise. Some years a prominent outside lecturer comes to give a continuing education course for faculty and outside dentists, for their benefit, but primarily for the benefit of the participants in this course. Prerequisites: HDR 611, HDR 613 and good standing as a Year IV student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 807 Advanced Removable Prosthodontics

In Year IV, twelve hours are devoted to additional didactic instruction in clinical applications of removable prosthodontics. These hours are used for the review and reinforcement of subjects previously taught, and the introduction of new concepts and techniques. The topics are selected to be of benefit to students who have begun to treat patients in this discipline. Prerequisites: HDR 611, HDR 613 and good standing as Year IV student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 821 Year IV Advanced Prosthodontics Selective

One to three predoctoral dental students are invited to participate in this selective based upon demonstrated skills and expressed interest in fixed prosthetics after successfully completing Year 2 and Year 3 preclinical and clinical courses. The student(s) may have the opportunity to send cases out to a private laboratory facility and spend more time observing a master technician. Prerequisites: Successful completion of all Year I, II & III dental courses and good standing as a Year IV student.
0 credit, Letter graded (A, A-, B+, etc.)

HDR 823 Year IV Radiology Clinic

In Year IV Radiology Clinic (HDR 823), students perform intraoral radiographic examinations, selected periapical and bitewing views, full mouth intraoral radiographic surveys) as set forth in faculty-approved treatment plans for their patients; interpret (in consultation with faculty, whenever confronted with unusual findings, or otherwise deemed necessary), and record imaging findings into the axiUm patient management system. Prerequisites: HDR 726 and good standing as a Year IV student.
0 credit, Letter graded (A, A-, B+, etc.)

HDS

HDS 601 Oral and Maxillofacial Surgery

The General Dentist must be able to establish a diagnosis and manage conditions which require oral and maxillofacial surgical procedures. In addition, the dentist must be able to perform basic surgical procedures within their scope and knowledge. This course provides a comprehensive overview of diseases and conditions, as well as the medical and surgical management provided by oral and maxillofacial surgeons for those conditions. In depth discussions on dentoalveolar surgical procedures provide a foundation for managing patients in the oral and maxillofacial surgery clinic courses in Year II, III and IV.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 602 Pain Control I

The administration of local anesthesia is often a necessity in maintaining patient comfort during the delivery of dental care. This course covers all phases of the administration of local anesthetics, including the selection of appropriate agents and intraoral injection techniques based on the needs of the individual patient and the specific procedure to be performed. The course consists of lectures, videotapes, and small group clinic laboratory sessions.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 603 Medical Emergencies I

The dentist must be prepared to manage medical emergencies that may occur during the course of dental therapy. This course presents a number of medical emergencies that may be caused by specific disease states, medications administered in the dental office, or by anxiety related to the dental visit. Prevention of medical emergencies is emphasized, as well as diagnosis and management. The course consists of three lectures in a case based format, and encourages class participation.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 604 Pain Control II

Dental patients often present to the office with a great deal of anxiety related to the treatment to be rendered. This course presents pharmacological and non-pharmacological methods that can be utilized to reduce patient anxiety in the dental office. The use of nitrous oxide/oxygen analgesia in the dental practice setting is emphasized. The course will consist of lecture, laboratory, and clinical sessions.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 605 Physical Diagnosis: Introduction to Family Medicine

Since dentistry shares with all health professionals a common obligation to insure the welfare of their patients, all practitioners have the responsibility of evaluating the capability of their patients to withstand and successfully tolerate the

anticipated proposed treatment regimens. Because of the varied effects that systemic diseases have on dental procedures, as well as the possible effect of dental treatment on systemic health problems, there is a need for dentists to be properly trained in the evaluation of their patients. This course introduces clinical medicine and its relationship to dentistry. It covers the clinical physical signs, symptoms, and laboratory values of the various organ systems in both health and disease, and the application of this knowledge to patients in ambulatory care and hospital settings, and emphasizes the oral manifestations and dental treatment modifications required by the medically compromised patient.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 621 Year II Oral and Maxillofacial Surgery Clinic

In this introductory clinical course in oral and maxillofacial surgery, the student acquires clinical experience in taking a comprehensive outpatient oral and maxillofacial surgery history, takes pre-operative and post-operative vital signs, establishes and reviews the surgical treatment plan, assists upper classmates in the removal of single and multiple teeth and minor oral surgery procedures, begins to apply basic sciences, behavioral, and surgical knowledge and acquire the skills for uncomplicated tooth removal, reviews postoperative care with the patient, and writes prescriptions for medications including analgesics and antibiotics.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 701 Advanced Oral and Maxillofacial Surgery Treatment Planning

The course consists of three seminar sessions discussing a total of nine case studies of patients with significant medical conditions who require oral surgical care. The class is divided into groups of four students. Approximately three weeks prior to each scheduled seminar, case studies are distributed; the material includes the patient's chief complaint, past medical history, physical examination and laboratory studies, as appropriate. Each group is responsible for preparing an oral presentation of the case and appropriate written handouts for the other members of the seminar group. The presentations should include: differential diagnosis, methods of diagnosis, presumptive diagnosis, current therapy and management for that diagnosis, and influence of the diagnosis on the oral surgery management.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 702 Oral Pathology

Covers the clinical and histopathologic manifestations of acquired, inherited and neoplastic diseases of the human oral cavity. Includes benign and malignant tumors of bone, odontogenic and non-odontogenic cysts and tumors, mucosal and salivary gland diseases, and oral manifestations of systemic diseases. 62 course hours Prerequisites: HDO 601
3 credits, Letter graded (A, A-, B+, etc.)

HDS 703 Medical Emergencies II

The dentist must be prepared to manage medical emergencies that may occur during the course of dental therapy. This course presents a number of medical emergencies that may be caused by specific disease states, medications administered in the dental office, or by anxiety related to the dental visit. Prevention of medical emergencies is emphasized, as well as diagnosis and management. The course consists of a case based session with active class participation as a method of review of material presented in Medical Emergencies I (HDS 603).
0 credit, Letter graded (A, A-, B+, etc.)

HDS 704 Oral Pathology Conference I

This course consists of clinico-pathologic case presentations designed to develop differential diagnostic skills. It covers the major clinical and histopathologic entities that the general dentist is likely to encounter in the ordinary course of practice and emphasizes the diagnostic considerations and the preferred clinical management that would be most appropriate for the examples studied. All aspects of diagnosis and management of the patient with these oral disorders are discussed. Classes are conducted in a seminar format and are based on the active participation of the students in discussions designed to describe and classify clinical cases presented.
3 credits, Letter graded (A, A-, B+, etc.)

HDS 705 Oral Medicine

Introduces the principles of patient care related to stomatologic and dermatologic disease, neurologic abnormalities, hematologic disturbances, and the medically compromised patient.16 course hours Prerequisites: HDO 701
3 credits, Letter graded (A, A-, B+, etc.)

HDS 706 Diagnosis and Management of Oro-Facial Pain

This course is designed to present information regarding the diagnosis and management of Orofacial Pain and Temporomandibular Disorders. The course will consist of a series of lectures and case presentations. The information provided in this course will allow the student to understand the dentist's role in managing simple and complex orofacial pain problems. The area of temporomandibular disorders will be emphasized since the dentist plays a major role in managing these pain disorders.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 721 Year III Oral and Maxillofacial Surgery Clinic

In this clinical course in oral and maxillofacial surgery, the student acquires additional clinical experience in taking a comprehensive outpatient oral and maxillofacial surgery history, takes pre-operative and post-operative vital signs, establishes and reviews patient surgical treatment plans, and applies basic science knowledge and clinical skills for uncomplicated single and multiple tooth and root removal and alveoplasty procedures, reviews post-operative care with the patient, and writes prescriptions for medications including analgesics and antibiotics.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 803 Medical Emergencies III

Practice Development II consists of two main components. The first component is a lecture series designed to provide the student with an in-depth understanding of practice

management concepts introduced in Practice Development I. The second component to this course is a group project and presentation. The class is divided into 20 groups, with each group to present an assigned topic. The topics cover a spectrum of issues/concepts necessary to start and operate a successful private practice.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 804 Oral Pathology Conference II

Clinicopathologic case presentations and development of differential diagnosis skills. 11 course hours Prerequisites: HDS 702, HDS 704
3 credits, Letter graded (A, A-, B+, etc.)

HDS 821 Year IV Oral Surgery Clinic

In this clinical course in oral and maxillofacial surgery, the student independently formulates and reviews comprehensive patient surgical treatment plans, and receives experiences in the more complex minor outpatient surgical procedures including multiple extractions, alveoloplasty, root recovery, biopsy technique, pre-prosthetic surgery, and infection management. Prior to completion of this course, the student will attain competence in the routine extraction of teeth.
0 credit, Letter graded (A, A-, B+, etc.)

HDS 822 Year IV Oral Surgery Clinic (Hospital Rotation)

In HDS 822 (Year IV Hospital Oral and Maxillofacial Surgery Rotation), students are exposed to advanced patient care in the clinic, emergency room, and operating room settings. At a minimum, students continue performing simple and surgical extractions in the outpatient setting, and may participate in more advanced cases depending upon availability in this rotation at University Hospital Medical Center. In addition, students participate in the management of patients receiving intravenous sedation and general anesthesia in the outpatient setting.
0 credit, Letter graded (A, A-, B+, etc.)

HFN

HFN 502 Contemporary Issues in the Global Food System

Every plate of food around the world tells a story. Is there sufficient nutrition? How far has the food traveled? Who can afford it? Will the food promote health or chronic disease? Which multi-national corporation delivered it? This online course explores why food matters and how our food choices impact the planet. We will travel around the world examining food security, hunger and malnutrition, food waste, agricultural practices, economic challenges and environmental concerns including climate change. Students will gain the ability to evaluate local and global food issues through case studies worldwide. Course materials will draw on published research and popular media. Assignments will be shaped by the student's academic and professional interests.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 503 Nutrition in the Media: Making Sense of the Science

This online course will increase students awareness of the pervasive nature of food and nutrition messaging and the varied motivations behind them. Basic concepts related to nutrition and food science will be presented along with the skills and resources needed to critically evaluate future issues and trends in nutrition. Topics to be discussed include popular supplements, fad diets, common chronic diseases and related dietary recommendations, sustainable food practices and food labeling.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 505 Current Topics: Maternal and Child Nutrition

This online course examines current trends in research on nutrition topics related to maternal and child health with a focus on evidence-based recommendations. Topics include fertility, intrauterine influences on development, maternal nutrition and infant feeding, breastfeeding, supplementation, asthma and allergic disease, nutrition and neurological development, gut microbiota in early life, links between early life and adult disease and environmental influences on early childhood feeding challenges. Prerequisites: Admission to program codes HFNMZ, HFPMS or HFPZM or HFN 507.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 506 Food Science Systems

This course introduces students to topics relating to food science and food systems management as it relates to an institutional food service setting. Students will review aspects of microbiology and food safety pertaining to safe storage and prevention of food spoilage, as well as relevant principles of food quality and preparation. Students will become proficient in purchasing, inventory control and budgeting. Students will be able to apply leadership, strategic planning and project management skills to food service operations. Prerequisites: Admission to program codes HFPMS or HFPZM
3 credits, Letter graded (A, A-, B+, etc.)

HFN 507 Nutrition Physiology and Metabolism

This course introduces nutrition physiology and metabolism, including the ingestion and digestion of food, as well as the absorption, transport, and metabolism of macro and micro-nutrients. Students will learn the structures, roles and metabolic regulation of carbohydrates, lipids and proteins. Students will be introduced to the role of vitamins and minerals in human metabolism and health. Prerequisites: Physiology
3 credits, Letter graded (A, A-, B+, etc.)

HFN 508 Concepts in Nutrition Therapy

This introductory nutrition course will provide students with the basic knowledge of nutrition through the lifecycle and medical nutrition therapy for some disease states. Students will learn specific nutritional needs for individuals during pregnancy and lactation, for normal growth and development, and for adults during early, middle and later years in life. Medical nutrition therapy for different disease states will be discussed

in detail include obesity, diabetes, cardiovascular disease and hypertension. In addition, the concept of nutrition support via enteral and parenteral nutrition will be introduced. Case-based assignments will be used to demonstrate knowledge and understanding of the nutrition care process (assessment, nutrition diagnosis, intervention, monitoring and evaluation) and documentation. Prerequisites/Co-Requisites: HFN 507.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 510 Issues and Trends in Nutrition

This online course will provide an overview of current and emerging issues in food and nutrition including topics that impact nutrition recommendations for patients. Course material will also include trends in health care organizations as it relates to food and nutrition service delivery. Students will explore how these trends may shape patient perceptions of favorable and unfavorable dietary choices, as well as food availability via market trends. Prerequisites: Admission to program codes HFNMZ, HFPMS or HFPZM or HFN 507
3 credits, Letter graded (A, A-, B+, etc.)

HFN 512 Macronutrients and Metabolic Regulation

This online course is designed to promote an in depth understanding of the role of macronutrients in human health and nutrition. The digestion, absorption and metabolism of carbohydrates, proteins and fats and the relationship of energy metabolism will be extensively studied.Prerequisites: Admission to program codes HFNMZ, HFPMS or HFPZM or HFN 507.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 514 Micronutrients and Functional Nutrition

This online course is designed to promote an in-depth understanding of the role of micronutrients in human health and nutrition. The digestion, absorption and metabolism of vitamins, minerals, and phytonutrients will be extensively reviewed as will their inter-relationships and roles in health and disease. Prerequisites: Admissions in program code HFNMZ, HFPMS or HFPZM, and HFN 512
3 credits, Letter graded (A, A-, B+, etc.)

HFN 515 Advanced Nutrition in Clinical Practice I

This two-part online course will offer the student an opportunity to explore the role of diet and nutrition in the prevention, progression and treatment of chronic disease including obesity, cardiovascular disease, diabetes, bone health, cancer prevention, gastrointestinal disorders, food allergy and intolerances, mental health, supplements, and nutrigenomics.Prerequisites: Admission to program codes HFNMZ, HFPMS or HFPZM or HFN 507.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 516 Advanced Nutrition in Clinical Practice II

The second half of this two-part online course will further explore medical nutrition therapy for cancer, upper and lower gastrointestinal disorders, liver, pancreatic, and gallbladder disease, eating disorders, neurological disorders, metabolic disorders, renal dysfunction, anemia, pulmonary disease, renal dysfunction, metabolic stress and the critically ill, malnutrition, diseases of the respiratory system, and end of life care. The principles and practices of enteral and parenteral nutrition will be covered. Prerequisites: HFN 515
3 credits, Letter graded (A, A-, B+, etc.)

HFN 520 Advanced Communications and Counseling

This online course examines the role of professionals in promoting general health and wellness for individuals and groups in a community setting. Application of key theoretical models of behavior change and evidence-based intervention strategies are explored. Strategies and skills in counseling the individual client and group are examined and applied. Additional topics include techniques for communicating nutrition information to the public, the media and ensuring cultural competence. In addition to the required text, a purchase of a self-assessment tool for $25 is necessary for the student to meet the course requirements. Prerequisites: Admission to Graduate Nutrition Program
3 credits, Letter graded (A, A-, B+, etc.)

HFN 525 Food Policy and Health Outcomes in the United States

This online course is an overview of how food access and health outcomes are influenced by federal and local municipal public policy. The class will include a brief overview of the American political system followed by a deeper analysis of some specific public policies that can lead to food access inequities and adverse health outcomes including, but not limited to: taxation, land use and zoning, agriculture policy, environmental policy, education policy, economic inequality, media influences and cultural biases. At the conclusion of the semester, students will be asked to conduct a case study analysis of a recent federal or local food policy decision and asked to evaluate the ways in which the policy succeeded or failed in achieving its mission. How should success and failure be measured? How could the policy be improved? What unintended consequences were discovered? Is the policy scalable to other municipalities?
3 credits, Letter graded (A, A-, B+, etc.)

HFN 526 The Nuts and Bolts of Planning, Monitoring, Evaluating and Funding Nutrition Policies and Programs

This online course prepares students to advance population health by theorizing a nutrition or food related policy or program promoting sustainable food systems, and to develop the skills necessary to operationalize such a policy or program. Students will use logic models to conceptualize the policy or program, and develop in-depth monitoring and evaluation strategies. In addition, students will learn to coordinate program planning with budget development so as to create realistic programs. Lastly, students will learn how to display data and seek funding to facilitate initial or continued implementation, or to further policy development. Prerequisites: HFN 502 or HFN 525
3 credits, Letter graded (A, A-, B+, etc.)

HFN 528 Public Health Nutrition ¿ Concepts and Strategies

This online course prepares students to advance population health. After reviewing underlying concepts of population surveillance and monitoring, epidemiology, social determinant of health and cultural competency, students will apply this knowledge to program development. Students will identify a nutrition or food related policy or program facilitating healthy food availability or sustainable food systems, and develop the skills necessary to operationalize such a policy or program. Students will use logic models to conceptualize the policy or program, and develop in-depth monitoring and evaluation strategies. In addition, students will learn to coordinate program planning with budget development so as to develop realistic programs. Lastly, students will learn how to display data and seek funding to facilitate initial or continued implementation, or to further policy development. Admission to program codes HFNMZ, HFPMS or HFPZM
3 credits, Letter graded (A, A-, B+, etc.)

HFN 530 Nutrition Management and Leadership

This course is designed to develop effective management skills in clinical nutrition and food service departments. The emphasis will be on the management of clinical services in highly regulated health care settings. Case studies and problem-based learning scenarios will complement instruction and readings and will apply to both clinical and food service areas. Personnel issues, cost containment and management principles pertinent to clinical functions will be discussed and applied to real life situations. Accreditation and regulation processes will be covered in depth and the focus will be on the Joint Commission Accreditation process and the Center for Medicare and Medicaid Services. Prerequisites: Admission in program code HFNMZ, HFPMS or HFPZM.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 535 Sports Nutrition and Wellness

This online course is designed to enhance the student's knowledge and understanding of sports nutrition practice. Explores the benefits and roles that macronutrients and micronutrients have on athletic performance. Pre-, during, and post- exercise recommendations, hydration recommendations for athletes and nutrition ergogenic aids will be discussed in detail. Students will learn strategies and develop skills to implement practical applications of sports nutrition including assessment of athletes, determining athletes¿ readiness to change, and creating individual recommendations. Specific needs for varying types of athletes, such as endurance athletes, strength/power athletes and team sport athletes will be reviewed. Special considerations in sports nutrition, such as athletes with diabetes, pregnant athletes, child and adolescent athletes, teen athletes, college athletes, master's athletes, elite athletes and vegetarian athletes will be examined. Lastly, differences for recreational athletes and active individuals will be discussed, and differences between competitive athletes delineated. Prerequisites: Admission to program codes HFNMZ, HFPMS or HFPZM or HFN 507.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 541 Critical Care and Nutrition Support

This online course will explore the role and impact of medical nutrition therapy in the critical care setting and its influence on patient outcomes. This will include the assessment of specific patient-populations such as acute respiratory distress syndrome (ARDS), burns, continuous veno-venous hemodialysis (CVVHD), sedated/intubated patients, and traumatic brain injuries (TBI). The impact of preoperative, perioperative, and postoperative feeding strategies will be discussed as well as potential pros and cons of immune enhancing supplements. Prerequisite: Admission to Graduate Nutrition Program's Advanced Nutrition Therapy and Critical Care Concentration and HFN 516
3 credits, Letter graded (A, A-, B+, etc.)

HFN 542 Advanced Pediatric and Neonatal Support

This online course will explore the nutrition needs of infants, children, and adolescents with an in-depth examination of medical nutrition therapy for select pediatric and neonatal diseases and chronic illnesses. Special emphasis will be placed on growth and development, pediatric nutrition assessment, and the effect of chronic and acute illnesses on the nutritional status and health outcomes of infants, children and adolescents. This course is designed to reinforce the fundamentals of nutrition and to build competence in the area of nutrition assessment, monitoring, and evaluation of nutritional status with in the pediatric populations, including neonates. Prerequisites: Admission to Graduate Nutrition Program's Advanced Nutrition Therapy and Critical Care Concentration and HFN 516.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 551 Evidence-Based Concepts in Integrative Nutrition

This online course will explore the underlying concepts of integrative nutrition, the practice of providing individualized medical nutrition therapy to optimize health, and treat complex chronic illnesses, through food and the judicious use of supplements. Such discussion will build on prior coursework, especially Macronutrients and Metabolic Regulation and Micronutrients and Functional Nutrition, to explore how nutrition can modulate major systems and functions including the gastrointestinal system, the immune system, the central nervous system, detoxification, oxidation and inflammation. Prerequisites: Admission to Graduate Nutrition Program's Integrative Nutrition Therapy Concentration and HFN 514.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 552 Case-Based Approaches to Integrative Nutrition Therapy

During this online course students will apply the concepts of integrative nutrition, as well as material in other clinically relevant courses, to a variety of complex clinical cases. Case study assignments will include detailed assessment strategies and care plans to include dietary intake and supplementation, as well as appropriate monitoring and evaluation techniques. Prerequisite: HFN 551.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 570 Statistics

This online course facilitates the development of the knowledge base to support statistical reasoning and the skills necessary to conduct statistical analyses appropriate in a health care or public health environment. This includes data collection methods, data cleaning, hypothesis testing, confidence limits, and statistical analysis procedures, such as t test, Chi-Square test, analysis of variance, and regression. This class will require the use of a statistical package for data organization, analysis, and presentation. Additional topics include techniques for summarizing results of various statistical procedures, as well as designing appropriate tables and graphs.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 575 Research Methods in Nutrition

This online course precedes the practicum/capstone project required for completion of the Masters Degree in Nutrition and follows the statistics course. You will build a base of knowledge about research methods and then work independently to develop a research project. You will work through the steps of formulating a research question, developing a testable research hypothesis, designing a study, and designing data collection methods. You will learn how to protect human subjects and health information. You will be able to understand and interpret published research. Prerequisites or Co-Requisites: HFN 570.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 578 Applications of Nutrition Research Literature

This online course will facilitate development of the critical thinking skills necessary to become efficient consumers of nutrition-related research presented in the scientific literature and popular media. Students will learn to interpret current nutrition research by performing effective literature searches for nutrition research articles, recognizing the strengths and limitations of the research methods, and evaluating the quality of nutrition information in both the scientific literature and popular media. This course will begin with an overview of the challenges facing health professionals when delivering nutrition education to the layperson. Challenges to be discussed include media misrepresentation, health illiteracy and a Prerequisites: Admission to Masters in Nutrition Program (HFNMZ) and HFN 575
3 credits, Letter graded (A, A-, B+, etc.)

HFN 580 Practical Applications

HFN 580 Practical Applications (3 credits) Students enrolled in this online course will have the opportunity to choose between three types of culminating projects: a research paper addressing a clinical question, a continuous quality improvement project addressing a clinical question or practice or a practicum project. Students will work with a faculty mentor who will supervise and guide the student as they select their project and topic and progress through the semester. Students may also seek an onsite agency mentor if utilizing their worksite to complete a CQI project, but will be responsible to provide all requested information to their assigned faculty mentor who will ultimately recommend a grade. (Only for those matriculated in program code HFNMZ) (Prerequisites: completion of 27 credits inclusive of 575; Prerequisites/Co-Requisite: HFN 578)
3 credits, Letter graded (A, A-, B+, etc.)

HFN 581 Continuing Practical Applications

This course provides an opportunity for students to successfully complete the requirements of HFN 580 when additional time is required. Prerequisites: HFN 580;Department consent required
1-3 credits, Letter graded (A, A-, B+, etc.)

HFN 583 Professional Applications in Nutrition Care

This online course will prepare students to advance the field of clinical nutrition by developing, implementing and evaluating high quality clinical nutrition therapies and services, through the following: execution of continuous quality improvement projects, development of innovative nutrition care plans though case studies of complex patient cases, business plans for clinical services, and/or presentations of the critical analysis of the research literature. By permission only. Prerequisites: Dual matriculation in HFNMZ and HMFDI.
1-3 credits, Letter graded (A, A-, B+, etc.)

HFN 590 Food Service Systems and Management

This supervised experiential learning class will take place in a hospital, long term care and/or assisted care facility that prepares therapeutic diets. In addition, these facilities may operate cafeterias open to the public and employees, and provide for catered functions. During this 150-hour experience students will become knowledgeable about the basics of quantity food production, such as menu planning, procurement, quantity food production, safety and sanitation, food distribution, and personnel management. It is expected that students will apply their knowledge and experience from prior coursework to the production of therapeutic diets.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 592 Community Nutrition

This supervised experiential learning class is 150 hours. Examples of acceptable sites include work on community nutrition projects related to gardens, food insecurity, childhood health and obesity as well as WIC and other community agencies (cooperative extension, food bank, department of health, senior centers, reservations, group housing agency, wellness center, corporate, school). This course will integrate and apply concepts and skills from didactic coursework in the Community Nutrition and Public Health unit.
3 credits, Letter graded (A, A-, B+, etc.)

HFN 594 Advanced Nutrition Therapy I

This supervised experiential learning course will provide practical, professional experiences such as performing nutritional assessments, including the NFPE of patients with simple to complex medical conditions. Included in this course is development of skills to meet competencies related to the nutrition care process with nutrition diagnosis, nutrition therapy implementation including counseling and monitoring/evaluation of the impact of nutrition interventions.

Prerequisites: Admission in program code HFPMS or HFPZM and HFN 515 HFN 596 is a continuation of this course. Students work with Stony Brook faculty and their on-site preceptors to plan which assignments and summative evaluations will be completed in this course, as well as HFN 596. This will determine in which course performance indicators will be tracked, although it is recognized that there will likely be overlap. This course will integrate and apply concepts and skills from didactic coursework in the Nutrition Therapy unit.
5 credits, Letter graded (A, A-, B+, etc.)

HFN 596 Advanced Nutrition Therapy II

This supervised experiential learning course will provide practical, professional experiences such as performing nutritional assessments, including the NFPE of patients with simple to complex medical conditions. Included in this course is development of skills to meet competencies related to the nutrition care process with nutrition diagnosis, nutrition therapy implementation including counseling and monitoring/evaluation of the impact of nutrition interventions. Assignments will enhance the learning process. Prerequisite:sAdmission in program code HFPMS or HFPZM and HFN 515. HFN 594 is a continuation of this course. Students work with Stony Brook faculty and their on-site preceptors to plan which assignments and summative evaluations will be completed in this course, as well as HFN 594. This will determine in which course performance indicators will be tracked, although it is recognized that there will likely be overlap. This course will integrate and apply concepts and skills from didactic coursework in the Nutrition Therapy unit.
5 credits, Letter graded (A, A-, B+, etc.)

HFN 598 Research and Quality Improvement

This course first explores the differences between quality assurance and research activities. Students are then engaged in the process of conducting a robust quality assurance program as well as in a discussion of differences in a potential research project on the same topic. During this time students will work on a group quality assurance project on a clinical topic. This will include identification of the problem, project design, baseline data collection, data analysis and development of conclusions. Each student will prepare a capstone summary PowerPoint presentation and deliver to a group of students and faculty. Prerequisites: Admission in program code HFPMS or HFPZM; Corequisites: HFN 575 This course will integrate and apply concepts and skills from didactic coursework in the Research and Quality Improvement unit.
1 credit, Letter graded (A, A-, B+, etc.)

HHA

HHA 500 Health Care Delivery Systems

This course will focus on historic and current issues that impact the US healthcare delivery system with a primary focus on how health care is delivered, organized, governed, and financed. Special emphasis on how these concepts impact health care in the United States (US): current health policy and reform; social determinants of health; the interrelated concepts of access, quality, and cost; meaningful use; and more recent focus on value.
3 credits

HHA 501 Hlth Info Esstls: Standards and Interoperability

This course provides broad but significant immersion into the field of biomedical and health informatics with a special emphasis on the following topics: the clinical flow of data (acquisition, use, and storage of information in healthcare), biomedical research, informatics and public health, decision and cognitive science. Electronic health records, personal health records, personalized medicine, imaging, telemedicine, concepts of meaningful use, Health Information Technology for Economic and Clinical Health (HITECH), and American Recovery and Reinvestment Act (ARRA) are also explored.
3 credits

HHA 502 Health Information Systems and HIT Essentials

Provides broad but significant immersion into the fields of health information systems and health information technology (HIT). Emphasizes systems analysis, clinical decision-support, integrated networking and distributed computing technologies, telemedicine applications, mobile applications, cloud computing, architecture and infrastructures, and database and systems administration.
3 credits

HHA 503 HC Cybersec: Regulations, Confidentiality, Privacy

This course provides foundational knowledge in the laws, regulations, policies, and procedures related to the confidentiality, privacy, and security on all levels of health-related information and infrastructures. Special emphasis on will be on the following: interoperability, The Health Insurance Portability and Accountability Act (HIPAA), Health Information Technology for Economic and Clinical Health (HITECH) Act,Privacy Rule and Security Standards, Code Set Rules, meaningful use, and information technology (IT) security forensics.
3 credits

HHA 504 Cloud Computing Health Informatic Professionals

This course will introduce open source cloud computing to a general audience along with the skills necessary to securely deploy applications and websites to the cloud. In this class, students will have the opportunity to learn about a wide variety of topics related to cloud computing that include the command line, Linux operating systems, open source software development, setting up servers and Linux, Apache, MySQL, and PHP (LAMP) stacks via docker, using GitHub, best practices for security, and the Domain Name System. No prior developer experience is necessary.
3 credits

HHA 505 Healthcare Leadership and Management Essentials

This course provides broad but significant immersion in organizational change, leadership, organizational behavior, project management, and change management. There is an emphasis on the following: healthcare project life-cycle, theoretical and applied strategies of managing change, communication and group dynamics, systems thinking, and strategic planning.
3 credits

HHA 506 Research Design and Methodology for the Health Informatics Professionals

This course provides an in-depth overview of quantitative, qualitative, and mixed methods research designs and methodologies. Students will analyze and evaluate the strengths and limitations of methods research designs and methodologies most appropriate to the practice of health informatics. This course emphases critical review and techniques of applied research and evaluation. Upon course completion, attendees will understand how to: (1) design and analyze clinical research protocols, (2) comply with best practices for study conduct, data management, and regulations, and, (3) apply the principles and practices underlying ethical and reproducible research.
3 credits

HHA 507 Data Science for Health Care: Python and R

This course introduces the student to the emerging field of data science through the presentation of basic math and statistics principles, an introduction to the computer tools and software commonly used to perform the data analytics, and a general overview of the machine learning techniques commonly applied to datasets for knowledge discovery within health care. The students will identify a dataset for a final project that will require them to perform preparation, cleaning, simple visualization, and analysis of the data with such tools as Python and R. Understanding the varied nature of data, their acquisition and preliminary analysis provides the requisite skills to succeed in further study and application of the data science field within healthcare.
3 credits

HHA 530 Clinical Decision Making and Process Improvement

Provides in-depth immersion into the knowledge and skills required to implement effective clinical decision making systems and participate in the development of clinical process improvements that support effective, efficient, safe, timely, equitable, and patient-centered care. Summer and Fall courses. Prerequisites: Summer and Fall courses including HHA 500, HHA 501, HHA 502, HHA 503, HHA 504, HHA 505, HHA 506, and HHA 507.
4 credits

HHA 531 Health Information Systems

Provides in-depth immersion into the knowledge and skills required to participate in the development or selection of an information system for clinicians; prepare clinicians prior to implementation and support them during implementation and ongoing operation of clinical information system; and evaluate the effectiveness of a system in meeting clinical needs. Summer and Fall courses. Prerequisites: Summer and Fall courses including HHA 500, HHA 501, HHA 502, HHA 503, HHA 504, HHA 505, HHA 506, and HHA 507.
4 credits

HHA 532 Leading and Managing Clinical Information Systems Change

Provides in-depth immersion into the knowledge and skills required to lead, manage change, and promote adoption associated with implementing clinical information systems. Summer and Fall courses. Prerequisites: Summer and Fall courses including HHA 500, HHA 501, HHA 502, HHA 503, HHA 504, HHA 505, HHA 506, and HHA 507.
4 credits

HHA 550 Applied Healthcare Analytics

Focuses on the design and implementation of analytics to aide in the evaluation of health in populations. Explores the role of the health care analyst and analytics in the improvement of healthcare delivery and outcomes. Consists of on-line lectures, videos, and hand on assignments with data set sand analytic models. Prerequisites: Summer and Fall Courses. Prerequisites: HHA 500, HHA 501, HHA 502, HHA 503, HHA 504, HHA 505, HHA 506, and HHA 507. Department permission required.
4 credits

HHA 551 Emerging Technologies in Healthcare

This course will focus on the application of new and emerging technologies in healthcare, as well as the technologies that are utilized to extract, process, and manipulate data in cloud environments. This course will consist of discussions, lectures, and hands-on use of analytical tools for analysis and data extraction. Prerequisites: Summer and Fall Courses. Prerequisites: HHA 500, HHA 501, HHA 502, HHA 503, HHA 504, HHA 505, HHA 506, and HHA 507. Department permission required.
4 credits

HHA 552 Healthcare Data Visualization

Focuses on techniques and tools for designing and implementing effective visual representations of healthcare data. Students will learn how to analyze, parse, and represent quantitative and text data visually, and how to present data that is clutter free, engaging and easy to comprehend. Hands-on course utilizes Tableau as a presentation platform for the designing and building of data visualizations. Students will learn to express findings, answer questions, and to drive data supported decisions in healthcare. Consists of three weeks of campus lecture, twelve weeks of hand-on use of data visualization tools, assignments, lectures, and on-line discussions. Prerequisites: HHA 500, HHA 501, HHA 502, HHA 503, HHA 504, HHA 505, HHA 506, and HHA 507. Department permission required.
4 credits

HHA 586 Specialization Practicum I

This is the first course in a two-part experiential learning sequence designed to provide significant hands-on immersion into health informatics. This 180-hour practicum is a progressive experiential learning experience.
6 credits

HHA 588 Specialization Practicum II

This is the second and final course in a two-part experiential learning sequence designed to provide significant hands-on immersion into health informatics. This second 180-hour practicum is a progressive experiential learning experience that builds on the first experience.
6 credits

HHA 590 Quality Improvement Project I

This is the first course in a two-part sequence. Under faculty supervision, students are given the opportunity to demonstrate integration, synthesis, and application of their knowledge and skills by identifying a real-world health informatics problem and researching best practices that can be utilized to create a solution. A majority of the course work will be completed independently.
6 credits

HHA 592 Quality Improvement Project II

This is the second course in a two-part sequence designed to give the student the opportunity to demonstrate mastery of the knowledge and skills acquired in the program. Students will build upon the work in HHA 590 to design a health informatics solution for a real-world problem. Under faculty mentor-ship, students will work independently, but will be required to meet synchronously in small groups during the last week of the semester for presentations. Students are also required to engage in a rigorous peer-review of other students¿ progress throughout the semester.
6 credits

HHA 599 Practicum Continuation

This course is for Applied Health Informatics students continuing with Practicum.
0 credit, S/F graded

HHM

HHM 500 Fundamentals of Molecular Biology Techniques

Covers main techniques used in molecular biology, including direct and amplified nucleic acid-based methods. Emphasizes basic principles behind each test, interpretation of results, advantages and limitations of each methods, and type of specimen required for each test. Addresses the importance of quality control, biosafety and proper decontamination procedures to ensure accurate data for proper patient diagnosis.
3 credits

HHM 510 Advanced Molecular Biology Laboratory

This 15-week laboratory course consists of a 6-hour weekly lab, during which the students perform hands-on activities covering the main molecular biology techniques used for the diagnosis of infectious and genetic diseases, determination of cancer markers, and forensic testing. Techniques include nucleic acid isolation, purification and quantification, DNA separation, amplification and sequencing. Prerequisite: HHM 500
3 credits

HHM 511 Application of Molecular Biology in Diagnostics

Introduces the applications of molecular biology techniques in diagnostics of various diseases. The students will learn the molecular mechanisms underlying infection by microorganisms, genetically inherited diseases as well as cancer, and how molecular techniques can help with the diagnosis and prognosis of these diseases. Addresses the advantages and limitations of different techniques available, as well as the importance of quality control. Prerequisite: HHM 500
3 credits

HHM 516 Application of Molecular Biology in Research

Focuses on various applications of molecular biology techniques in both basic and translational medical research. High emphasis will be placed on the understanding of the molecular pathways involved in various diseases, including cancer, genetically inherited diseases and infection by microorganisms. The students will learn how the power of molecular genetic analysis is used to identify, isolate and characterize genes that cause and contribute to the etiology of human diseases. Explains how various molecular biology techniques can be applied to diagnose diseases and to develop potential therapeutics. Discusses the advantages and limitations of different techniques, as well as the importance of quality control. Prerequisite: HHM 500, 510, 511
3 credits

HHM 520 Flow Cytometry Laboratory

This laboratory course consists of 30 hours of hands-on activities, and covers the main techniques used in the flow cytometry laboratory. This laboratory will be given once weekly, on weekends or weeknights. Students will perform numerous immunophenotyping techniques, including stem cell quantitation, hematologic and non-hematologic neoplasms, minimal residual disease, fetal hemoglobin and cell functional assays. Students will learn how to do quality assurance and instrumentation maintenance, and will gain hands-on experience with the application software used by flow cytometers. Prerequisite: HHM 500, 510, 511 Co-requisite: HHM 521
1 credit

HHM 521 Flow Cytometry Methods and Applications

Introduces students to the applications of flow cytometry techniques and their applications in the diagnosis and prognosis of human diseases including leukemia and lymphoma, primary immunodeficiency diseases, Human

Immunodeficiency Virus (HIV) infection detection of paroxysmal nocturnal hemoglobinuria, cytometry clinical transplantation, leukocyte functional assays, cell apoptosis, CD34 positive stem cell enumeration, immunologic dysfunction, and DNA and cell proliferation measurements in cancer cells. Prerequisite: HHM 500, 510, 511 Co-Requisite: HHM 520
2 credits

HHM 531 Cytogenetics Methodology and Applications

Focuses on the impact of chromosome abnormalities on the diagnosis, prognosis and treatment of cytogenetic syndromes. Covers basic cytogenetic concepts and laboratory techniques required for the detection of various diseases, including sex chromosome abnormalities, the fragile X syndrome, and structural and numerical chromosome abnormalities, with special emphasis on the mechanisms underlying these syndromes. Prerequisite: HHM 500, 510, 511, 516, 520, 521, 540, 545
2 credits

HHM 540 Laboratory Operations in Molecular Biology

Covers the main principles of laboratory standards used in the molecular diagnostics, including pre- and post-analytical operations, test result documentation, quality assurance and quality control. Considers the importance of safety, regulation and standards.Prerequisite: HHM 500, 510, 511, 516, 520, 521
2 credits

HHM 545 Ethics in the Laboratory

Reviews professional guidelines for ethical conduct and approaches to ethical dilemmas for laboratory scientists. Explores ethical issues, including responsible research conduct, good laboratory practice, and research with human subjects. Discusses ethical principles in genetics and genetic engineering; advance directives, confidentiality, informed consent, patient rights, and Health Insurance Portability and Accountability Act of 1996 (HIPAA). All aspects of this class will be presented and discussed via a distance learning format using Blackboard. Prerequisite: HHM 500, 510, 511, 516, 520, 521
2 credits

HHM 551 Research Methods and Scientific Writing

Introduces students to the basic concepts of biomedical research. Emphasizes critical evaluation of published scientific literature, and how to plan, design and conduct a research study. Presents the proper use of the different statistical methods required to analyze research data. Teaches students how to communicate effectively as scientists by writing high quality scientific papers, giving oral presentations, and putting together a research proposal. The students will apply these concepts to their own writing. Prerequisite: HHM 500, 510, 511, 516, 520, 521, 540, 545
3 credits

HHM 570 Journal Club on Medical Molecular Biology

Students participate in critical analysis of scientific journal articles from a diverse set of topics related to the field of molecular biology including molecular diagnostics, molecular microbiology, cancer research, genetically inherited diseases and genomics, among others. In each session, a student presents the essential information of the paper including background, significance, hypothesis, experimental methods, results and conclusions by means of a narrated Powerpoint presentation. Following the presentation, the rest of the class discuss and analyze the content of the paper in an online discussion forum. Prerequisite: HHM 500, 510, 511, 516, 520, 521, 540, 545
1 credit

HHM 581 Clinical Practicum in Molecular Diagnostics

This is a two week fulltime practicum in a Clinical Molecular Diagnostics lab designed to give students supervised practical application of what was learned in classes. The students will be provided with on-the-job training while experiencing the work environment in a clinical diagnostic laboratory. Prerequisite: HHM fall year two courses.
2 credits

HHM 583 Clinical Practicum in Flow Cytometry

This is a two week fulltime practicum in a Clinical Flow Cytometry lab designed to give students supervised practical application of what was learned in classes. The students will be provided with on-the-job training while experiencing the work environment in a clinical diagnostic laboratory. This will be repeatable course, for additional course credits. Prerequisite: HHM fall year two courses.
2 credits

HHM 585 Clinical Practicum in Cytogenetics

This is a two week fulltime practicum in a cytogenetics diagnostics lab designed to give students supervised practical application of what was learned in classes. The students will be provided with on-the-job training while experiencing the work environment in a clinical diagnostic laboratory. Prerequisite: HHM fall year two courses.
2 credits

HHM 596 Capstone Project in Medical Molecular Biology

Culminating experience designed to for students to choose a topic of interest within the area of molecular diagnostics, flow cytometry, or cytogenetics and further investigate it by means of a systemic literature review. Topics can be problems identified during clinical practice or learned in classes. Students will need to develop a comprehensive proposal that will be reviewed by faculty. Prerequisite: HHM fall year two courses.
2 credits

HHS

HHS 510 Aphasia and Related Disorders

Provides current theory and practice in the identification, assessment, and intervention of aphasia in adults. Includes the anatomy, neuropathology and the cognitive and communication characteristics associated with different types of aphasias and Right Hemisphere Syndrome. Covers evidence-based practices in the assessment and intervention, multicultural issues during service delivery, patient and family education, and client advocacy. Students will learn how to translate research into clinical practice.
3 credits

HHS 511 Cognitive Communication Disorders

Provides information about the assessment and intervention of cognitive communication disorders, including traumatic brain injury, primary progressive aphasia and dementia. Discusses evaluating and treating cognition, including attention, memory and executive function skills. Discusses evidence based practice for assessment and intervention with a focus on The World Health Organization's International Classification of Functioning, Disability, and Health model. Opportunities will be available for interprofessional practice and discussion about multicultural service delivery, partner/family education and challenges that clinicians face in today's healthcare system.
1 credit

HHS 512 Neuroscience in Communication Sciences and Disorders

Covers the neuroanatomy and neurophysiology of the speech, language, hearing, and swallowing mechanism. This intensive neuroscience course includes neuroanatomical dissections, lectures, and clinical problem solving. Requires students to conduct a cranial nerve exam examining the cranial nerves responsible for speech and swallowing with a client diagnosed with a communication or swallowing disorder. Uses team-based and problem-based learning in the classroom to help students apply their theoretical knowledge into clinical practice.
3 credits

HHS 513 Adult Dysphagia

Examines the anatomy and physiology of normal and disordered swallowing in the adult population. Includes assessment and intervention of swallowing disorders; etiologies of swallowing disorders; working with tracheotomy/ventilator dependent populations; ethical considerations; documentation; insurance coverage; importance of client advocacy; and education of family and other professionals. Students will refine their skills through case scenarios, role-playing situations, interprofessional education and interprofessionl practice. Prerequisites: Completion of Year One Fall Courses
3 credits

HHS 514 Neuromotor Speech Disorders

Covers the etiology, assessment and intervention of motor speech disorders secondary to developmental or acquired central and/or peripheral damage to the nervous system of adults and children. Includes the identification and differentiation of various motor speech disorders secondary to neurological injury. Discusses best practice in assessment and intervention with an emphasis on evidence-based practice, ethical case studies, functional treatment outcomes, importance of interprofessional education, and client advocacy. Students will observe in the ALS team clinic at Stony Brook University Hospital.
3 credits

HHS 520 Preschool Child Language Disorders

Examines the theories of language development, evidence-based practice assessment and intervention of language delays/disorders in preschool children, multicultural service delivery, treatment advocacy and outreach, designing intervention plans, establishing and maintaining collaborative relationships, and the role of family in the intervention process. Students will apply their theoretical knowledge to clinical practice by eliciting a language sample from a preschool child.
3 credits

HHS 521 Speech Sound Disorders

Covers articulation and phonological development, theories of development, and disorders in children. Discusses best practice in assessment and intervention with an emphasis on evidence-based practice, language difference versus disorder, multicultural issues in service delivery, and phonological awareness. Students will apply theory into clinical practice by completing a speech sample assignment with a child diagnosed with a speech sound disorder.
3 credits

HHS 522 Early Intervention in Speech-Language Pathology

Includes information about the normal development of feeding/oral-motor skills and its relation to overall motor development. Discusses feeding, craniofacial syndromes and disorders. Students will observe a session at the Cleft Palate - Craniofacial Center. Discusses information about clinical practice in early intervention, caregiver training, multicultural issues in service delivery, and counseling of families. Includes discussion about evidence-based practice approaches to assessment and intervention of children who are medically fragile and how to best facilitate communication and feeding with these children.
3 credits

HHS 523 Language and Literacy Disorders in School-Age Children and Adolescents

Provides an overview about school-age and adolescent language and literacy disorders. Covers models of language and reading development. Discusses evidence-based practice assessment and intervention of oral and written language disorders in school-age children and adolescents, multicultural service delivery, treatment advocacy and outreach, designing intervention plans accounting for Common State Core

Standards and Response to Intervention (RTI), and providing therapy services to children in schools. Students will apply their theoretical knowledge to clinical practice by eliciting narrative samples from a school-age child.
3 credits

HHS 524 Autism and Social Communication Disorders

Reviews current research about speech-language, cognitive, and social communication aspects of Autism Spectrum Disorders. Discusses possible theories of ASD, the diagnostic criteria used to identify these children, best practices in assessment and intervention. Focuses on the role of families in the assessment and intervention process, using effective intervention strategies, and collaborative and interdisciplinary models of service delivery for children diagnosed with Autism and social communication disorders.
2 credits

HHS 526 Foundations of Teaching English Language Arts to Bilingual Language Learners

Provides the students with an understanding of methods of teaching English language arts to bilingual English language learners, including literacy for meeting the State learning standards for students. This is a required course for students who wish to obtain a Bilingual Extension in any registered and approved Base Certification Program. There is a requirement of 25 hours of field experience dedicated to observations and paraprofessional authentic activites.
3 credits

HHS 530 Voice and Resonance Disorders & Instrumentation

Provides a thorough understanding of physical, physiological and pedagogical principles in understanding professional and nonprofessional impaired voice production in children and adults. Discusses vocal anatomy, voice classification, and us of instrumentation for assessment and intervention. Provides information about evidence-based practices in assessment and intervention, multicultural issues, and client advocacy. Students will integrate their theoretical skills with clinical practice by engaging in real life scenarios and case studies.
3 credits

HHS 531 Fluency Disorders

Provides the theoretical knowledge about the nature and possible etiologies of fluency disorders, and evidence-based practice assessment and intervention in the preschool, school-age, adolescent and adult populations. Emphasizes working with family and friends of persons who stutter. At the culmination of the course, students will complete a diagnostic evaluation and an intervention plan of a person with a fluency disorders.
2 credits

HHS 532 Aural Rehabilitation

Provides information and strategies for aural habilitation/ rehabilitation with children and adults. Topics include hearing aids, cochlear implants, assistive technology, speech reading, auditory training, listening skills impacted by hearing loss, deafness, auditory processing disorders and communication strategies and counseling techniques. Students will develop an intervention plan based on communication skills and needs of the individual and learn about collaborating as part of multidisciplinary teams.
2 credits

HHS 533 Augmentative and Alternative Communication

Examines the design, selection, and use of augmentative and alternative methods of communication. Addresses the populations for which they are appropriate, and issues related to the prevention, assessment and intervention of persons using augmentative and alternative methods and devices, client advocacy, and service delivery models. Students will also learn about incorporating evidence-based practices and multicultural services deilivery in assessment and intervention.
2 credits

HHS 536 Seminar in Medical Speech-Language Pathology

Prepares students to provide evidence-based practice assessment and intervention with patients in a medical setting. Students will apply ethical and professional practice skills during problem-based and team-based case studies. Topics include: identifying the role of the SLP as a member of the rehabilitation team in healthcare, identifying pertinent background information and applying the information in making decisions about the patient's communication and swallowing function, creating functional treatment plans, and interprofessional education and practice. Students will also participate in neurology grand rounds.
1 credit

HHS 537 Seminar in Professional, Ethical and Multicultural Issues in Communication Sciences and Disorders

Covers an overview of the policies of the graduate program in Speech-Language Pathology and current issues and procedures related to the clinical pratice of speech-language pathology. Topics include knowledge and skills related to professional ethics, SLPs in different work settings, documentation, confidentiality, mandatory reporting of abuse, regulations and requirments for professional practice, cultural conisderations for studying, assessing and treating communication and swallowing disorders in culturally and linguistically diverse (CLD) populations, knowledge and skills related to certification and licensure, employment seeking skills, cultural linguistic diversity, clinical fellowship, and information about ASHA and its role in the profession.
2 credits

HHS 539 Seminar in Counseling

Provides an overview about counseling in speech-language pathology, specifically in interdisciplinary and collaborative healthcare and educational settings. Covers the role of the speech-language pathologist in the counseling process, contemporary counseling issues, models of counseling, multicutural issues and advocacy during prevention and

wellness, screening, assessment and treatment in different service areas. Incorporates case studies and team-based learning.
1 credit

HHS 540 Foundations of Clinical Practice

Provides the students with a thorough understanding of the assessment and therapy principles, methods and procedures in speech-language pathology. Topics include Health Insurance Portability and Accountability Act (HIPPA), universal precautions, CALIPSO, writing behavioral objectives, session plans, progress notes, individual and group therapy, data accountability and recording, and teaching strategies. Students will attain 25 hours of supervised clinical observation if they did not attain at the undergraduate level. Corequisite: HHS 581
2 credits

HHS 542 Clinical Concepts in Audiology

Provides knowledge and skills necessary to perform the responsibilities as outlined in the scope of practice of the speech-language pathologist. Discusses pure tone screenings, otoscopic inspection, tympanometry screening, listening checks for hearing aids, multicultural screening considerations, and counseling patient/family.
2 credits

HHS 544 Diagnostics in Speech-Language Pathology

Covers principles and methods of evidence-based practice assessment of a variety of communication and swallowing disorders across the lifespan. Includes analyzing and interpreting testing data, designing functional intervention plans based on the results, reporting assessment results to clients, family, and other professionals working in educational and health related fields, teaching students to be critical consumers of assessment materials, client advocacy and outreach, and professional ethics and practice. Students will engage in team-based and problem-based learning experiences. Students will acquire experience writing the different sections of a diagnostic report. Corequisite: HHS This course is taken concurrently with HHS 587
2 credits

HHS 546 Speech Language Pathology in Schools

Covers the role of the speech-language pathologist in the school setting, models of service delivery, historical and legal foundations of education, scheduling, individualized education planning, multicultural service delivery, importance of collaboration and consultation, Common Core Standards, managing the educational environment to maximize communication opportunities, and communication with family and professionals. Describes models and theories of typical and atypical growth and behavior across age groups, and philosophies that provide the foundation for research- based special education practice.
3 credits

HHS 551 Research Methods and Resources in Communication Sciences and Disorders

Teaches students to be critical consumers of different types of research in the field of communication sciences and disorders. Topics include research designs; accessing and assessing articles in journals; using Refworks; creating an annotated bibliography; ethics in research; Institutional Review Board; Evidence-Based Practice in communication disorders; HIPAA; and constructing a presentation/professional poster. Students will be required to write a research proposal including a research question, theoretical position, supportive literature review, and methodology.
2 credits

HHS 572 Speech and Language Pathology in the Schools Clinical

Required clinical/seminar for students pursuing their TSSLD certification. Students will complete 150 clock hours of supervised clinical practice in a school setting. Seminar will meet once weekly and allow students to discuss evidence-based practice assessment and intervention in the school setting, models of service delivery, multicultural diversity, advocacy and outreach, classroom management, NYS Standards, educating family, collaboration with professionals, and reflect about their clinical experiences.
4 credits

HHS 574 Speech and Language Pathology in the Schools Bilingual Clinical

Required clinical/seminar for students pursuing their Bilingual Extension certification. Students are required to complete 150 clock hours (50 hours with bilingual population) of supervised clinical practice in a bilingual school setting. There will be a seminar which will meet once weekly and allow students to discuss evidence-based practice assessment and intervention in the school setting, models of service delivery, multicultural diversity, advocacy and outreach, classroom management, NYS Standards, educating family, collaboration with professionals, and reflect about their clinical experiences
4 credits

HHS 581 Clinical I

Integrates information learned in concurrent speech-language pathology courses through real-life clinical experiences, classroom discussions and clinical simulations with other allied health professionals. Clinical clock hours will be obtained for real-life experiences and clinical simulations. Students will complete an evidence-based practice presentation to faculty and peers at the culmination of this course. Corequisite: HHS 540 Foundations of Clinical Practice
.5 credit

HHS 582 Clinical II

Integrates information learned in previous and concurrent speech-language pathology courses through real-life clinical experiences and classroom discussions. Students will provide prevention, and evidence-based practice assessment and intervention services with adults and children. Clinical clock hours will be obtained for real-life experiences at clinical sites

affiliated with Stony Brook University. Students will complete an evidence- based practice presentation to faculty and peers at the culmination of this course. Prerequisites: HHS 540 and HHS 581 (with a minimum grade of B)
1 credit

HHS 583 Clinical III

Integrates information learned in previous and concurrent speech-language pathology courses through real-life clinical experiences and classroom discussions. Students will provide prevention and evidence-based practice assessment and intervention services with children and adults. Clinical clock hours will be obtained for real-life experiences at an outside placement. Students will complete an evidence-based practice presentation to faculty and peers at the culmination of this course. Prerequisites: HHS 540, HHS 581, HHS 582 (with a minimum grade of B)
1.5 credits

HHS 584 Clinical IV

Integrates information learned in previous and concurrent speech-language pathology courses through real-life clinical experiences and classroom discussions. Students will provide prevention, and evidence-based practice assessment and intervention services with children or adults. Clinical clock hours will be obtained for real-life experiences at an outside placement. Students will complete and evidence-based practice presentation to faculty and peers at the culmination of this course. Prerequisites: HHS 540, HHS 581, HHS 582, and HHS 583 (with a minimum grade of B).
3 credits

HHS 585 Clinical V

Integrates information learned in previous and concurrent speech-language pathology courses through real-life clinical experiences and classroom discussions. Students will provide prevention and evidence-based practice assessment and intervention services with children or adults. Clinical clock hours will be obtained for real-life experiences at an outside placement. Students will complete an evidence-based practice presentation to faculty and peers at the culmination of this course. Prerequisites: HHS 540, HHS 581, HHS 582, and HHS 583 (with a minimum grade of B). NOTE: This course required clinical for students not completing the TSSLD or TSSLD with Bilingual Extension. Foundations of Clinical Practice, Clinical I, Clinical II, Clinical III, and Clinical IV are pre-requisites for this course.
3 credits

HHS 586 Audiology Clinical

Provides practical skills necessary to perform the responsibilities as outlined in the scope of practice of the speech-language pathologist. Students will gain hands-on experience performing pure tone screenings, otoscopic inspection, tympanometry screenings, listening checks for hearing aids, and making referrals to audiologists. Corequisite: HHS 542
.5 credit

HHS 587 Diagnostics in Speech-Language Pathology Clinical

Students will provide evidence-based practice assessment with children and adults diagnosed with communication and swallowing disorders. Students will be selecting and administering evaluation procedures, adapting evaluation procedures, interpreting and synthesizing information to determine diagnoses, considering multicultural service delivery and treatment advocacy and outreach, designing intervention plans, establishing and maintain collaborative relationships, making appropriate referrals and recommendations, providing counseling and education to patients/family and other professionals, writing diagnostic reports, and adhering to the ASHA Code of Ethics.
Corequisite: HHS 544
.5 credit

HHS 594 Capstone Project in Speech-Language Pathology and Praxis Examination Preparation

This hybrid course will cover the nine ASHA areas of specialty, including speech sound disorders; child language/literacy disorder; adult language/neurological disorders; voice disorders; fluency disorders; augmentative and alternative communication; dysphagia; research methods; and cultural aspects of communication disorders. Discusses basic human communication; audiology/hearing; counseling; professional issues; and research. Provides necessary tools to prepare and present a professional poster illustrating students' research study. Students will write a research paper summarizing their capstone project for submission to a journal or for a professional presentation.
2 credits

HHS 599 Clinical Continuation

Clinical continuation course for speech-language pathology students only.
0 credit, S/F graded

HM

HM 500 First Year Medicine (Fall)

First year medical students (Fall) August - December.
0 credit

HM 501 First Year Medicine (Spring)

First year medical students (Spring) January - June.
0 credit

HM 600 Second Year Medicine (Fall)

Second year medical students (Fall) August - December.
0 credit

HM 601 Second Year Medicine (Spring)

Second Year Medical Students (Spring) January - June.
0 credit

HM 700 Third Year Medicine (Fall) July - December

Third year medical students (Fall) July - December

0 credit

HM 701 Third Year Medicine (Spring) January - June

Third year medical students (Spring) January - June
0 credit

HM 800 Fourth Year Medicine (Fall) July - December

Fourth year medical students (Fall) July - December
0 credit

HM 801 Fourth Year Medicine (Spring) January - May

Fourth year medical students (Spring) January - May/June
0 credit

HM 910 Continuation of Studies

Medical student continuation of studies
0-3 credits

HM 999 VISIT STUD ELECTIVE

Students visiting from other medical schools to complete an elective at Univeristy Hospital
0-12 credits, S/U grading

HMA

HMA 500 First Year 3-Year Medicine (Fall)

First Year 3-Year Medicine Students (Fall) July - December
0 credit

HMA 501 First Year 3-Year Medicine (Spring)

First Year 3-Year Medicine Students (Spring) January - June
0 credit

HMA 600 Second Year 3-Year Medicine (Fall)

Second Year 3-Year Medicine Students (Fall) July - December
0 credit

HMA 601 Second Year 3-Year Medicine (Spring)

Second Year 3-Year Medicine Students (Spring) January - June
0 credit

HMA 700 Third Year 3-Year Medicine (Fall)

Third Year 3-Year Medicine Students (Fall) July - December
0 credit

HMA 701 Third Year 3-Year Medicine (Spring)

Third Year 3-Year Medicine Students (Spring) January - June
0 credit

HMC

HMC 331 Legal and Ethical Issues in Health Care

Introduction to ethics, its application to the health care profession, and to some of the major ethical and legal doctrines that affect health care professionals. The doctrines are discussed by addressing specific problem situations. Some of the topics are the right to refuse medical, mental, and social care; the right to life and its limits (e.g., suicide, euthanasia, abortion); the right to receive care; and access to and evaluation of health care delivery. Since the goal of the course is to sensitize professionals to legal and ethical issues like those they will be called upon to resolve, students are expected to take part in class discussions and do readings.
3 credits

HMC 361 Literature and Medicine

Explores major themes of medical care and illness as presented in works of poetry, prose, and drama. Includes personal and ethical dilemmas confronted by doctors; special characteristics and discourse of the medical setting; the experience of being ill; philosophical, social, and spritual dimensions of the clinical enounter; and the search for meanings in medical events.
3 credits

HMC 487 Independent Study

3 credits

HMF

HMF 88 Continuing Dietetic Internship Program

This course is for continuing dietetic interns.
0 credit, S/F graded

HMF 89 Dietetic Internship Program

The Dietetic Internship program emphasizes nutrition therapy and community nutrition. Dietetic interns routinely interact with physicians, medical residents, nurses and nurse practitioners at interdisciplinary case conferences, grand rounds, walking rounds and informal educational activities. This internship is accredited by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics. The program is limited to those students accepted into the program through the DICAS process.
0 credit, S/F graded

HMH

HMH 401 INTRO MEDICAL PHYS

Introduction to Medical Physics
3 credits

HMO

HMO 401 RESEARCH IN PERINATA

HMO 402 RSH PRJ IN OB/GYN

HMO 490 IND STUDY CYTOGENET

HMO 492 IND STUDY REP BIO

HMP

HMP 425 INDEP RES NEUROPSYCH

HMP 430 INDEPENDENT STUDY

HMP 575 Appl Clin Neuropsych

HNC

HNC 299 Introduction to Professional Trends in Nursing

This course explores current health care issues in relationship to nursing practice and professionalism. Social, ethical, legal and cultural implications will be considered in accordance with Nursing: Scope and Standard of Practice (ANA, 2015), The Essentials of Baccalaureate Education for Professional Nursing Practice (AACN, 2008), and QSEN Competencies (2005).
1-4 credits

HNC 300 Health Care Informatics

This course introduces information technology and its use in the health care arena. The essential components of information management, computer fluency, and information literacy are emphasized. Nursing informatics as it relates to patient-centered care, quality improvement, evidenced-based practice, and telehealth are explored.
3 credits

HNC 304 Social Justice in Health Care

This course will explore the role of social determinants in health outcomes. Current theories on health disparities will be examined. Strategies to decrease these disparities will be discussed and methods to promote social justice within the current health care environment will be presented.
2 credits

HNC 305 Healing and the Arts

This course examines the interface between the arts and nursing to provide insight into the human condition and the healing process. Theoretical and evidence-based foundations that inform the field of the arts in health care will be discussed. Students will have the opportunity to view, interpret, reflect on and create works of art, including paintings, sculpture, literature, film, music and movement. These topics will be explored to develop and enhance the skills of observation, analysis, empathy, self-reflection, and interpersonal (nurse-patient) and interprofessional (nurse-colleague) relationships, which are essential in supporting the healing process and providing holistic patient-centered care to diverse populations.
2 credits

HNC 310 Pathophysiology

This is a foundation course introducing the student to the basic mechanisms of disease and pathophysiology.
3 credits

HNC 333 Fundamentals of Pharmacology

This course explores the basic scientific principles that underlie the mechanisms of action of the major drug classifications and their effect on pathophysiologic processes. A prototype approach is used to assist students in organizing and learning the major drug classifications. A major emphasis is placed on development of clinical decision-making and critical thinking skills.
4 credits

HNC 340 Novice to Expert

This course is designed as an introduction and application of Patricia Benner's model of professional development of nurses. The relationship of theory to practice in the acquisition of skills will be explored. Course work will facilitate a deeper understanding and appreciation for the expanded roles and responsibilities of the baccalaureate prepared registered nurse. Prerequisite: HNC 333
6 credits

HNC 350 Professional Role Development in Nursing

This is a foundation course that explores the role and responsibilities of the nurse in meeting the demands of current and evolving health care systems. The history and theoretical basis of the profession are introduced. Standards of practice, ethical issues, and personal values are examined. Political, social, and economic issues, as they relate to nursing and health care, are also considered. Cultural awareness and sensitivity are emphasized. Consideration of the schools mission and philosophy is followed by student development of a personal philosophy of nursing practice.
2 credits

HNC 351 Role Development for Professional Advancement

This course explores the historical and theoretical basis of the nursing profession. The role and responsibilities of the baccalaureate nurse, as manager of care, in current and evolving health care systems are presented. Standards of practice, ethical issues, and personal values are examined. The process of writing for the profession for the purposes of evidence dissemination, sharing innovations, and developing the science base of the profession is emphasized.

3 credits

HNC 360 Statistical Methods for Health Care Research

This course explores statistical principles and their application to research as a basis for evidence-based healthcare practice. A focus on data management, probability testing, and statistical analysis, as they are used to answer research questions and test hypotheses, is provided. Case studies will provide introductory applications of descriptive and inferential statistics to salient and researchable health care problems.
3 credits

HNC 367 Introduction to Health Care Policy

This course provides a basic understanding of the health care policy in the United States. Emphasis is placed on the application of healthcare policy as it relates to the nurses role as patient advocate, and professional change agent. The impact of specific policies and regulating agencies upon nursing practice is also examined.
2 credits

HNC 369 Ethical and Legal Issues in Health Care Policy

This course delivers an introduction to health care policy in the United States. Emphasis is placed on the application of policy as it relates to ethical considerations, advocacy, and promoting change. The legal basis of current policy will be discussed. The impact of specific policies and regulating agencies upon optimal care for individuals and populations is also examined.
3 credits

HNC 370 Health Assessment

This course focuses on the health assessment of individuals within a multicultural society. Biopsychosocial and spiritual dimensions of health are assessed. Using scientific methods as a framework, concepts of communications, critical analysis and clinical decision-making are emphasized in assessing psychological and physiological health status throughout the lifecycle. The basic skills of interviewing, history taking, data collection and physical examination are employed to derive nursing diagnoses, determine priorities and therapeutic nursing interventions.
3 credits

HNC 382 Continuing Course Work

Continuing Course Work
0-5 credits, S/U grading

HNC 440 Nursing Research: Appraising Evidence for Pract

This course is an introduction to nursing research as a scientific foundation for nursing practice. Theoretical frameworks, research terminology and designs are introduced. The importance of research to evidence-based nursing is emphasized. Sources of evidence for clinical decision-making are examined. Critical appraisal skills are developed through the evaluation, critique, and synthesis of current research. Evidence-based practice as a means to patient care quality and safety is promoted. Pre-requisite: HNC 360
2 credits

HNC 452 Preparation for Professional Licensure

This elective course explores the application of nursing knowledge and skills of critical thinking, management, and delegation to demonstrate competency as an entry-level nurse. Prioritization and clinical judgment concepts are emphasized.
1-5 credits

HNC 462 Clinical Immersion in Emergency Nursing

This elective clinical course explores the role of the registered nurse and the interprofessional health care team in the Emergency Department environment.
2 credits

HNC 469 Population Health Nursing

This required clinical course is designed to prepare the student to work with families, groups, communities and populations across both the lifespan and the continuum of health care environments. Case studies and community based learning activities are provided to enhance critical reasoning and encourage independent decision making. Clinical experiences are designed to give the student an opportunity to utilize evidence based nursing interventions to provide health promotion and disease prevention. Advanced communication skills are utilized in caring for the diverse population in collaboration with interprofessional team members. Pre-requisite: Successful completion of HNC 499.
6 credits

HNC 470 Nursing Ldrship Practicum: A Capstone Experience

This course explores leadership and management theoretical frameworks and principles related to nursing practice. The nurse's role(s) and responsibilities as a manager across diverse health care settings are considered. Students analyze and evaluate the implementation of a quality improvement project developed to address an identified nursing management problem.
6 credits

HNC 471 Nrsng Ldrshp Practicum: A Cap Exp for BS/MS Stdnts

This course explores leadership and management theoretical frameworks and principles related to nursing practice. The nurse's role(s) and responsibilities as a manager across diverse health care settings are considered. Students will analyze and evaluate the implementation of a quality improvement project developed to address an identified nursing management problem.
3 credits

HNC 479 Transitioning to Baccalaureate Nursing Practice

This course presents the concepts and skills needed to transition to the baccalaureate nursing role. Organizational structure, time management and conflict resolution strategies are presented. Team-building and interdisciplinary communication principles are emphasized. The nurse's role as a health care advocate and resource manager are investigated. Delegation and prioritization principles are reinforced, and legal/ethical issues related to nursing practice are explored. Career planning and professional growth are encouraged through the development of a professional resume.
3 credits

HNC 480 Clinical Immersion in Operative Nursing

This elective clinical observation course explores the role of the registered nurse and the interprofessional health care team in the operating room environment
1 credit

HNC 481 Clinical Immersion: Undergraduate

The focus of this course is to expand, deepen, or enrich clinical practice skills relevant to area of clinical practice. Learning opportunities, in clinical and simulated settings, will promote integration of clinical competencies, leadership, and practice inquiry. Emphasis will be placed on self-directed and perceptive learning experiences, in-depth clinical skill building and decision-making, continuity of care, and inter-professional collaboration.
1-6 credits

HNC 482 Directed Studies

A directed study is a student-initiated elective course in which an area of interest in nursing is explored with the guidance of a faculty mentor. The directed study courses do not replace required or core courses for the major.
1-4 credits

HNC 483 Clinical Immersion in Perioperative Nursing II

This elective clinical course provides the opportunity to apply the knowledge, skills and attitude required of a professional nurse in the perioperative environment. Communication and collaboration of the interprofessional health care team is emphasized. Students will work with diverse populations of patients and their families in the perioperative environment under the direct supervision of an RN preceptor.
3 credits

HNC 489 Global Immersion: Undergraduate

The focus of this course is to expand, deepen, or enrich nursing practice relevant to global aggregates, families and communities. Learning opportunities will promote integration of competencies, leadership, and practice inquiry within the context of a global experience. Cross-cultural learning experiences will provide opportunities for student reflection on the interconnections, interdependence and inequalities they encounter during these experiences. Emphasis will be placed on interprofessional collaboration within an international environment.
0-6 credits

HNC 490 Professional & Ethical Communication in Digital Era

This course introduces the principles of professional and ethical communication specific to online and social media interactions. Theoretical frameworks related to cyberpsychology and online communications are explored. Critical thinking to address issues facing nurses who communicate through online workplace and social media platforms is emphasized.
3 credits

HNC 491 Patient and Family Centered Care: Partners on Health Care

This course is designed to provide a theoretical and conceptual framework for
2 credits

HNC 492 Complementary and Alternative Therapies

This course is an introduction to complementary and alternative health practices. The student will examine uses of complementary and alternative therapies in health promotion and disease prevention as well as in acute and chronic health management through evidence based practice and research. Implications of complementary and alternative therapies on culture, health disparities, society, economics, safety, legal, ethical and health policy issues will be explored.
2 credits

HNC 493 End of Life Care of the Adult Patient

This course focuses on nursing care of the adult patient and family as they approach end of life. It will emphasize a framework that allows the patient to die peacefully, with dignity and in the context of their own lives while honoring the patient's end-of-life decisions. The content will address several themes including advocacy, ethical, legal, cultural, and financial considerations, and interprofessional collaboration.
2 credits

HNC 495 Palliative, Hospice and End of Life Care

This course is focused on improving end-of-life care for clients and their families to enable the client to die peacefully, with dignity and in the context of their own lives, while honoring their end-of-life choices. The content will emphasize the goals of palliative care with attention on clinical skills and interprofessional collaboration, providing the licensed student confidence in caring for the client/family who is nearing death. Topics will include clinical aspects of symptom management, communication skills, grief, spirituality, and self-care. Additional themes include advocacy, ethical challenges, regulatory policy, cultural and fiscal considerations.
3 credits

HNC 496 Working Together: Interprofessnl Conversations-Cultural Diversity, Patient Safety, and Quality Care

This elective course explores theoretical frameworks and core competencies related to interprofessional collaborative practice, leading to effective communication, culturally sensitive care, improved patient safety, and quality care. Professional roles and responsibilities are emphasized through relationship-building, team dynamics, and communication concepts taught by faculty across disciplines. Cultural awareness and sensitivity are emphasized. Effective team performance in the planning, delivery, and evaluation of patient/population-centered care is appraised through the use of simulation and the completion of a root cause analysis (RCA).
2 credits

HNC 497 Genetics and Genomics

This course introduces the principles of genetics and genomics in relationship to prevention strategies, health care screening, treatment, and privacy.
3 credits

HNC 499 Epidemiology: Population Based

This course provides an introduction to epidemiology as a basic science of public health. The distribution and determinants of health and disease in various populations are explored. Methods to prevent or improve outcomes will be applied to major public health problems in the community. Statistical concepts that are used to summarize health data in the study of health and disease across populations is also presented.
3 credits

HND

HND 612 Theories of Applied Science

This course will explore the theoretical and scientific foundations for scholarly doctoral level practice. This course emphasizes the application of theory-based practice models, quality improvement, and implementation frameworks that guide the translation of evidence into practice toward improving population health outcomes.
3 credits

HND 615 Genomics

This course will explore the role of genetic factors in the, causation, treatment, and prevention of human disease. Emphasis will be placed on translation of genetic discoveries into interventions which improve health outcomes.
3 credits

HND 625 Health Care Policy and Social Justice

This course will explore the interface among federal, state and local governments, from a historical to a contemporary perspective, relative to social determinants of health. Emphasis will be placed on correlating components of healthcare to health policy, fiscal implications, access to care, and delivery of care.
3 credits

HND 635 Biostatistics

This course will provide knowledge of statistical approaches used in health research and epidemiology. Emphasis will be placed on applying statistical methods to critically evaluate evidence used in clinical decision making.
3 credits

HND 640 Epidemiology and Population Health

This course will focus on the study of epidemiological, biostatistical, and environmental data as they relate to evidence-based practice, injury and disease prevention, and improvement of population health outcomes.
3 credits

HND 645 Large Data Analyses

This course will provide an overview of real-world and healthcare data sets available at the federal, state, and local levels. Emphasis will be placed on the query of large data sets and developing analytical methods to answer research questions.
3 credits

HND 647 Doctoral Seminar in Evidence-based Practice

This course will emphasize development of doctoral-level academic skills essential for establishing the scientific foundation of nursing practice and scholarship, and culminate in comprehensive review of select literature. Practice experiences will provide opportunities to acquire these and other competencies.
4 credits

HND 650 Systems Theory

This course will provide knowledge and opportunities for identifying responsibilities inherent in the leadership role, opportunities for change, and strategies to improve and enhance health care delivery from a systems perspective.
3 credits

HND 655 DNP Synthesis I

This course will emphasize methodology, and culminate in development of a proposal for a comprehensive doctoral-level project which seeks to advance health outcomes. Practice experiences will provide opportunities to acquire these and other competencies.
5 credits

HND 665 DNP Synthesis II

This course will emphasize data collection and measurement, and culminate in the analysis of data from a comprehensive doctoral-level project which seeks to advance health outcomes. Practice experiences will provide opportunities to acquire these and other competencies. Required prerequisite: HND 655.
6 credits

HND 670 Independent Studies

This elective course provides an opportunity to use advanced critical thinking and investigative skills to develop or refine specific competencies that support the advancement of human health. Except for extraordinary circumstances, Independent Studies cannot replace courses for a degree. Prerequisite: By permission of faculty.
0-4 credits

HND 675 DNP Synthesis III

This course will emphasize scholarly presentation, and culminate in the synthesis and dissemination of results from a comprehensive doctoral-level project which seeks to advance health outcomes. Practice experiences will provide opportunities to acquire these and other competencies. Required prerequisite: HND 665.
6 credits

HND 682 Doctor of Nursing Practice (DNP) Continuing Coursework

This elective course provides an opportunity to achieve program-essential requirements following a course-disrupting circumstance that is beyond the student's control
0-6 credits, S/U grading

HNG

HNG 501 Primary Care

The student explores and analyzes common health problems as experienced by women from young adulthood through old age. Optimum client outcomes are emphasized in the development of client specific management plans. The clinical components of primary care are practiced in women's health care settings. An emphasis is placed on application of evidence-based screening guidelines. Prerequisite: HNG 540 and HNG 588; Co-Requisite: HNG 515
3 credits

HNG 506 Evidence-based Health and Wellness of the Contemporary College Student

This interdisciplinary course focuses on understanding the health and wellness continuum of the contemporary college student, identifying the at risk student, and examining models for intervention and student support. Concepts including developmental theory, health beliefs and culture will be explored in relation to topics such as health maintenance, mental health substance abuse, violence, and the needs of the student with cognitive and physical disabilities.
2 credits

HNG 507 Parenting: Anticipatory Guidance

This course critically examines issues, knowledge and skills which facilitate optimal parent/child health outcomes. Concepts from humanities, health related and nursing sciences provide a knowledge based for parenting and parent education. Anticipatory guidance, as a therapeutic nursing intervention, will be the focus of the course.
2 credits

HNG 508 Adv Theory & Clin Prac Acute Care Pediatric Nrsg I

This is the third clinical course in pediatric advanced nursing practice and the first with a focus on acute care. Emphasis is placed on development of competencies needed to meet the health care needs of children and families with complex, acute, critical and chronic illnesses across pediatric populations. Precepted clinical experiences will expose students to assessment, diagnoses and management of pediatric patient conditions commonly found in acute and critical care environments.
5 credits

HNG 509 Adv Theory & Clin Prac Acute Care Adult/Ger Nrsg I

This is the third clinical course focused on adult-gerontology advanced nursing practice and the first with a focus on acute care. Emphasis is placed on development of competencies needed to provide services ranging from disease prevention to acute and critical care. Didactic and clinical coursework will focus on management of acute, critical and complex illnesses across the entire adult age spectrum. Pre-Requisite: HNG 529
5 credits

HNG 513 Advanced Health Assessment of the Neonate and Infant

This course will be centered on assessment of physical, behavioral and cognitive development of the neonate and infant within the context of their family and environment. Emphasis will be placed on the development of diagnostic reasoning and clinical decision making skills as essential components of the advanced practice role.
3 credits

HNG 514 Advanced Theory and Clinical Practice in Perinatal Women's Health I

This is the first of four sequential courses focusing on advanced nursing practice specializing in perinatal/women's health throughout the life span focusing on gynecological health. Analytical thinking and clinical decision making within collaborative practice will be implemented so that therapeutic nursing interventions result in desired outcomes in the ambulatory care of women. Nursing theory and research for health promotion and management of women within the context of a multicultural society will be addressed. Realistic problems within a collaborative practice will be explored and developed to facilitate acquisition of skills in reasoning, problem solving, decision making and critical reflections relevant to the specialization of Perinatal Women's Health.
4 credits

HNG 515 Advanced Health Assessment

Provides diagnostic reasoning and a regional approach to physical exam in the health assessment process. Functional health patterns and biomedical models constitute the theoretical framework.
3 credits

HNG 517 Advanced Theory and Clinical Practice in Psychiatric/Mental Health I

Provides a theoretical and conceptual foundation for the advanced practice of Psychiatric/Mental Health Nursing. The concept of mental health is based upon a comprehensive understanding of human interaction with the environment through a synthesis of arts, sciences, humanities and life experience. Emphasis will be place on the importance theory plays in defining knowledge necessary to assess human behavior, diagnose illness and to implement and evaluate treatment related to psychopathology. Prerequisite: HNG 515, HNG 540, HNG 551, HNG 588
4 credits

HNG 518 Advanced Theory and Clinical Practice in Pediatric Nursing Across the Continuum I

The focus of this course is the development of critical thinking and clinical decision making as essential components of the advanced practice role. The major emphasis will be on analyzing and exploring common primary health problems of infants, children, and adolescents and developing optimum client outcomes that promote cost-effective, quality health care within the context of a multicultural society. Health assessments will integrate the concepts, theories, and principles underlying advanced assessment, diagnosis, and management of common health problems of infants, children, and adolescents within the context of their families and communities. Knowledge of related health sciences, nursing theories, and research are drawn upon to further develop the framework for the advanced practice role. Prerequisite: HNG 525
4 credits

HNG 519 Advanced Theory and Clinical Practice in Adult-Gerontology Nursing Across the Continuum I

This course focuses on clinical problem solving and decision making skills essential to assessing and diagnosing health status, health risks, illness and functional/dysfunctional health patterns of adults and their families. Resources, strengths and limitations are used as a basis to collaborate with adult patient families and/or other health care providers to plan therapeutic interventions to promote, maintain or restore health. Prerequisite: HNG 515, 540, and 588
4 credits

HNG 520 Pediatric Pathophysiology

The course is designed to provide the graduate student preparing for an advanced practice role with a broad knowledge base of the physiological and pathophysiological changes that occur during the maturational process from conception through childhood. Emphasis will be placed on the maintenance of wellness and prevention of illness through nursing interventions, perinatal education, and anticipatory guidance.
3 credits

HNG 522 Advanced Topics in Fetal and Neonatal Pathophysiology

This course is designed to provide the graduate student preparing for an advanced practice role in neonatal health with a broad knowledge base of the physiological and pathophysiological changes that occur during the developmental process from conception through infancy. Emphasis will be placed on the development wellness and prevention of illness through nursing interventions, perinatal education, and anticipatory guidance.
2 credits

HNG 524 Advanced Theory and Clinical Practice in Perinatal Women's Health II

This is the second of four clinical courses that will prepare the student to provide primary care to women during the childbearing years. The conceptual frameworks of wellness, health promotion and disease prevention, and the effective use of communication strategies in documentation, patient education and advocacy will be emphasized. This course develops the paradigm of family-centered, community-based health care, which respects multicultural traditions and lifestyle variations. Students are prepared for the advanced practice role of the Perinatal Women's Health Nurse Practitioner role in the provision of care to women from preconception through the prenatal, intrapartum, postpartum phase of childbearing. The normal neonate and breastfeeding content is also included in this course.
4 credits

HNG 525 Advanced Health Assessment Child Health

This course is designed to enable the student to refine and further develop clinical decision making skills while conducting health assessment of infants, children, and adolescents. Emphasis will be placed on assessment of the child's physical, emotional and cognitive development within the context of the family and environment.
3 credits

HNG 527 Advanced Theory and Clinical Practice in Psychiatric/Mental Health Nursing II

This is the second of four sequential clinical core courses for advanced practice in psychiatric mental health nursing. This course is designed to provide the knowledge and skills inherent in the diagnosis of mental disorders as related to etiology, psychopathology, practice and research. A variety of treatment models that provide a foundation for psychotherapeutic interventions will be explored, analyzed and applied to meet the needs of a complex and culturally diverse society. Prerequisite: HNG 517
4 credits

HNG 528 Advanced Theory and Clinical Practice in Pediatric Nursing Across the Continuum II

This is the second of four sequential courses designed to expand and integrate concepts, theories and principles underlying advanced assessment, diagnosis and management of common health problems of children within the context of their families and communities. This course prepares

students for the advanced practice role of the pediatric nurse practitioner/clinical nurse specialist in an environment conducive to analytic skills, clinical decision making and reflections on practice in a multi-cultural society. Clinical and evidence based research is drawn upon to further develop the framework for the advanced practice role. Prerequisites: HNG 518
4 credits

HNG 529 Advanced Theory and Clinical Practice in Adult-Gerontology Nursing Across the Continuum II

This is the second of four sequential courses designed to develop advanced clinical decision making skills in diagnosing, treating and managing a patient/family with health problems and dysfunctional patterns. Therapeutic interventions are planned to promote health, treat illness, manage chronic disease and limit disabilities by enhancing problem solving and self care abilities of adults and their families. The implementation and evaluation components of managed care are emphasized. Prerequisites: HNG 519.
5 credits

HNG 534 Advanced Theory and Clinical Practice in Perinatal Women's Health Nursing III

This is the third of four sequential clinical courses designed to integrate nursing theory and research into the health promotion and management of the high risk perinatal family within the context of a multicultural society. Emphasis is placed on the prevention and early detection of reproductive risk, therapeutic nursing intervention and communication necessary to improve the quality of perinatal outcomes. The nursing process is utilized to manage high risk reproductive and perinatal complications.
5 credits

HNG 537 Advanced Theory and Clinical Practice in Psychiatric/Mental Health Nursing III

Provides the knowledge and skills in the nursing diagnosis and therapeutic nursing interventions of mental disorders in special populations in a multicultural society. The variey of therapeutic roles for the Nurse Practitioner in Psychiatric/ Mental Health nursing will be analyzed to provide a framework for advanced practice. Prerequisite: HNG 527
5 credits

HNG 538 Advanced Theory and Clinical Practice in Primary Care Pediatric Nursing I

This is the third of four sequential courses and is designed to provide knowledge and analytical skills to meet the health care needs of children and families with chronic and or medically fragile conditions in a complex and culturally diverse society. There will be precepted clinicals that expose students to clinical decision making in collaborative practice environments. Health care management will be linked with evidence based clinical research findings that promote optimal health care for children and families within complex interrelated health care systems. Pre-requisites: HNG 528
5 credits

HNG 539 Advanced Theory and Clinical Practice in Primary Care Adult-Gerontology Nursing I

This is the third of four sequential courses designed to develop advanced clinical decision making skills in diagnosing, treating and managing a patient/family with health problems and dysfunctional patterns. Emphasizes coordination, consultation, and interaction components of case management to promote, maintain and/or restore health in groups of adult patients in primary care settings. Clinical research is drawn upon to further develop the framework for the advanced practice role. Pre-requisites: HNG 529
5 credits

HNG 540 Clinical Pharmacology

The course focuses on the knowledge and application of advanced pharmacotherapeutic principles related to the health needs of patients throughout the lifespan. Emphasis will be placed on pharmacodynamics, patient response to therapeutic regimens, and management. Regulatory requirements pertaining to prescribing practices are included.
3 credits

HNG 541 Nursing Research and Evidence-Based Practice I

This course is an introduction to the process of evidence-based practice. Research will be examined as the scientific foundation for nursing. An emphasis will be placed on understanding research methods and strategies to evaluate results for use in evidence-based practice. The steps of the evidence-based practice process will provide the framework for the course. Published nursing research studies will be evaluated according to principles of evidence-based practice for applicability and clinical feasibility.
3 credits

HNG 542 Neonatal Clinical Pharmacology

The course is centered on pharmacotherapeutic management of selected neonatal conditions with major emphasis on the development of diagnostic reasoning and clinical decision making skills as essential components of the advanced practice role. Learners will explore and analyze pharmacologic issues relevant to the neonate and infant in the intensive care and primary care settings as well as potential consequences of maternal drug therapy on the fetus. Currency in knowledge of the principles of clinical and basic pharmacology is an essential prerequisite of this course.
3 credits

HNG 543 Nursing Research and Evidence-Based Practice II

This is the second of two courses designed to examine research in relation to evidence-based practice and health care outcomes. Models and methods of evidence-based practice will be examined. A focus will be placed on critical appraisal of nursing research and clinical guidelines for applicability to practice. Identification, review of evidence, and

recommendations for improving health care outcomes will be emphasized.
3 credits

HNG 545 Advanced Psychiatric Health Assessment and Diagnostic Reasoning

This course is designed to provide a conceptual foundation to promote analytical skills and clinical decision making in the diagnosis of mental health disorders throughout the lifespan within the context of a multicultural society.
2 credits

HNG 547 Advanced Theory and Clinical Practice in Psychiatric/Mental Health Nursing IV

This is the culminating course of the four sequential advanced clinical courses. It is designed to provide students with the opportunity to implement and evaluate the role of the nurse practitioner within the nursing discipline in a specialty area of their choice. Emphasis will be placed on integration of the advanced nursing practice role, nursing research, and the leadership component in the clinical specialization. Concepts of clinical practice as they relate to the specialty area in a culturally diverse society will be explored and analyzed so that therapeutic nursing interventions are linked with patient outcomes. Students will be expected to implement their role as advanced nurse practitioner, terminate and evaluate the experience. Prerequisites:HNG 537
5 credits

HNG 548 Advanced Theory and Clinical Practice in Primary Care Pediatric Nursing II

This is the last of a series of four courses designed to provide students an opportunity to evaluate critically the role of the Pediatric Nurse Practitioner and Clinical Nurse Specialist in the care of children and their families. Care will be taken to integrate advanced nursing practice, leadership, management, research and expert clinical practice in diagnosing, treating and managing children with particular healthcare needs. Concepts of clinical practice will be related to outcome based research. Prerequisite: HNG 538
4 credits

HNG 549 Advanced Theory and Clinical Practice in Primary Care Adult-Gerontology Nursing II

A capstone experience for students to be mentored by faculty in experiencing full enactment of the roles and functions of the NP. Students identify the patient populations with whom they plan to practice, negotiate for placement in a self selected practice setting, implement the roles and functions of NP, and evaluate the terminal experience in advanced practice in adult health care. Prerequisites: HNG 539
5 credits

HNG 551 Psychopharmacology

This course will center on pharmacotherapeutic management of selected psychiatric conditions. Students will explore and analyze pharmacologic issues relevant to the psychiatric client in ambulatory, acute care and chronic care settings.
2 credits

HNG 554 Advanced Theory and Clinical Practice in Perinatal Women's Health Nursing IV

This is the culminating nursing practicum course designed to provide students with the opportunity to implement and critically evaluate the role of the nurse practitioner in women's health. Emphasis will be placed on the integration of advanced nursing practice, research, and leadership/management concepts in the clinical specialization. Issues in clinical practice related to the specialty area will be explored as well as the effect of therapeutic nursing interventions on patient/family outcomes.
4 credits

HNG 555 Professional Issues in Midwifery Practice

The course will focus on professional organizations for nurse-midwifery practice and provides an opportunity for professional socialization and responsibility. This course provides a culminating review of all clinical aspects of nurse midwifery practice and standards. An emphasis on the mastery of core competencies and standards of practice of the ACNM will be integrated throughout the course. Co-requisite: HNG 587
1 credit

HNG 557 Clinical Perspectives of Pathophysiology/Neurophysiology

This course is based on the core concepts in Neurophysiology which are integral to the clinical practice of advanced psychiatric mental health nurses. A major focus involves understanding the neurophysiological theories of major psychiatric/mental health disorders, neurological assessment.
3 credits

HNG 558 Adv Thry & Clin Prac Acute Care Pediatric Nrsg II

This is the fourth and culminating clinical course advanced in pediatric acute care advanced nursing practice. This course is designed to provide students opportunities to integrate advanced nursing practice, leadership, management and research with expert clinical practice in diagnosing, treating and managing children with complex acute, chronic, and critical healthcare needs. Precepted clinical experiences will expose students to clinical decision making in acute and critical care settings. Pre-Requisite: HNG 508
4 credits

HNG 559 Adv Thry & Clin Prac Acute Care Adult/Gero Nrsg II

This is the fourth and culminating clinical course in adult-gerontology acute care advanced nursing practice. Emphasis is placed on advanced clinical skills in diagnosing, treating, and managing adult-gerontology clients in acute and complex care settings. Development of evidence-based practice, clinical acute, reasoning skills and ethical decision making

will be integrated into didactic and clinical coursework, clinical simulation, and clinical immersions with expert practitioners. Pre-Requisite: HNG 509
5 credits

HNG 560 Sexual Health across the Lifespan

This course will provide the skills to assess, coordinate, consult, promote, maintain and/or restore sexual health in diverse patient populations. Emphasis is placed on risk reduction and the promotion of sexual well-being.
3 credits

HNG 561 Clinical Immersion: Graduate

The focus of this course is to expand, deepen, or enrich advanced practice skills relevant to area of clinical specialization. Learning opportunities, in clinical and simulated settings, will promote integration of advanced practice competencies, leadership, and practice inquiry. Emphasis will be placed on self-directed and precepted learning experiences, in-depth clinical skill building and decision-making, continuity of care, and interprofessional collaboration.
1-5 credits

HNG 564 Adv Thry Cln Pract Perinatal/ Neonatal Health Nursing I:Primary Care Concepts

This course focuses on the advanced health assessment skills required to provide primary care to high-risk infants and their families within the context of a pluralistic society. The biological and psychosocial aspects are studies as a basis for nursing practice. Emphasis is placed on the role of the neonatal nurse practitioner in improvising the provision of primary care and follow-up services to high-risk infants with the purpose of decreasing mortality and morbidity rates and improving the quality of life for these infants after discharged from the intensive care nurse.
3 credits

HNG 565 Adv Thry Cln Pract in Neonatal Health Nursing II:Primary Care High Risk Infant

This course focuses on the advanced health assessment skills required to provide primary care to high risk infants and their families within the context of a pluralistic society. The biological and psychosocial aspects are studies as a basis for nursing practice. Emphasis is placed on the role of the neonatal nurse practitioner in improvising the provision of primary care and follow-up services to high risk infants with the purpose of decreasing mortality and morbidity rates and improving the quality of life for these infants after discharged from the intensive care nursery.
6 credits

HNG 567 Evidence-Based Pract: Promoting Mentl Hlth Wellness

This course explores the current evidence surrounding societal mental health wellness. Students will select a topic of exploration and use the steps of evidence-based practice in the development of solutions to improve mental health outcomes throughout the lifespan. Pre-requisites: HNG 515, HNG 588, HNG 540, HNG 541
2 credits

HNG 568 The Addicted Client: Strategies for Nursing Assessment and Intervention

This course is designed to provide a theoretical and conceptual foundation needed to address clients with a broad range of substance abuse and addiction patterns on the health-illness continuum. It utilizes concepts from a number of nursing specialties in data collection, diagnosis, planning, intervention and evaluation through the case study method. The critical evaluation of socio-cultural beliefs, values and attitudes toward the addicted client will also be explored.
2 credits

HNG 569 Advanced Theory & Clinical Practice Peri/Neonatal Hlth Nrsng II:Childbearing Family/High Risk Infant

This is one of four sequential courses designed to focus on advanced assessment of the childbearing family.All components of this comprehensive assessment are integral to the development of differential diagnoses and management plans for high risk neonates and their families and will form the foundation for clinical decision-making required in the advanced practice role of the neonatal nurse practitioner. Parenting and the needs of the family in the context of a pluralistic society are emphasized.
5 credits

HNG 570 Independent Studies

The focus of this course is self-directed study in the analysis, examination and critique of a specialty area of interest in advanced practice.
1-6 credits

HNG 572 Advanced Theory and Clinical Practice in Family Health Nursing I

This is the first of four sequential clinical courses that focus on advanced nursing practice specializing in primary family health care. The major emphasis is on the development of clinical reasoning and critical thinking as essential components of the advanced practice role in family health nursing. An epidemiologic and body systems approach to common problems in primary health care will be applied along the health continuum. Optimal client outcomes within the context of a multicultural society will be explored. Prerequisites: HNG 515, HNG 540, HNG 588
4 credits

HNG 573 Advanced Theory and Clinical Practice in Family Health II

This is the second of four sequential clinical courses. The major emphasis is on clinical decision making and critical thinking as essential components of the advanced practice role. This course focuses on advanced nursing practice specializing in the primary health care for the pediatric patient. The major emphasis will be on analyzing and exploring

common problems in primary health care for pediatric patient and throughout a health continuum and developing optimum client outcomes within the context of multicultural society. Prerequisite: HNG 572
5 credits

HNG 574 Advanced Theory and Clinical Practice in Family Health Nursing III

This is the third course of four sequential advanced clinical courses. Coordination, consultation and interaction components of case management are emphasized to promote, maintain, and, or restore health in families in primary care settings. Prereq: HNG 573
5 credits

HNG 575 Advanced Theory and Clinical Practice in Family Health Nursing IV

This is the fourth of four sequential clinical courses that focus on advanced nursing practice in family health, womens health and gender related care. The major emphasis is on clinical decision making and critical thinking as essential components of the advanced practice role. An epidemiologic and body systems approach to common problems in primary, health care of women from adolescence through the advanced years will be applied. Optimal individual and family outcomes within the context of a diverse society will be explored. Prerequisite: HNG 574
5 credits

HNG 577 Families: Theories and Interventions for Advanced Nursing Practice

This course is designed to provide a theoretical and conceptual framework for the NP in developing therapeutic interventions for individuals and their families. Adult and adolescent developmental theories, the major family theories and crisis intervention theory are examined. Selected family typologies are used to illustrate theoretical concepts. Emphasis is placed on assessment, interventions and development of referral resources.
3 credits

HNG 578 Advanced Theory & Clinical Practice in Perinatal/Neonatal Health Nursing III: High Risk Neonate I

This is one of four sequential advanced theory and clinical practice courses in the neonatal nurse practitioner program. Emphasis is placed on the development of diagnostic reasoning and clinical decision making skills as essential components of the advanced practice role in providing care to high risk infants and their families in the acute care setting. Nursing theory and research for health promotion and management of the neonate and family within the context of a pluralistic society will be explored. Prerequisites: HNG 513, HNG 522, and HNG 542
6 credits

HNG 579 Advanced Theory & Clinical Practice in Perinatal/Neonatal Health Nursing IV: High Risk Neonate II

This is the last of four sequential advanced theory and clinical practice courses in the neonatal nurse practitioner program. Emphasis is placed on the development of diagnostic reasoning and clinical decision making skills as essential components of the advanced practice role in providing care to high risk infants and their families in the acute care setting. The role of the neonatal nurse practitioner in improving the provision of care to high risk infants with the purpose of decreasing mortality and morbidity rates and improving their quality of life is explored. Parenting and the needs of the family in the context of a pluralistic society are stressed. Prerequisite: HNG 578
6 credits

HNG 580 Adv Sklls, Tchnologies & Clin Dec-Making Acte Cre

This course incorporates assessment, implementation, evaluation of advanced skills and technologies, and clinical decision making in the management of acutely ill patients. Recognition of client presentations requiring use of technology using evidence-based criteria will be addressed. Ethical, legal and psychological aspects, including the impact of technology on the client, family and health care system will be incorporated. An introduction to invasive interventions and diagnostic device application and interpretation will be facilitated through advanced skill labs and simulated experiences. Co-Requisites: HNG 508 or HNG 558; or HNG 509 or HNG 559
3 credits

HNG 581 Midwifery I

This is the first of four sequential courses, each containing the didactic content associated with the clinical practice of midwifery. Conceptual frameworks of wellness, health promotion, and disease prevention will be utilized. The course is designed to foster the effective use of communication strategies in documentation, client education, and patient advocacy. Effective coordination of care, integration of evidence-based practice, and the application of bioethical principles of care are emphasized. An introduction to clinical decision making, diagnosis, and the management of gynecologic and antenatal patients will be emphasized. This course develops the paradigm of family-centered, community-based health care, which respects multicultural traditions. Pre-requisites: HNG 501, HNG 515, HNG 540, and HNG 588
4 credits

HNG 582 Continuing Course Work

Continuing Course Work
0-5 credits, S/U grading

HNG 585 Midwifery II

This is the second of four sequential courses which builds upon the foundational concepts of clinical practice in midwifery. The focus of this course is to provide a comprehensive understanding of gynecology, maternal

and fetal physiology, and antenatal care. The conceptual frameworks of health promotion, disease prevention are reinforced. The use of communication strategies and documentation principles are emphasized. This course furthers understanding of family-centered, community-based, multicultural care across the lifespan. Pre-requisites: HNG 581
4 credits

HNG 586 Midwifery III

This course emphasizes the normalcy of labor and birth as a physiologic and developmental process and prepares students to assume responsibility for management of care of the woman and fetus during the intrapartum period. The use of conceptual frameworks of wellness, health promotion and disease prevention will be emphasized. Communication and collaborative strategies will be emphasized to build upon the strengths of families and communities and minimize technological intervention. Prerequisite:HNG 585
5 credits

HNG 587 Midwifery IV

This is the fourth in a sequence of courses designed to prepare the midwife for clinical practice. The organizing framework of this course is continuity of care, emphasizing family centered, community-based health care and the normalcy of birth and recovery. Prerequisites: HNG 586
5 credits

HNG 588 Clinical Pathophysiology Across the Lifespan

This course focuses on pathophysiology and disruptions in normal body functioning for individuals across the lifespan. In depth theoretical and clinical principles of diseases resulting from genetic, environmental, and stress related causes are included. Emphasis is placed on regulatory and compensatory mechanisms as they relate to disease states.
3 credits

HNG 599 Therapeutic Touch

Therapeutic touch assessment skills will be taught so that the practitioner may use therapeutic touch clinically to assist in reduction of pain and anxiety, promote relaxation and facilitate the body's natural restorative process.
1 credit

HNH

HNH 501 Health Illness in a Cross Cultural Perspective

This course examines the role of history and culture in healing and medicine. The consideration and utilization of cultural practices and beliefs when designing health education programs will be stressed.
3 credits

HNH 503 Organizational Leadership and Role Transformation

This course focuses on the knowledge and skills needed to understand the economies of care, business principles, and how to work within and affect change in systems. It will also prepare students to conceptualize a new advanced practice role in the discipline of nursing. Leadership, including theory, leadership styles, contemporary approaches and strategies, will be explored.
3 credits

HNH 504 Quality Improvement, Safety and Healthcare Technologies

As a foundational course for graduate level nurses, this course prepares students to apply quality improvement methods and analyze information to affect safety and quality of care and to improve patient outcomes. The use of current and emerging technologies to support safety, quality and value based care and quality across diverse settings will be emphasized.
3 credits

HNH 505 Health Care Policy and Advocacy

This course examines how policies shape the structure and financing of health care, influence social determinants of health, and affect health outcomes. Participation in the development and implementation of institutional, local, state, and federal policy will be an expectation of this course. The role of nurse as advocate for vulnerable populations, the profession, and health-promoting policies will be explored.
2 credits

HNH 510 Facilitating Adult Learning

This course focuses on the role and perspective changes in adulthood. Concepts of self and maturity, learning theories, cognition, creativity, interests, attitudes and motivation will be explored. Issues, strategies and methods for facilitating adult learning will be emphasized. Theory is considered in relation to nursing education.
3 credits

HNH 511 Curriculum Design , Implementation and Evaluation in Nursing Education

This course focuses on issues in design of curriculum content, organization, and planning toward a practical approach to curriculum development. Application of theory to the development and implementation of curriculum from the point of view of the practice discipline of nursing will be emphasized. Problems, issues and procedures involved in designing and implementing evaluation studies will be discussed. Theory and methods of measurement and evaluation and their application to practice will be emphasized.
3 credits

HNH 512 Advanced Teaching Strategies

This course emphasizes the role of the teaching-learning process in clinical and academic nursing education through development of innovative instructional designs and processes. Issues such as feminism, creativity in clinical teaching, and the impact of economic and social trends on reality-based nursing will be discussed. A variety of teaching methods will be explored including simulation, virtual learning,

social media and relevant and innovative instructional technologies.
3 credits

HNH 513 Advanced Theory and Practice in Nursing Education I

This course focuses on graduate level clinical practice content and experiences related to the role of the nurse educator. This population-focused practicum will include student placement with an expert nurse clinician to develop proficiency in a focused area of clinical practice. Students will choose a population foci and complete 75 direct care hours during this precepted clinical experience. Increased knowledge in a specialized area of practice will provide a clinical foundation for academic and/or clinical nursing education. Prerequisites: HNG 515, HNG 540, and HNG 588.
3 credits

HNH 514 Advanced Theory and Practice in Nursing Education II

This is the second of three sequential courses focused on providing guided learning experiences in nursing education. Students will acquire knowledge, skills and values in the aspects of nursing education related to teaching and learning, assessment of the learner, instructional design, curriculum development, delivery, and evaluation. Role transition and experiential learning related to academic or clinical nursing education will be a central focus of this course. Observation and experience related to academic or clinical nursing education will be emphasized. The student will be expected to complete 90 hours with a nurse educator. Prerequisite: HNH 513
4 credits

HNH 515 Advanced Theory and Practice in Nursing Education III

This is the third of three sequential courses focused on providing guided learning experiences in nursing education. Students will select aspects of nursing education related to the role of nurse educator as leader and change agent. Scholarship activities begun in HNH 514 will conclude in HNH 515. Professional role responsibilities, including administrative functions, committee work and interdisciplinary efforts will be emphasized. Experiential learning related to academic and clinical nursing education will be emphasized. The student will be expected to complete 90 hours with a nurse educator. Prerequisites: HNH 514
4 credits

HNH 530 Communication and Relationship Management

This course focuses on issues in communication, relationship building, behaviors that influence others, diversity and shared decision making. Theories of interpersonal communication and professional relationship development will be emphasized. Problems, issues and procedures in relationship building will be discussed. Inter-professional collaboration will be stressed. A variety of leadership theories will be used to articulate the importance of effective oral and written communications in relation to leadership in relationship management.
3 credits

HNH 531 Business Skills for Nurse Leaders

This course focuses on issues in resource management, strategic management and marketing in the health care environment. Focus will be on developing a strategic plan for the health care environment in which the student works. Marketing strategies will be explored. Discussions on labor relations in relation to professional issues in collective bargaining will be emphasized. Problems, issues and procedures involved in resource management will be discussed.
3 credits

HNH 532 Finance and Economics in Nursing Leadership

This course provides an introduction to financial management for planning, operation, and evaluation of the economic performance of an organization. The course will focus on budgeting, healthcare reimbursement, cost/benefit analysis and the integration of leadership and management functions into fiscal planning. The student will investigate concepts and principles necessary for the management of fiscal resources.
3 credits

HNH 533 Legal/Ethical/Regulatory Issues in Nursing Leadership

This course is designed to provide the knowledge and skills necessary to integrate legal, ethical and regulatory requirements into a variety of health care settings. Principles and processes of patient and employee safety will also be emphasized. Students will investigate concepts and principles necessary for ethical decision making, patient advocacy, and employee rights under law.
3 credits

HNH 534 Advanced Leadership Seminar

This course is the capstone course and will focus on the role of the nurse leader. Emphasis will be on role formation, dimensions of leadership roles, identification of individual and group leadership attributes, knowledge and skills required to fulfill the role and approaches to leadership. Students will develop and conduct self-assessments and create a professional development plan.
3 credits

HNH 540 Advanced Theory and Practice in Nursing Leadership I

This is the first of two sequential courses designed to provide learning experiences with a nurse leader. Students will integrate advanced knowledge and skills related to organizational theory and financial/human resource management. The student will use data-driven decision making and creative leadership skills to build a positive practice environment as well as develop analytical skills to assess and forecast trends in nursing leadership. Inter-professional collaboration will be emphasized. Field experiences of 90 hours are required and may include preceptorship by a nurse leader and financial officer in a health care system.

4 credits

HNH 541 Advanced Theory and Practice in Nursing Leadership II

This is the second of two sequential courses designed to provide learning experiences with a nurse leader. This course builds on knowledge of organizational leadership and quality improvement. The student will integrate advanced knowledge and skills into practical applications in the role of nurse leader. Students will further explore the leadership role through current relevant research to enhance their ability to strategize entrepreneurial relationships, develop creative solutions to financial constraints and evaluate infrastructure and technology. Project management will be emphasized. Students will be required to seek experiences with health care leaders involved in project management. Field experiences of 90 hours are required. Prerequisites: HNH 532 and HNH 540
3 credits

HNH 580 Health Coping Skills Training for Health Care

Treatment approaches for many chronic illnesses consist of pharmacological and non-pharmacological interventions. Often patients need to take an active role in their care in order to best manage symptoms associated with chronic illness. Coping Skills Training (CST) is a psychotherapeutic approach that aims to solve problems concerning dysfunctional emotions, behaviors and cognitions through a goal-oriented, systematic procedure. The theoretical foundations that underpin CST will be explored through guided readings. A combination of cognitive and behavioral therapeutic interventions will be introduced and practiced with the goal of applying the skills to practice in order to help people change negative thought patterns, beliefs, and behaviors so they can manage symptoms and enjoy more productive, less stressful lives. Students will learn to deliver CST using a standardized manual of coping skills. Rationale for each skill, demonstration, role playing and skills feedback will be the teaching/learning strategies for this course. Instructor feedback and supervision of home practice audio recordings of simulated skill sessions will enhance student proficiency in skill acquisition.
3 credits

HNH 590 Nursing and Numbers: Budgeting and Benchmarking for Nurses

This course is designed to provide nurse leaders with an overview of the budget development process. Various types of budgets will be discussed with a focus on variance assessments, analysis, and benchmarking.
2 credits

HNI

HNI 290 Introduction to Nursing

This course is designed as an introduction to nursing for students who plan
2 credits

HNI 301 Mathematics for Health Care

This required course builds upon previous knowledge of mathematical concepts. Students are guided to refine and apply these concepts to the preparation of drugs and solutions. Emphasis is placed on the need for accuracy in computations. A self-directed programmed approach will be utilized.
2 credits

HNI 304 Social Justice in Health Care

This course will explore the role of social determinants in health outcomes. Current theories on health disparities will be examined. Strategies to decrease these disparities will be discussed and methods to promote social justice within the current health care environment will be presented.
2 credits

HNI 305 Healing and the Arts

This course examines the interface between the arts and nursing to provide insight into the human condition and the healing process. Theoretical and evidence-based foundations that inform the field of the arts in health care will be discussed. Students will have the opportunity to view, interpret, reflect on and create works of art, including paintings, sculpture, literature, film, music and movement. These topics will be explored to develop and enhance the skills of observation, analysis, empathy, self-reflection, and interpersonal (nurse-patient) and interprofessional (nurse-colleague) relationships, which are essential in supporting the healing process and providing holistic patient-centered care to diverse populations.
2 credits

HNI 307 Disability from the Inside Out

This course is designed to provide students an opportunity to develop an awareness of issues of disabled adults, including self care, self advocacy, disability rights, and independent living philosophies. Experience-based learning activities facilitate acquisition of student skills in critical thinking, interprofessional collaboration and communication relevant to developing therapeutic interventions. This interprofessional course will include a service learning experiential immersion, utilizing the EmpowerSCI spinal cord injury program, a unique residential rehabilitation program for individuals with spinal cord injuries, in collaboration with the School of Health Technology and Management.
2 credits

HNI 310 Pathophysiology

This is a foundation course introducing the student to the basic mechanisms of disease and pathophysiology.
3 credits

HNI 314 Transitional Leadership: Military Veteran to Nurse

This course is designed to support a seamless transition for the student veteran, from military to civilian/ university life as a nursing undergraduate student. This course will emphasize the maturity of the student veteran; exploring the strengths of the student veteran: leadership skills, discipline and teamwork experiences, familiarity with diversity, and mission focused

orientation. Individual learning needs will be evaluated with focus on learning styles, attention/ concentration, information processing, and executive function. Orientation to School of Nursing and campus resources and academic accommodations will be reviewed. Skills for student success will be addressed including concentration/ memory tips, advanced communication techniques, test taking strategies, and coping mechanisms. Basic nursing theory and patient and population health care will be discussed. The student veteran will be introduced to the nursing profession and will examine and explore similarities and differences between the systems.
2 credits

HNI 333 Fundamentals of Pharmacology

This course explores the basic scientific principles that underlie the mechanisms of action of the major drug classifications and their effect on pathophysiologic processes. A prototype approach is used to assist students in organizing and learning the major drug classifications. A major emphasis is placed on development of clinical decision-making and critical thinking skills.
4 credits

HNI 350 Professional Role Development in Nursing

This is a foundation course that explores the role and responsibilities of the nurse in meeting the demands of current and evolving health care systems. The history and theoretical basis of the profession are introduced. Standards of practice, ethical issues, and personal values are examined. Political, social, and economic issues, as they relate to nursing and health care, are also considered. Cultural awareness and sensitivity are emphasized. Consideration of the school's mission and philosophy is followed by student development of a personal philosophy of nursing practice.
2 credits

HNI 367 Introduction to Health Care Policy

This course provides a basic understanding of the health care policy in the United States. Emphasis is placed on the application of healthcare policy as it relates to the nurse's role as lobbyist, patient advocate, and professional change agent. The impact of specific policies and regulating agencies upon nursing practice is also examined.
2 credits

HNI 370 Health Assessment

This course focuses on the health assessment of individuals within a multicultural society. Biopsychosocial and spiritual dimensions of health are assessed. Using scientific methods as a framework, concepts of communications, critical analysis and clinical decision-making are emphasized in assessing psychological and physiological health status throughout the lifecycle. The basic skills of interviewing, history taking, data collection and physical examination are employed to derive nursing diagnoses, determine priorities and therapeutic nursing interventions.
3 credits

HNI 373 Psychosocial Mental Health Nursing

This required nursing course focuses on psychosocial nursing as a continuum of care across the lifespan and across the continuum of health care environments. Theoretical knowledge and clinical practice are developed from the philosophy of nursing care that respects clients as individuals within the context of family and a culturally diverse society. Case studies and experiential based learning activities are provided to enhance critical thinking and encourage independent decision-making. Clinical experiences are designed to give the student an opportunity to utilize previously acquired nursing knowledge, to develop an understanding of health promotion and disease prevention; advanced communication skills in caring for diverse population, and with interprofessional team members.
6 credits

HNI 376 Nursing Student Internship

This course is designed to provide the nursing student with the opportunity to further develop clinical expertise utilizing Stony Brook University Medical Center (SBUMC) as a clinical campus. Critical thinking/clinical decision-making skills, cultural sensitivity, communication, time management, ethical issues, and therapeutic interventions will be emphasized.
3 credits

HNI 377 Principles and Applications of Nursing Interventions I

This required nursing clinical course is an introduction to the role of the baccalaureate nurse as a manager of health care. Intra- and interprofessional communication and clinical/critical decision making are explored as key aspects of nursing process. Concepts and principles of practice are drawn from nursing theories, combined with evidence based research findings and current knowledge in the psychological, social, behavioral and physical sciences and the humanities, to build a conceptual base for professional practice. Professional nursing practice goals of health promotion, prevention of disease states and restoration of health within the current state of increased prevalence of chronic illnesses/comorbidities are presented. The focus is on the introduction of knowledge and skills used for patient interactions to provide high quality health care to a diverse patient population throughout the lifespan.
6 credits

HNI 378 Principles and Applications of Nursing Interventions II

This required nursing clinical course facilitates continued development of the baccalaureate nurse as manager of health care. Intra- and interprofessional communication and clinical/critical decision making are explored as key aspects of nursing process. Concepts and principles of practice are drawn from nursing theories, combined with evidence based research findings and current knowledge in the psychological, social, behavioral and physical sciences and the humanities, to build a conceptual base for professional practice. Professional nursing practice goals of health promotion, prevention of disease states and restoration of health within the current state of increased prevalence of chronic illnesses/comorbidities are presented. A focus is on continued development of knowledge, skills and attitudes

necessary for patient interactions to provide high quality health care to a diverse patient population throughout the lifespan.
6 credits

HNI 382 Continuing Course Work

Continuing Course Work
0-5 credits, S/U grading

HNI 389 Cultural Immersion: Undergraduate

This seminar course will provide the student with an interprofessional perspective of global health. A specific world area will be studied in detail with emphasis on contemporary problems that affect health considering the ecology, history, language, cultural systems and social arrangements. Cross-cultural learning opportunities, both domestic and abroad, will engage students in reflection on the interconnections, interdependence and inequalities they encounter during this experience. School of Nursing permission is required.
3 credits, Letter graded (A, A-, B+, etc.)

HNI 440 Nursing Research: Appraising Evidence for Pract

This course is an introduction to nursing research as a scientific foundation for nursing practice. Theoretical frameworks, research terminology and designs are introduced. The importance of research to evidence-based nursing is emphasized. Sources of evidence for clinical decision-making are examined. Critical appraisal skills are developed through the evaluation, critique, and synthesis of current research. Evidence-based practice as a means to patient care quality and safety is promoted.
2 credits

HNI 452 Preparation for Professional Licensure

This elective course explores the application of nursing knowledge and skills of critical thinking, management, and delegation to demonstrate competency as an entry-level nurse. Prioritization and clinical judgment concepts are emphasized.
1-5 credits

HNI 455 Adult and Gerontological Health Nursing I

This required nursing clinical course is an introduction to assessment and management of human complex health problems of adult and geriatric individuals within a multicultural society. Application of theoretical and conceptual frameworks, intra-and interprofessional communication, clinical/ critical decision making, and evidence-based therapeutic interventions to provide safe, high quality care.
6 credits

HNI 456 Adult and Gerontological Health Nursing II

This required nursing clinical course allows development of assessment and management skills for human complex health problems of adult and geriatric individuals within a multicultural society. Utilization of theoretical and conceptual frameworks, intra-and interprofessional communication, clinical/ critical decision making, and evidence-based therapeutic interventions to provide safe, high quality care.
6 credits

HNI 463 Sexual, Reproductive and Perinatal Health

This is a required clinical course which focuses on the birthing parent and newborn nursing as a continuum of care during pregnancy, delivery, postpartum, and the neonatal periods. The student is introduced to theoretical and clinical practice based on a philosophy of nursing care that respects patients as individuals within the context of family and a culturally diverse society. Experience-based learning activities facilitate critical thinking, clinical decision making, interprofessional communication, and collaboration relevant to developing therapeutic nursing interventions.
5 credits

HNI 464 Child and Adolescent Health Nursing

This is a required clinical course which focuses on parent child health nursing as a continuum of care during the child-bearing years from newborn through adolescence. The student is introduced to theoretical and clinical practice based on a philosophy of nursing care that respects patients as individuals within the context of family and a culturally diverse society. Experience-based learning activities facilitate acquisition of student skills in critical thinking, clinical decision making, and interprofessional communication and collaboration relevant to developing therapeutic nursing interventions.
5 credits

HNI 469 Population Health Nursing

This required clinical course is designed to prepare the student to work with families, groups, communities and populations across both the lifespan and the continuum of health care environments. Case studies and community based learning activities are provided to enhance critical reasoning and encourage independent decision making. Clinical experiences are designed to give the student an opportunity to utilize evidence based nursing interventions to provide health promotion and disease prevention. Advanced communication skills are utilized in caring for the diverse population in collaboration with interprofessional team members.
6 credits

HNI 474 Capstone Nursing Practicum

This is a required senior level course which emphasizes integration and application of theory and research findings in an intensive clinical practicum. The student has the opportunity to actualize the professional nurse generalist role, utilizing professional registered nurse preceptors and faculty mentors.
5 credits

HNI 479 Transitioning to Baccalaureate Nursing Practice

This course presents the concepts and skills needed to transition to the baccalaureate nursing role. Organizational structure, time management and conflict resolution strategies are presented. Team-building and interdisciplinary communication principles are emphasized. The nurses role as a health care advocate and resource manager are investigated. Delegation and prioritization principles are reinforced, and legal/ethical issues related to nursing practice are explored. Career planning and professional growth are encouraged through the development of a professional resume.
3 credits

HNI 480 Clinical Immersion in Operative Nursing

This elective clinical observation course explores the role of the registered nurse and the interprofessional health care team in the operating room environment
1 credit

HNI 481 Clinical Immersion: Undergraduate

The focus of this course is to expand, deepen, or enrich clinical practice skills relevant to area of clinical practice. Learning opportunities, in clinical and simulated settings, will promote integration of clinical competencies, leadership, and practice inquiry. Emphasis will be placed on self-directed and perceptive learning experiences, in-depth clinical skill building and decision-making, continuity of care, and inter-professional collaboration.
1-6 credits

HNI 482 Directed Studies

A directed study is a student-initiated elective course in which an area of interest in nursing is explored with the guidance of a faculty mentor. The Directed Study courses do not replace required or core courses for the major.
1-4 credits

HNI 484 Clinical Immersion Psychiatric-Mental Hlth Nursing

This elective clinical observation course explores the role of the registered nurse and the inter professional health care team in the psychiatric-mental health environment. Permission of faculty required. "
1 credit

HNI 489 Global Immersion: Undergraduate

The focus of this course is to expand, deepen, or enrich nursing practice relevant to global aggregates, families and communities. Learning opportunities will promote integration of competencies, leadership, and practice inquiry within the context of a global experience. Cross-cultural learning experiences will provide opportunities for student reflection on the interconnections, interdependence and inequalities they encounter during these experiences. Emphasis will be placed on interprofessional collaboration within an international environment. School of Nursing permission is required.
0-6 credits

HNI 491 Patient and Family Centered Care: Partners on Health Care

This course is designed to provide a theoretical and conceptual framework for
2 credits

HNI 492 Complementary and Alternative Therapies

This course is an introduction to complementary and alternative health practices. The student will examine uses of complementary and alternative therapies in health promotion and disease prevention as well as in acute and chronic health management through evidence based practice and research. Implications of complementary and alternative therapies on culture, health disparities, society, economics, safety, legal, ethical and health policy issues will be explored.
2 credits

HNI 493 End of Life Care of the Adult Patient

This course focuses on nursing care of the adult patient and family as they approach end of life. It will emphasize a framework that allows the patient to die peacefully, with dignity and in the context of their own lives while honoring the patient's end-of-life decisions. The content will address several themes including advocacy, ethical, legal, cultural, and financial considerations, and interprofessional collaboration.
2 credits

HPA

HPA 507 Health Systems Performance

This course introduces students to the system that we have developed to deliver health care in the United States, with international comparisons. The topics include the organization and financing of health care systems, access to health care including health insurance, regulation and policy issues, and the health care workforce.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 508 Human Resources Management in the Health Sector

Explores the key and active role played by human resources in health services organizations. Introduces students to the role of the human resources function and to the challenges that health care managers and leaders will face. Emphasizes strategic human resources, talent management, performance management, the role of the regulatory environment in human resources and making the connection between financial and non-financial rewards and workforce management. The course also identifies issues between management and the labor force.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 510 Health Finance and Accounting

Provides broad but significant immersion into the requisite core knowledge and skills of financial management and accounting in the healthcare sector. Emphasis will include but

not be limited to managerial and financial accounting, fiscal analysis, fiscal planning, and fiscal reporting. Decision making with regard to capital budgets and expenditures are reviewed.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 520 Health Governance and Organizational Analysis

Provides students with immersion into the study of organizational behavior, integrated with the study of organizational theory, to develop evidence-based approaches to analyze, manage, and lead change within healthcare organizations. Emphasis on groups and teams, diversity and cultural competence, individual attitudes and perceptions, communication, organizational change, cognitive processes, leadership, power and influence, stress and well-being, conflict management, decision making and negotiation skills, motivation, and strategies to improve employee and organizational success.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 523 Social & Behavioral Determinants of Health

This course introduces students to the social determinants of health as one of the drivers of population health. Consistent with public health tradition, health is discussed from an ecological perspective, and the course presents current knowledge about the multiple determinants of population health including socioeconomic status, the physical environment, medical care, individual behavior, and genetics and the interaction of these factors. Also covered is the measurement of population health, sources of data, and methods for assessing population health improvements.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 527 Health Economics and Policy

This course will provide students with a comprehensive view of the reasons behind the rapid rise in medical expenditures in the United States over nearly four decades, and the measures that have been proposed to address this problem. This course will cover the following topics: the demand and supply of medical care; the dynamics of competition in the health care industry; the role of government in medical care; general understanding of health care institutions, including Medicare, Medicaid, managed care, hospital and physician behavior, and pharmaceutical markets; and health care reform.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 529 Fundamentals of Healthcare Management

This course provides students with an overview of concepts and issues related to healthcare leadership. Through the examination of management topics and healthcare situations, the student will explore the skills and knowledge needed to be successful in a diverse healthcare environment. Topics include healthcare leadership, organizational design as it relates to the uniqueness of healthcare organizations, managing professionals, and supervisory to mid-level management.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 530 Health Operations Management

This online course explores the terminology and tools for identifying and applying appropriate operations management (OM), decision analysis (DA) and operations research (OR) techniques to problems in healthcare. Students will receive exposure to OM, DA and OR techniques in order to have practical experience solving problems in planning, scheduling, resource allocation, procedural decisions, and measurement of health care processes.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 536 Health Law and Compliance

This course will provide students with a comprehensive view of the reasons behind the rapid rise in medical expenditures in the United States over nearly four decades, and the measures that have been proposed to address this problem. This course will cover the following topics: the demand and supply of medical care; the dynamics of competition in the health care industry; the role of government in medical care; general understanding of health care institutions, including Medicare, Medicaid, managed care, hospital and physician behavior, and pharmaceutical markets; and health care reform.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 541 Health Strategic Planning and Management

Explores the fundamentals of strategic planning and leadership in the health sector. Emphasizes mission, vision, values, creating business plans and conducting strengths, weaknesses, opportunities and threats (SWOT) analyses. Explores the impact of leadership style on the strategic planning process.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 542 Capstone

Explores the key characteristics of successful health leaders, including the values that guide personal and professional behavior through the lens of an interactive capstone research project. Prerequisite: Permission of the department.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 564 Health Quality and Information Systems Management

Explores two critical components of healthcare administration through a split module format, dedicating seven weeks per topic and one week exploring the synergies between both topics. The first module will explore information systems management and the second module will explore healthcare quality and performance improvement concepts. The Information Systems Management module will discuss how healthcare decision-making and management are increasingly driven and dependent upon information. The sheer diversity of the information required by the healthcare enterprise surpasses the information needs of almost any other type of organization. Healthcare managers at every level of the organization are forced to be information managers. The Quality and Performance Improvement module will explore healthcare quality management methodologies and examine the impact on healthcare productivity, quality and patient safety. Students will understand and utilize the concepts of performance improvement and continuous process improvement to improve product and service quality and

competitiveness. Students will understand the history of quality improvement in healthcare and how quality concepts may be applied to improve clinical outcomes, patient safety, patient satisfaction, financial outcomes and employee and physician satisfaction. An emphasis will be placed on the critical importance of data analytics to monitor performance improvement activities. CQI and lean strategies are introduced to students as well.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 575 Long-Term Care in the Health Sector

Explores management techniques and standard practices in long-term care in the health sector. Emphasizes skilled nursing, home care, assisted living, adult day care, home health care and senior retirement communities. Provides direction and insight for understanding industry certification.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 576 Aging and Health

An overview of topics relevant to the physical and psycho-social health of older adults and the policy and structural systems that affect aging/older adults in the United States. Specific topics include demographics of aging in the US, attitudes towards older adults and aging, physiological and pathological changes as humans age, health promotion/ disease prevention, health care delivery settings and structures, health insurance (including Medicare and Medicaid), aging in place, home health care, innovative models in healthy aging (US and internationally), and ethical/ legal issues relevant to older adults.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 580 Integrative Experience

This course provides a 100-hour field placement that provides students with opportunities to gain practical health management experience in the health services field. Field placements strive to integrate real-world experience in administration and management of health services by enhancing health administrative skills under the direction, mentorship or supervision of a knowledgeable preceptor in an environment that promotes learning. Students will complete aspects of the health management integrative experience on site in individual practicum placement settings. In addition to the field placement and under supervision of a faculty member, students will maintain and submit weekly logs of their activity and attend three synchronous sessions that will allow reflection, synthesis, and professional development based upon the individual experiences of students. Prerequisite: Permission of the department.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 585 Introduction to Biostatistics & Epidemiology

This course is an introduction to biostatistics and epidemiology. In the first half of the course students will be introduced to the principles and methods of epidemiology. The second half focuses on the statistical methods used throughout the health sciences. At the end of the course students will be able to interpret epidemiological studies and have a basic understanding of the statistical methods these studies employ.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 586 Health Management Professionalism and Ethics

Explores professionalism and ethics in the field of health management. Facilitates the application and integration of health management competencies gained in year one of coursework to realistic case studies using interdisciplinary team based methods. Students will continue to enhance communication skills, skills that encourage functional interdisciplinary teamwork and will develop presentation skills, problem solving skills, networking strategies, professional etiquette and have the opportunity to engage in professional development activities.
3 credits, Letter graded (A, A-, B+, etc.)

HPA 599 Physician Practice Management

Explores the essential components of physician practice management including the structure and organization of solo practice and group practices. Includes operating and administrative issues, information management, health informatics, patient care systems, corporate compliance, physician credentialing, finance and management reporting, risk management, operations, practice valuation, marketing and planning, leadership, compensation, governance, billing, coding, medical malpractice, collections, reimbursement mechanisms, human resource management, physician compensation and quality of care. Explores the factors influencing physician practices, physician-hospital relationships, leadership and governance.
3 credits, Letter graded (A, A-, B+, etc.)

HPD

HPD 519 Sytematic Review of the Literature

This introductory course will provide students with an understanding of the process used to perform systematic review, as well as provide a "hands on" experience. Each student will perform a systematic review of the literature for their own pre-defined research question of interest. As part of the systematic literature review process, students will learn how to focus their research question; to search the literature to identify relevant studies; to appraise the quality and select studies; and to summarize studies as well as to synthesize their results in context of their original research question raised. To receive a grade for this course, moreover, a scholarly product (e.g., manuscript or letter to the editor) must be submitted to a peer -reviewed journal.
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

HPD 521 Introduction to Clinical Research

This seminar series course provides a broad-based introduction to the fields of population health and clinical science research. This course will prepare participants to become critical consumers of the peer-reviewed literature. Class lectures will cover a wide range of topics, which include: framing a research question, formulating a research

hypothesis, evaluating the peer-reviewed literature, exploring study design options, conducting human subjects' research ethically/responsibly, selecting clinical outcomes, and evaluating analytical alternatives. Offered in Summer, 1 credit, Letter graded (A, A-, B+, etc.)

HPD 601 Human Subjects: Ethics and Responsible Conduct of Research

This introductory course incorporates three components focused upon identifying: 1) the ethical principles associated with human subjects research; 2) the primary tenets of responsible conduct of research; 3) academic career planning. This course provides a philosophical basis for current research ethics practices, identifies outstanding ethical issues and controversies in clinical and translational science and research, and provides students with knowledge and access to resources such that they may to address the ethical challenges that may arise most effectively. The course provides a more in-depth exploration of the ethics and responsible conduct of clinical and translational science research that can supplement current mandated training in the area. ABCF grading
1 credit, Letter graded (A, A-, B+, etc.)

HPD 605 Introductory Seminar on Doctoral Studies in Population Health and Clinical Outcomes

This is an introductory doctoral level 3-credit seminar for all incoming PhD students in Population Health and Clinical Outcomes. This course will help students understand what earning a PhD entails, opportunities that exist after earning a PhD, typical PhD-level work activities, and beginning the process of academic writing. Students should already be thinking about what their dissertation will be about, and we will build off of that throughout the course.
3 credits, S/U grading

HPD 619 Independent Study

Intensive reading under supervision of one or more instructors, of material not covered in the formal curriculum, or execution of a research project under the supervision of one or more faculty members. Generally a written deliverable (e.g. manuscript) will be required. Instructor consent required.
0-6 credits, Letter graded (A, A-, B+, etc.)

HPD 650 Seminar Series: Clinical Applications of Molecular Medicine

This course will provide an overview of the field of molecular medicine, with a focus on cutting edge technologies related to the current and future clinical applications to improve early detection, to enhance diagnostic testing, to monitor treatments, and to counsel patients on their prognosis. As applied to clinical patient care questions, the specific molecular medicine topics discussed will include: DNA, RNA, proteomics, and chromosome assays. Pending the specific lecturers and topics coordinated, students will be introduced to a broad range of biomarkers for disease such as cancer, pulmonary/heart diseases, autism, and immune-related disease challenges. An emphasis will be placed in this course on learning how molecular markers can be applied in a clinical setting to augment the patient and provider decision-making process. (NOTE: Students should have an introductory knowledge of cellular and molecular development biology. ABCF Grading
1 credit, Letter graded (A, A-, B+, etc.)

HPD 664 Clinical Trials

This course introduces the design, conduct, and analysis of clinical trials. Topics include types of clinical trials, study design, treatment allocation, randomization and stratification, quality control, sample size requirements, patient consent, and interpretation of results.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 665 Clinical Outcomes Research

This course will provide an overview of the field of clinical outcomes assessment. The specific topics covered include: risk factors identification, clinical outcomes selection, risk adjustment methods, patient safety monitoring, and provider-based quality improvement performance reporting. Students will be introduced to a broad range of clinical outcomes including (but not limited to) short-term mortality, treatment-related morbidity, health-related quality of life, condition-specific metrics, patient satisfaction, health plan member satisfaction, utility theory, and cost-effectiveness analysis. An emphasis will be placed in this course is placed on learning how clinical outcomes research can provide a data-driven approach to influence patient, provider, program, and policy decisions.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 673 Longitudinal Data Analysis

This course covers the theory and application of univariate and multivariable techniques appropriate for longitudinal data. Students will be exposed to both theory and application addressing repeated measures challenges.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 674 Statistical Methods in Clinical Outcomes and Health Services Research

Clinical outcomes research frequently involves the analysis of nonexperimental retrospective databases. Such databases pose a number of statistical challenges, due to their nonexperimental design and various data limitations. This course will review and discuss multivariate methods in clinical outcomes research, focusing on specific issues involved in building and interpreting these models. These issues include causal inference, selection bias, measurement error, missing data problems, multicollinearity, and serial correlation. Clinical outcomes and health services research studies will be reviewed and discussed to illustrate these statistical issues and how they have been addressed in published research. Students will be asked to review and evaluate clinical outcomes and health services research papers, and present their reviews for discussion in class.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 681 Advanced Social Determinants of Health

This course will build on the prior HPH 523 and further examine the current evidence supporting an association between social determinants (e.g., socioeconomic status, physical living conditions, individual characteristics, social support, etc) and health. Students will review and critically examine the current literature on the social determinants of population health with the goal of identifying gaps in this literature which may be filled by future research. Concepts relating to the social determinants of health - e.g., identification of current priority areas, theoretical frameworks and perspectives, intervention, research methodology, etc, will be addressed as each comes up in the context of the reviewed journal article. Using publicly available data sets, students will choose a research topic related to an identified gap in the current research on the social determinants of health, propose a project to examine this topic or need which can be accomplished using publicly available data sets, conduct the analysis and write up their project in a format suitable for submission for publication. Offered Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HPD 682 Statistical Methods in Clinical Outcomes Research

The purpose of the course is to familiarize students with some major topics in clinical outcomes research, the statistical models commonly employed, and statistical problems that need to be overcome. Specific topics of interest may include: risk factor analysis; static models; risk factor/disease progression analysis;dynamic models; survival analysis (including multivariable survival analysis); volume-outcomes research; and forecasting models. Statistical techniques and challenges will be discussed within the context of each research topic as they arise. By the end of this course, students should be broadly familiar with these issues, and should be able to evaluate published clinical outcomes research in terms of the appropriateness of models chosen and how well the statistical problems have been addresses, and the reliability of the results. Prerequisites: HPH 507 Biostatistics II or equivalent course. ABCF Grading
3 credits, Letter graded (A, A-, B+, etc.)

HPD 685 Research in Population health and Clinical Science.

This course will introduce students to health services and clinical outcomes research methods and applications of these approaches. The course will begin with an overview of key statistical methods, outcomes measurement issues, and methods for assessing the economic value of clinical treatments. The second part of the course will consider specific applications of health services and clinical outcomes research from a review and critique of published studies. Students will present and critique these studies together with the instructor. Specific areas of applications will include: Estimating the Production of Health Hospital Volume and Clinical Outcomes Estimating Clinical Outcomes with Patient-Level Data Racial and Ethnic Disparities and Medical Treatments Electronic Medical Records and Clinical Outcomes Cost Effectiveness Applications
3 credits, Letter graded (A, A-, B+, etc.)

HPD 686 Mentored Research Project in Population Health and Clinical Outcomes Research

Supervised research experience.
0-9 credits

HPD 687 Advanced Research Seminar

The main purpose of this course is to familiarize students with empirical research methods via presentation and critiques of published research and work in progress. By presenting and discussing actual research that employs various statistical and other research methods, students will deepen their understanding of research intent and design, methodology and technique, format and presentation, and data management and analysis. This will reinforce their understanding of these methods learned in previous coursework.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 692 Practicum in Teaching I

In this course, students will have the opportunity to examine, and plan for, the teaching component of the professor role. We will use a combination of strategies including lectures, discussions, small group activities, and interviews of exceptional teachers and departmental chairs to explore philosophical and practical issues related to course preparation, delivery, and evaluation. At the completion of the course, students will have a teaching portfolio that will have two basic components: a detailed set of plans for a specific course and a statement of their teaching philosophy. This will be an intensive hands on course that will require supportive and cooperative behaviors by all.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 693 Practicum in Teaching II

The course is a supervised teaching experience with the Master of Public Health program.
3 credits, S/U grading

HPD 694 Grant Writing

This course will assist students in synthesizing basic public health knowledge through completion of a grant writing experience. Students will be introduced to the process of writing grant proposals, developing budgets, professional networking, publishing in the scientific literature, and planning for their future careers as public health professionals and academics. Students will also present their own individual research projects, write their own grant proposal, and do a career mapping exercise.
3 credits, Letter graded (A, A-, B+, etc.)

HPD 699 Dissertation Research On Campus

This course is normally taken by advanced PhD students when they conduct research towards their theses. Only PhD students who have been advanced to candidacy (G5 status) can take this course. Students who have the G3 and G4 status and participate in a research project with their advisor can register for HPD 619 Independent Study. Prerequisites: Must be advanced to candidacy (G5); permission of instructor S/U grading, may be repeated for credit

0-9 credits, S/U grading

HPH

HPH 201 What is Public Health? A Humanities Approach

The idea of 'public health' could be described as an endeavor of figuring out how to promote health protective measures across populations of disparate individuals who nevertheless depend on one another in important ways. At the same time, we are a society which prizes personal responsibility and seeks out individual attention and expression. How do we keep a population safe and healthy while respecting our highly individualized national character? This course examines this tension through reference to novels, narrative accounts, drama, and essays where you will have an opportunity to think through these seminal 'threshold' questions on your own. This course is offered as both EGL 290 and HPH 201.
3 credits

HPH 500 Contemporary Issues in Public Health

This course provides an introduction to the field of public health that aims to develop an appreciation of the unique and important mission of public health; an understanding of the history, values, ethics, mission, and goals of public health; and knowledge about how public health functions today including the organization, financing, policies, and practices of public health. Students will be expected to think critically about whether public health has achieved its mission in today's world and how the profession might develop in the future. Prerequisite: Admission to Graduate Public Health Program or Department Consent.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 501 Introduction to the Research Process

This course provides an overview of the research process including formulation of a research problem, conceptualization of the research design, construction of the instrument for data collection, selection of a sample, collection of data, and writing a research report. Topics include how to identify a research question and, correspondingly, how to formulate a clear, concise hypothesis or set of hypotheses; reasons and procedures for reviewing the literature; overview of observational and interventional research designs; review of measurement theory, types of scales, and commonly used measures in public health-related research; data collection methods including survey and qualitative methods; and the ethical conduct of research. Through the introduction of these topics, the course provides a general background for individuals who are interested in learning the fundamentals of how to prepare a research proposal. Prerequisite: Admission to Graduate Public Health Program or Department Consent.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 506 Biostatistics I

This is the first of a sequence of two-semester courses with the aim to provide students and researchers in public health with an introduction to the principles of public health informatics and statistical methods with their application in biomedical and public health research. The course will provide necessary knowledge and skills to perform various data management tasks to create and manage data sets using SAS with basic proficiency. The course will also introduce summarizing and exploring data, probability theory, discrete and continuous probability distributions, populations and samples, sampling distributions and statistical inference, hypothesis testing, one-sample and two-sample comparisons.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 507 Biostatistics II

"This is the second of the two-semester courses intended to provide students and researchers in public health with an introduction to the principles of public health informatics and statistical methods and their application in biomedical and public health research. The course will provide necessary knowledge and skills to perform various data management tasks to create and manage data sets using SAS with intermediate proficiency. The course builds upon the foundations of its prerequisite, Biostatistics I, with progressively more advanced instruction in analysis of variance, association and correlation, linear regression, and logistic regression. Prerequisite: HPH 506
3 credits, Letter graded (A, A-, B+, etc.)

HPH 508 Health Systems Performance

This course introduces students to the system that we have developed to deliver health care in the United States, with international comparisons. The topics include the organization and financing of health care systems, access to health care including health insurance, regulation and policy issues, and the health care workforce. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 510 Infectious Disease Epidemiology

This course is an introduction to the characteristics of infectious disease and dynamics of transmission. Major goals of the course are for students to understand the theoretical basis of pathogen transmission; to identify factors that determine patterns of disease spread within populations; and to identify populations at risk. The course will demonstrate how an understanding of epidemiological characteristics facilitates disease prevention and control, with broader implications for public health.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 514 Epidemiology for Public Health

This course presents basic epidemiologic concepts used to study health and disease in populations. It provides an overview of the major causes of morbidity and mortality, including methods of measurement (e.g., incidence, prevalence). Observational and experimental epidemiologic studies will be described and their advantages and disadvantages compared. The course aims for students to begin developing the skills needed to evaluate data, interpret reports, design, and conduct studies. Students will be introduced to the various areas of epidemiologic studies, including cancer, molecular/genetic, environmental,

occupational, social and behavioral, and infectious disease surveillance. The course comprises both lectures and small group seminars for in-depth discussions of previously assigned topics. Prerequisites: Admission to Graduate Public Health Program or Department Consent; HPH 506.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 516 Environmental and Occupational Health

This course is designed to provide the fundamentals of environmental and occupational health and to educate students on issues related to major environmental and occupational concerns. It will provide a forum for the discussion of local and national environmental and occupational public health issues. The content of the course will focus on major pollutants, their detection, impact on health, and principles of remediation. Using various teaching techniques, students will be exposed to current environmental and occupational topics and approaches to prevention and treatment. The course will emphasize the most recent research in the field. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 519 Independent Study

Intensive reading, under supervision of one or more instructors, of material not covered in the formal curriculum, or execution of a research project under the supervision of one or more faculty members. Permission of MPH Academic Coordinator is required. Prerequisite: Admission to Graduate Public Health Program or Department Consent
0-6 credits, Letter graded (A, A-, B+, etc.)

HPH 521 Introduction to Clinical Research

This introductory seminar series provides a broad-based overview of clinical science research methods, as well as guidance for critically reviewing the peer-reviewed literature. Class lectures, exercises, and interactive small group sessions will cover framing a research question, formulating a research hypothesis, critically appraising the literature, exploring study design options, conducting research ethically and responsibly, selecting clinical outcomes, and evaluating analytical alternatives. Students enrolled in the Master of Public Health degree program can not use this course (earn credit) to their degree requirements.
1 credit, Letter graded (A, A-, B+, etc.)

HPH 522 Race, Racism, and Health

This course introduces students to race and racism as a determinants of health. We explore the historical notions of race, how race impacts health, and how racism impacts the health of different populations. Also covered is how race and discrimination are measured, critical race theory and public health interventions to address racial disparities. Some background in statistics and research methods is required in order to fully understand the course material.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 523 Social and Behavioral Determinants of Health

This course introduces students to population health as one of the organizing concepts in public health and the orientation that differentiates public health from medicine. Consistent with public health tradition, health is discussed from an ecological perspective, and the course presents current knowledge about the multiple determinants of population health including socioeconomic status, the physical environment, medical care, individual behavior, and genetics and the interaction of these factors. Also covered is the measurement of population health, sources of data and methods for assessing population health improvements. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 525 Fundamentals of Program Planning

This course introduces students to the scope of public health program planning and analysis. This includes the major health behavior theories that are used in population health research and practice, public health program planning and budgeting, and public health program evaluation.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 531 Women and Gender Minorities' Population Health

This course introduces students to the barriers faced in improving population health and reducing health disparities for women and gender minorities. From hysteria to `atypical¿ presentations of cardiac disease, women have historically been excluded from medical research. Consequently, women have been seen and treated as the default male with differences only in hormones and reproductive organs, too difficult to study. We will explore the definitions of sex and gender, representation in medical research, how these identities are asked and recorded in data collection, sex as a non-binary categorical variable, and how this affects research conclusions and public health recommendations. This course will go beyond the common understanding of Women¿s Health as reproductive health, towards gaining an understanding of how phenotypic gender, gender identity, bias, sexism, and transphobia affect individual and population health through erasure and inability to create evidence-based guidelines. The effects of political and public health policies on health recommendations and disparities will be covered at length, drawing from work and theories in: sociology, medical history, psychology, political science and law, and biostatistics.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 532 Chronic Diseases

This course will cover substantive and methodological issues in the epidemiology of chronic diseases, including cancer, and cardiovascular, chronic respiratory and neurodegenerative diseases. Students will be presented with examples of descriptive and analytical epidemiology studies in each of these areas; aspects such as disease registration and its contribution to epidemiology research, estimates of attributable fractions, and preventive strategies will be also addressed. The course will include considerations about causality for chronic diseases, including issues of validity in

epidemiology studies as well as integration of evidence across studies and disciplines.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 533 Disability and Public Health

Disability and Public health will expose students to the healthcare and sociocultural challenges experienced by people with disabilities, including health disparities, unequal access to employment, education, transportation, and community participation. The course will address matters of public and social policy that have been implemented to alleviate disparities experienced by people with disabilities. The course will include gaps that are still in existence, as well as what we, as public health officials, can do to address these existing gaps.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 534 Spatial Analysis: Health Applications

This course is an intermediate level graduate course in the application of spatial methods for analyzing environmental exposure and disease data. Students with backgrounds in epidemiology, public health, environmental health, biostatistics, community health, biology, sociology, psychology, marine and atmospheric sciences, geosciences, demography, and geography are particularly encouraged to participate. Although the course will focus on examples related to human health, graduate students in other disciplines will find the course useful for specific and appropriately defined research purposes. Techniques for spatially analyzing point patterns and aggregated data in polygons will be introduced, including autocorrelation, clustering analysis, geostatistical smoothing, and approaches for spatial regression. Consideration of space-time variability will also be covered. This course includes theoretical elements so that the student will learn to appreciate strengths and weaknesses of different spatial approaches.Prior course in GIS or equivalent, as determined by consent from the instructor required. Students need a foundational knowledge of Geographic Information Systems (GIS) software. This requirement can be met by completing GSS 313: GIS Design and Application I (if available), by completing other Introduction to GIS courses at Stony Brook or elsewhere, or by self-teaching using the following book: Getting to Know ArcGIS Desktop by Tim Ormsby, Eileen Napoleon, and Robert Burke. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 535 Clinical and Community Preventive Medicine

This course prepares residents to transition from the role of learners to practitioners of preventive medicine. Didactic lectures emphasize clinical preventive medicine, which entails mastering the science of preventive medicine practice, grounded in the evidence-based clinical preventive services guidelines as developed by the United States Preventive Services Task Force (USPSTF) [i.e. screenings, behavioral counseling, and chemoprophylaxis/preventive medications], while case-based simulated sessions provide an opportunity to become skilled in the art of preventive medicine practice, built upon the principles of lifestyle medicine, motivational intervention, brief action planning and other evidence-based strategies for health behavior change. The work of the preventive medicine physician in public health, referred to as community preventive medicine or community medicine, is also covered in this course, including the Community Preventive Services (CPSTF) guidelines, to help prepare residents for the medical practice of prevention in the public health domain. The role of the preventive medicine physician in the seamless integration and effective collaboration between clinical medicine and public health is emphasized where appropriate. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 542 Introduction to Global Health

This course will provide an introduction to the field of global health and challenge students to think about how a global perspective could enhance their future practice. The course is designed for MD and MPH students, and is open to students from related graduate programs with instructor permission. This course will explore core concepts in global health, including its definition and origin; how to measure the global burden of disease; recent progress and current challenges; social inequalities in health; health systems; and global stakeholders. It will also apply such concepts to major global health topics, with lectures focused on such areas as HIV/AIDS, child health and immunization, chronic disease epidemiology and sexual violence.
2 credits, S/F graded

HPH 549 Public Health Law

This course is a survey of legal and policy issues that have special relevance for public health professionals. Topics may vary, but typically will include many of the following: structure of the U.S. legal system; power of state governments in matters affecting health care; governmental power and the right to privacy; constitutional issues in social welfare benefits; governmental regulation of health care providers and payers; the scope and discretion of administrative agencies in health care; the antitrust laws; the fraud and abuse laws; and negligence in the delivery and financing of health care. Prerequisite: Admission to Graduate Public Health Program.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 550 Theories of Health Behavior and Communication

In this survey theory course, students learn about the major health behavior and health communication theories that are used in population health research and practice. Rather than simply cataloguing each theory in turn, this course takes a constant, comparative, approach to the learning of theories, in which theories are dissected to their core elements and compared to each other in order to understand the points of convergence and divergence among them. The goal in taking this comparative approach is application: by knowing the core elements of various theories, students will more easily be able to choose appropriate theories to explain population health problems of interest and consider the design of interventions that are appropriate to achieve improvements in the educational, behavioral and environmental factors

that may contribute to the problem. In addition to covering traditional individual-level behavior change and health communication theories, this course will focus on social change and systems theories, challenging students to think about the role of social context and systems on health behavior and health communication to achieve population health improvements. Finally, after learning about commonly-used theories in the field of public health, students will learn about and critique theories that are less-commonly used (such as new and emerging theories in the literature) and have important implications for future research, practice, and further theory development and testing among populations. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 551 Practice of Health Communications

This course provides an overview of health communication. The course will introduce theories concerning health communication, and build on such to provide practical approaches to interpersonal and organizational health communication, risk communication, and media campaigns. Students will learn to collect, organize, and convey information effectively to different audiences important to public health initiatives. Throughout, the course will emphasize how health literacy and cultural beliefs influence effective communication, and students will be challenged to develop communication tools (e.g., social marketing campaigns, presentations, op-eds) optimized for a specific population. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 552 Planning and Implementing Community Health Initiatives

In this course, students learn how to develop theoretically-informed and evidence-based community health initiatives. Over the course of the semester, students work on developing their own culturally-competent community health initiatives, each of which is targeted at a particular population with a specific health need. Each student learns how to assess community needs and assets using a variety of methods, elaborate an initiative's theory of change through use of logic model, design theoretically-informed intervention activities appropriate to the needs/assets identified, create a budget and organizational structure, and engage key stakeholders at every facet of development and implementation of the community health initiative. Students work together in the same small group over the course of the semester to get/give feedback and hone their individual projects. Through this intense group work, students both (1) learn how to apply course concepts to several particular community health problems and (2) gain skills for working in teams on community health initiative planning and implementation. Prerequisite: Admission to Graduate Public Health Program or Department Consent; HPH 550.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 553 Advanced Evaluation of Community Health Initiatives

This course prepares students to plan, implement, and utilize an evaluation of a community health initiative. Basic principles and practices of evaluation are addressed, including identifying the goals of a community health initiative; designing an evaluation plan that can determine if the initiative's goals are achieved; implementing an evaluation plan; interacting with stakeholders; and using evaluation results to improve performance. Prerequisite: Admission to Graduate Public Health Program or Department Consent; HPH 525
3 credits, Letter graded (A, A-, B+, etc.)

HPH 554 Principles of Health Education & Promotion

This course aims to provide students with the historical, theoretical, and philosophical foundations of health education and promotion. Students will be given the tools to work with community and patient populations. Students will be equipped with the knowledge, skills, and attitudes to raise people's health awareness, as a well as the tools needed to teach people how to reduce their risk of disease and promote health. All students will be required to design a health education and promotion program using the knowledge and skills learned in the course. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 555 Global Health and Demography

This course introduces students to the basic theory and methods employed in the study of demography and global health. This course will provide an introduction to the field of global health and challenge students to think about how a global perspective could impact their future public health practice. The students will also learn about sources of demographic data, patterns in global fertility and mortality, and the demographic transition. Prerequisite: Admission to Graduate Public Health Program or Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 559 Advanced Research Methods

This course will provide students with an in-depth review of principles of public health research methods. Emphasis will be placed on conceptualization of research questions, evaluation of research design, sample size, and issues related to potential threats to validity within a public/applied setting. Additionally, students will become familiar with how to evaluate methods used in published literature and to design their own research projects. Course topics will include how to obtain secondary data, sample size calculation, risk adjustment, bias, confounding, and interaction. The instructor will work with students as they develop their own analytic project proposals. Students will be expected to implement their proposed research in HPH 560 Advanced Biostatistics in the following semester. Prerequisite: Admission to Graduate Public Health Program or Department Consent; HPH 507 and HPH 501
3 credits, Letter graded (A, A-, B+, etc.)

HPH 560 Applied Biostatistics

Students learn to formulate a scientific question in terms of a statistical model, leading to objective and quantitative answers. Topics may include analysis of variance, regression,

including details of data-analytic techniques and implications for study design, measures of association, 2x2 tables, stratification, matched pairs, logistic regression, model building, analysis of rates, and survival data analysis using proportional hazards models. The course stresses applications in epidemiology, and other areas of public health research. Prerequisite: Admission to Graduate Public Health Program or Department Consent; HPH 507 and HPH 559.
3 credits, Letter graded (A, A-, B+, etc.)

HPH 562 Population Health Analytics

The Population Health Analytics course provides students with the methodological and analytical skills required for competent evidence-based decision-making regarding population health improvement projects. Beginning with a review of current methods and an introduction to emerging methods for the generation and analysis of health data, such as precision medicine/¿big data¿, telemedicine/¿digital health¿, and spatial analysis/¿hotspotting¿, the course covers the major elements required for the evidence-based pursuit of population health goals. In particular, hands-on training is provided on how to synthesize evidence, via comprehensive systematic review methodologies, in the following 4 aspects of evidence-based decision-making: effectiveness, efficiency, feasibility, and appropriateness/ meaningfulness. In addition, students will learn how to retrieve and summarize information about population health from major public health information systems in the U.S. Lectures and labs are aimed at developing hands-on skills for the management and analysis of health data using SPSS and other relevant statistical software programs, such as Open Meta Analyst (OMA) and the System for the Unified Management, Assessment and Review of Information (SUMARI). Prerequisite: Admission to Graduate Public Health Program or Department Consent; HPH 501 and HPH 506
3 credits, Letter graded (A, A-, B+, etc.)

HPH 564 Qualitative Methods

In this course, students learn about the logic, theory, and methods of qualitative research within population health and related fields (e.g., social welfare, nursing, medicine, sociology, and psychology). The course begins with an introduction to the epistemological and ontological underpinnings of qualitative inquiry, with special attention to how these factors affect the types of research questions often asked (and answered) by qualitative researchers. Students then learn the nuts-and-bolts of qualitative research design and data collection through review of existing qualitative studies and hands-on application. Homework and in-class exercises over the course of the semester give students practice in (a) designing a feasible qualitative research study, and (b) collecting three kinds of qualitative data: participant observation, in-depth interviews, and focus groups. The course concludes with an overview of steps for data analysis, including coding, memo-writing, and triangulation. Emphasized throughout the course are methodological issues germane to qualitative (and quantitative) research: reflexivity of the researcher, appropriate treatment of human subjects, and obtaining quality data. Prerequisite: Admission to Graduate Public Health Program or Department Consent; HPH 501
3 credits, Letter graded (A, A-, B+, etc.)

HPH 566 Clinical Trials

This course introduces the design, conduct, and analysis of clinical trials. Topics will include types of clinical trials, study design, treatment allocation, randomization and stratification, quality control, sample size requirements, patient consent, and interpretation of results.
2 credits, Letter graded (A, A-, B+, etc.)

HPH 575 Public Health Internship

This course is an applied internship in a public, not-for-profit, or private sector organization that provides a public health service. Students will gain practical public health skills though a semester long internship. The student will work in the organization and prepares a weekly journal of activities, as well as a paper at the conclusion of the course, applying program knowledge to the internship activities. Graduate Graded and may be repeated for credit. MPH Academic Coordinator consent required. Prerequisite: Admission to Graduate Public Health Program and Department Consent
0-12 credits, Letter graded (A, A-, B+, etc.)

HPH 580 Practicum

The Practicum is a planned experience in a supervised and evaluated public health-related practice setting. A journal of fieldwork and a project, with a written report, are required. Students will be expected to demonstrate their "capacity to organize, analyze, interpret and communicate knowledge in an applied manner." Health departments, as well as a variety of other local organizations, offer a wide array of potential sites for the Practicum experience.Permission of MPH Academic Coordinator is required. Prerequisite: Admission to Graduate Public Health Program and Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 581 Capstone

This course will assist students in synthesizing basic public health knowledge through completion of several competency-driven learning experiences. Most core and concentration course work must be completed before the student can participate in Capstone. Students will be introduced to the process of writing grant proposals and developing budgets, professional networking with non-academic community partners, publishing in the scientific literature; communicating practice-based projects in both oral and poster presentation formats, and planning for their future careers as public health professionals. They will self-assess their own conflict styles and apply negotiation and mediation skills to address community and/or organizational challenges, and reflect on their conflict styles when considering case studies. Students will also engage in inter-professional education learning activities to improve their understanding and communication of their roles, values/ethics, and how to work effectively as part of an inter-professional team. Students will apply systems thinking to a case study to create a logic model that demonstrates the complex systems involved in a population health issue. Lastly, they will present their own work as part of their Practicum to fellow students, and discuss career plans. Permission of MPH Academic Coordinator is required. Prerequisite: Admission to Graduate Public Health Program and Department Consent
3 credits, Letter graded (A, A-, B+, etc.)

HPH 590 Research Practicum

The goal of Research Practicum is to mentor students to successfully complete their research requirements. Expectations are that students will register for Research Practicum for three consecutive semesters. The Research Practicum is a planned experience with expectations identified each semester in conjunction with a research mentor and faculty supervisor. A practicum proposal, analysis report, and final deliverable (NIH proposal, Foundation proposal, or peer reviewed publication) are required.
0-9 credits, Letter graded (A, A-, B+, etc.)

HPH 599 Maintenance of Matriculation

This course is for students who are maintaining matriculation while engaging in consultation with faculty regarding completion of courses and/or master's project. Students will be graded S/F.Prerequisite: Admission to Graduate Public Health Program and Department Consent
0-3 credits, S/F graded

HSC

HSC 500 Health, Sciences and Society

Interdisciplinary course for HSC students (Nursing, Social Welfare, Dental Medicine, Health Technology and Management, Medicine and Public Health). Topics include communication, health economics, scope of practice, ethics, law, policy, public health and medical informatics.
3 credits

HTM

HTM 39 Radiologic Technology Program

This course is offered as a continuation of the Health Science major concentration in Radiologic Technology. The course contains both a clinical and didactic component, and satisfies the clinical requirements necessary to be eligible for the national registry and certification exams as well as NYSDOH licensing.
0 credit, S/F graded

HTM 49 Radiation Therapy Program

This course is offered as a continuation of the Health Science major concentration in Radiation Therapy. The course contains both a clinical and didactic component, and satisfies the clinical requirements necessary to be eligible for the national registry and certification exams as well as NYSDOH licensing.
0 credit, S/F graded

HTM 59 Nuclear Medicine Technology Program

This course is offered as a continuation of the Health Science major concentration in Nuclear Medicine Technology. The course contains both a clinical and didactic component, and satisfies the clinical requirements necessary to be eligible for the national registry and certification exams.
0 credit, S/F graded

HTM 69 Medical Dosimetry Program

This course is offered as a continuation of the Health Science major concentration in Medical Dosimetry. The course contains both a clinical and didactic component and satisfies the clinical requirements necessary to be eligible for the national certification exam.
0 credit, S/F graded

HTM 79 EMT-Paramedic Program

The EMT-Paramedic training program is designed to train effective and compassionate paramedics in accordance with standards established by the United States Department of Transportation. Upon successful completion of the program, students will be eligible to take examinations for national and New York State certification
0 credit, S/F graded

HTM 98 Clinical Continuation

This course is for SHTM non-credit program students continuing with clinicals.
0 credit, S/F graded

HTM 99 Anesthesia Technology Program

This course is offered as a continuation of the Health Science major concentration in Anesthesia Technology. The course contains both a clinical and didactic component, and satisfies the clinical requirements necessary to be eligible for the national certification exams.
0 credit, S/F graded

HWC

HWC 210 Overview of the Social Work Profession

Introduces the student to the field of social work. Provides an overview of the variety of settings in which social workers practice. Describes the knowledge, values, and skills which social workers use in order to help individuals, families, groups, and communities.
1 credit

HWC 300 Introduction to Fields of Practice

This course exposes students to various social service delivery systems. Field visits, reports, guest speakers, lectures, and small group discussion are included. Agencies such as youth development associations, public schools, criminal justice systems, mental health and health systems will be observed. The social worker's role in such agencies, and identification and utilization of community resources are emphasized.
4 credits

HWC 301 Practicum Education I

Places students in settings conducive to generalist practice. Prepares students to fulfill social work roles and functions within the social welfare system. Supervision provided by

an M.S.W. Students graded S/F. Corequisite: HWC 306 and 315.Prerequisites: HWC 300 and 305
6 credits, S/F graded

HWC 302 Practicum Education II

A continuation of HWC 301. Students will be graded S/F. Corequisite: HWC 307 and HWC 316.Prerequisites: HWC 300, 301, 305 and 306
6 credits, S/F graded

HWC 304 Contemporary Social Justice Issues

This course explores the meaning of social justice and its presentation in our society. Examines the impact of social injustice and discusses the individuals, organizations, and communities who fight to combat the presence of injustice. Provides an understanding of social problems and the plight of populations who do not benefit from a socially just society. Analyzes effective methods utilized to eradicate the sources of oppression and organizational responses that address injustice and bring balance to the equitable experiences of individuals, groups, and communities.
3 credits

HWC 305 Practice Processes in Social Work I

This course is the first of a three-semester sequence (HWC 305, 306, 307) designed to develop students values, knowledge and skill base in order to enable them to work as generalist practitioners in various social work areas of practice. This course focuses on beginning development of social work knowledge, values, and skills in engagement, assessment, and intervention across the spectrum of social work practice. Emphasis is on practice skills in problem/need identification and prioritization, data collection, strength based assessment, goal setting, selection and implementation of appropriate interventions, evaluation and endings. It is organized around the values of respect for the dignity of others, appreciation of cultural differences and diverse lifestyles, belief in the right of self-determination, confidentiality and the right for the client(s) to participate in goal setting and the implementation of action. The course aim is to provide students with an understanding of 1) the ecological perspective in examining the situation; 2) the problem solving process utilized in social work intervention; 3) the strengths perspective in assessment, intervention and evaluation; 4) the ability to evaluate the effectiveness of interventions taking into account human diversity and services to historically oppressed and devalued people; and 5) how the policies of the agency facilitate or hinder the provision of needed services. It will also focus on a beginning development of professional self-assessment and identity. Corequisite: HWC 300.
3 credits

HWC 306 Practice Processes in Social Work II

The School of Social Welfare recognizes that the problems facing individuals with whom social workers are concerned evolve from the existence, nature and impact of oppression. This belief acknowledges that many human problems reflect the workings of social systems, which oppress members of specific groups in society. In this course, we will build on the knowledge, values and skills of the processes discussed in HWC 305. Students will further their knowledge of structural oppression and develop greater understanding of their roles as change agents and methods used across the micro-mezzo-macro levels of practice. Students will further develop their application of: 1) needs and strengths assessment; 2) problem identification and definition; 3) direction planning; 4) collaborative goal determination; 5) information gathering/investigation; 6) implementation; and 7) assessment and evaluation. Corequisite: HWC 301 and 315 . Prerequisites: HWC 300 and 305.
3 credits

HWC 307 Practice Processes in Social Work III

This course builds on the generalist foundation of social work practice courses, HWC 305 and HWC 306 and continues the development of the student's professional identity for work in the various social welfare fields of practice. It will emphasize the generalist social work approach in working across the micro-mezzo-macro levels of practice, as well as explore the nature and application of a variety of interventive modalities. It will provide knowledge and skills in areas of generalist social work practice, within the framework of social work values, a strengths perspective and the School's mission of empowerment, valuing diversity, overcoming oppression and striving for social justice. Corequisite: HWC 302 and HWC 316. Prerequisites: HWC 301 and HWC 306.
3 credits

HWC 308 Human Behavior and the Social Environment I

Introduces a framework for understanding how individuals and families grow, develop and change within their social environment. Interpersonal, intrapersonal and sociostructural theories and their impact on special populations, especially groups that have been historically oppressed, devalued and alienated in society are critiqued.
3 credits

HWC 309 Human Behavior and the Social Environment II

A continuation of HWC 308. This course emphasizes an understanding of the life course, the role of time, social events, trauma and the developmental process. Social institutions and their impact on people generally oppressed in society and the role of empowerment are examined. Prerequisites: HWC 308
3 credits

HWC 310 The Political Economy of Social Welfare

This course introduces students to the human rights perspective of social work. It provides an understanding of social justice issues faced by the social work profession and the intersectionality of national and international political and economic factors that influence and impact social change. By familiarizing students with these factors and exploring their relationship with phenomena such as poverty, racism, and sexism in the United States and the interconnected

global economy, the course seeks to provide students with knowledge and skills used in human rights advocacy and policy practice. The material presented in this course will be further developed in subsequent courses as a means of analyzing social welfare problems, policies, and programs.
3 credits

HWC 311 Social Welfare Policy, Services and Analysis

This course presents the history and basic concepts underlying the development of social welfare in the United States. Identification and interrelationships of social values and structures, political factors and economic conditions in understanding the evolution of social welfare and the profession of social work are emphasized. Presents an analytical framework which enables students to examine social welfare policy according to a disciplined, systematic process built upon the values of social justice and equality, empowerment and self-determination.
3 credits

HWC 312 Social Welfare Policy and Institutional Oppression

Builds upon the foundation provided in HWC 311 and expands the student's understanding of the complex interrelationships characterizing American society which result in social injustice, inequality and oppression. Views the policies and programs of the public welfare, health, mental health, housing and criminal justice systems through the lens of five basic sources of oppression in American society racism, sexism, classism, ageism and heterosexism. Prerequisites: HWC 311
3 credits

HWC 313 Research in Social Work I

This course provides instruction in introductory concepts and methods of social research. Focuses on examining the various methods researchers use to collect data relevant to social work practice, such as survey, experimental design, field research and unobtrusive design.
3 credits

HWC 314 Research in Social Work II

Explicates data analytic procedures used in analyzing data relevant to social work practice. Examines basic descriptive statistics (e.g., frequencies and percentages, mean, median, mode, variance, standard deviation) and bivariate (e.g., Pearson's r, chi-square, t-test) as the major focus of the course.
3 credits

HWC 315 Integrating Seminar I

Provides an opportunity for the integration, within the framework of the mission of the school, of the knowledge, skills and professional values acquired and developed through course work and field education experience. Corequisite: HWC 301 and 306.
3 credits

HWC 316 Integrating Seminar II

Builds on HWC 315. Corequisite: HWC 301 and 306. Prerequisites: HWC 315
3 credits

HWC 317 Issues in Death and Dying; Loss and Separation

This course provides an overview of the knowledge, values, policy and skills underlying effective entry-level practice with dying and grieving clients. The interrelationship of psychological, interpersonal, family, institutional, community and cultural dynamics of dying and grieving are covered. Permission required for students not enrolled in the School of Social Welfare.
3 credits

HWC 320 Aspects of Aging

This comprehensive course will prepare students to serve older adults and their families at each level of social work practice. Content will include the current models, theories, and perspectives in the study of aging. Students will learn of the biopsychosocial-spiritual experiences of older adults in America and the systems that impact them. Attention will be paid to physical and mental wellness, social programs, ethical issues, and diverse populations within gerontology. 3 credits.
3 credits

HWC 321 Ethnic Sensitive Social Work Practice

Provides a theoretical framework and focuses on the development of skills necessary to provide effective culturally sensitive social work services to diverse individuals, families, groups and communities. The special problems faced by groups traditionally devalued and oppressed are examined. Skills in working for institutional change and social justice are emphasized.
3 credits

HWC 323 Growing Old in America: The Social Conditions Policy and Practice Implications

Explores the social, political and economic conditions related to aging in this society. Identifies social policies and program formats that enhance wellness and support dependencies from a positive perspective.
3 credits

HWC 324 Models of Change - Trailblazers, 'Good' Troublemakers, & Change Agents

This class will explore human rights advocates and dig deep into the social movements that have driven societal change. This class stresses the need for social workers to use a human rights framework for practice, especially in our interconnected global economy. This course will examine human rights, social work as a human rights profession, and in particular, vulnerable populations. This class will highlight timely issues such as human trafficking and environmental justice and will highlight advocates who like John Lewis "Get in good trouble, necessary trouble, and help redeem the soul of America".

3 credits

HWC 325 Food Justice

This course offers students an introduction and explanation of food systems, food policy, and rights frameworks, and the relation of each to food justice. Students will explore concepts such as food insecurity (and its measurement and costs), the United Nations Universal Declaration of Human Rights Right to Food, food security, food justice, and food sovereignty in order to develop a critical assessment of the food system, food policies, and hunger relief programs of the U.S., with a focus on social work advocacy and policy practice towards food justice.
3 credits

HWC 326 Crisis Intervention: Opportunities for Change

This course provides theoretical and substantive content that will enable students to gain knowledge, understanding, and skill in relation to crisis intervention in social work practice. This course defines crisis, provides examples of the types of crises workers will face in various fields of practice, explores the role of the social worker, and the range of interventions needed in response to crisis situations. Permission required for students not enrolled in the School of Social Welfare.
3 credits

HWC 327 SW in the Political Process: Campaign School

Social Workers, and the people they work with, are fundamentally dependent on the decisions made by the people who are elected to the executive and legislative branches of government. In order to advance the values of the Social Work profession, and advocate on behalf of clients, Social Workers must participate and engage in the political process. This course is an exploration of the world of partisan electoral politics as an area of social work practice. Social workers can, and do, play many roles in the political arena. These roles can include, staff to elected officials, volunteer and staff positions on political campaigns, political appointments, lobbying roles and as elected officeholders. This course makes it clear why it is important for social workers to be in the political arena. The specific techniques and requirements for running for office, or serving in a leadership role on a political campaign, will be covered throughout this course. This is a hybrid course that combines ten class sessions and required attendance at a two day conference, titled ¿Campaign School.¿
3 credits

HWC 329 Resiliency, Wellness and Self-Care

Self-Care is an essential part of being an effective Social Worker. Yet, many times the Social Worker will neglect their own needs for wellness. This course is specifically designed to help empower the Social Worker how to best care for themselves, in turn, enabling them to be the most impactful in their role as helper. This course will discuss Spirituality, obstacles to Self-Care, High Cost of Neglect, and Developing a personalized self-care plan
3 credits

HWC 330 Case Management in Human Services

Case management has grown dramatically in the human service field over the last twenty years in response to the growing service needs of individuals and families facing complex life situations and issues. It examines both the macro level and micro level issues facing case managers and agencies as they provide quality services to often oppressed populations.
3 credits

HWC 339 Ancestral Health Practices

There is an increasing integration of complementary medicine and allopathic medicine. As health professionals, it is important to understand the beliefs and practices of our clients in order to maximize their options and choices. Professionals must be knowledgeable about the healing traditions anchored in different cultures and ethnicity.
3 credits

HWC 340 Social Issues in Popular Culture

Movies have been a useful medium that can illustrate current social issues and family dynamics, as well as policy and research dilemmas. Each week, a film with a central practice/research/policy issue provides the basis for a lecture and class discussion. Topics focus on a variety of social issues such as family dynamics, bereavement, adoption, domestic violence, abuse, residential placement, policy and research.
3 credits

HWC 342 School Social Work: An Overview

This course is an introduction to the practice of school social work. It gives an overview of the central issues that occur in schools. It discusses strategies to build a positive and safe school climate for diverse and disenfranchised populations. It examines the social/political context of working in the school and the impact of policies such as the Common Core, NCLB and Race to the Top. Topics will also include working with students struggling with psychiatric, psychological, substance use, and familial issues as well as assisting students in special education. An overview of crisis intervention techniques will be presented.
3 credits

HWC 343 Working with Children of Alcoholics and Substance Abusers

Deals with children of alcoholic parents, how parents illnesses affect the social, emotional and educational development of their children, and the survival roles children assume in order to live in troubled, alcoholic families. It emphasizes identification and intervention strategies with children who suffer from parental alcoholism when they are seen in settings other than home or social service agencies, such as school and youth programs.
3 credits

HWC 344 Overview of Substance Abuse

This course is an examination of the history and development of alcohol and substance abuse problems in the United

States. It focuses on the etiology, psychopharmacology and legal ramifications of the use of licit and illicit substances in our culture. The course provides information on a variety of services available to drug abusers, addicted individuals and their families in the fields of prevention, education and treatment. Permission required for students not enrolled in the School of Social Welfare.
3 credits

HWC 345 Social Work and Human Rights

The goals of social work are intertwined with the premise that the realization of universal human rights are essential to a just and ordered society. This class stresses the need for social workers to use a human rights framework for practice, especially in our interconnected global economy. Social workers can be vital to envisioning a just and equitable world and can be the architects laying the groundwork of that world¿s creation. Human rights can help link micro practice to macro practice and connect the varying roles of the social worker. This course will examine human rights, social work as a human rights profession, and in particular, vulnerable populations. This class will highlight timely issues such as human trafficking and environmental justice.
3 credits

HWC 349 Overview of Social Work with Special Populations

This course examines the issues that social workers must consider when working with traditionally disenfranchised populations. Emphasis will include micro and macro issues when intervening with gay and lesbian individuals, members of diverse racial and ethnic groups, and women, as well as others. The historic as well as contemporary experiences of these individuals interactions with the health and human service delivery system will be explored.
3 credits

HWC 351 Law and Social Change

This course introduces students to the interrelationship of the legal process in the United States and the profession of social work. Focuses on the legal process in general, social welfare law, in particular, and the implications for effective social work practice. Co-scheduled with HWC 551. 3 credits, semester varies
3 credits

HWC 361 Implications of Racism for Social Welfare

This course examines personal and institutional racism in the United States and the effect racism has on the delivery of services to individuals who do not fit the traditional "American model". It examines the historical relationship between racism and social welfare policies, programs and practice, as well as contemporary strategies for change.
3 credits

HWC 362 Implications of Child Abuse and Maltreatment

Introduces child maltreatment via its history and how its recognition progressed to spur many to become advocates for the prevention of child abuse. Topics include identification, reporting and interviewing. Social and economic pressures on the family are examined.
3 credits

HWC 363 Homelessness, Politics and Public Health

This course analyzes homelessness as an issue of social policy, including its history, recent causes and current demographics. Emphasizes the political and economic context that has made homelessness a major social problem.
3 credits

HWC 364 The Impact of Sexual Assault

Introduction to the incidence and prevalence of childhood sexual abuse. Covered are definition issues, family dynamics, symptoms, assessment techniques, treatment modalities and strategies utilized with the survivor. Issues related to offenders and offender treatment are addressed, as well as ethical and legal dilemmas. Cultural dynamics in sexual abuse related to childhood sexual trauma will be emphasized. Students should develop an understanding and ability to critically analyze current research.
3 credits

HWC 369 Youth and Violence

This course examines the etiology of youth at risk for violence, using ecological and interpersonal perspectives. Family, school and community risk factors are outlined as well as assessment, intervention and treatment issues. Successful prevention programs are highlighted. Permission required for students not enrolled in the School of Social Welfare.
3 credits

HWC 375 Child Welfare: An Overview

This course covers the impact of historical and contemporary developments within the field of child welfare. It examines the evaluation of child welfare services and the role of child care workers. Examines out-of-home care, foster care, group home care and institutional care within the context of traditional public/voluntary structure of services and the social/political context. Services in relation to the changing roles of the family and emergence of child care are covered.
3 credits

HWC 379 Special Topics in Social Welfare

These courses examine significant timely issues confronting the profession. Topics include violence as a public health problem, issues of aging, racism, gender, AIDS, the media, and others. Topics vary each term as faculty develops specific modules that address one or more of these issues. Permission required for students not enrolled in the School of Social Welfare.
3 credits

HWC 380 Overview of Family Violence

This course is an overview of the phenomenon of family violence in the United States including child abuse, intimate partner violence (IPV) and elder abuse. Incidence and prevalence regarding each form of family violence will

be reviewed as well as etiology, current evidence-based treatment modalities and competing political ideologies. Particular focus will be on the current research for each type of family violence and policy directives that emanate. This course also explores theories of etiology, including patriarchy, intergenerational family dynamics and substance abuse. It examines programmatic approaches and programs for batterers and prevention strategies. Co-scheduled with HWC 580.
3 credits

HWC 390 HIV / AIDS

This course focuses on the central aspects of the HIV/AIDS Pandemic, including the state of medical knowledge, HIV/AIDS and the law, prejudice and discrimination, AIDS activism and organizing, grief/death/dying, psychosocial issues, redefining the medical model, homophobia, racism, sexism and ableism in research, treatment and policy, IV drug use, drug treatment and other related issues. Upon completion of this course, students will have met the educational requirements established by the HIV Primary Care Medicaid Provider Agreement. This requirement is needed to conduct HIV pre- and post-test counseling in hospitals and clinic settings.
3 credits

HWC 394 Continuation of Field Work Experience

Continuation of placement in practice settings under supervision of a licensed M.S.W.
0 credit, S/F graded

HWC 395 Independent Study

Independent study with an individual faculty member.
1-3 credits

HWC 396A Community Learning and Professional Preparation Year I Part A

This first part of a required two-part course will provide foundational knowledge, values and skills to prepare the BSW Junior as a Social Work professional. Topics covered in this course include professional pathways, areas of practice, advocacy and communication skills, and other topics specific to the students' social work education. Attendance is required at two full-day events and designated workshops at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, U3 status)
.5 credit, S/U grading

HWC 396B Community Learning and Professional Preparation Year I Part B

This second part of a required two-part course will provide foundational knowledge, values and skills to prepare the BSW Junior as a Social Work professional. Topics covered in this course include professional pathways, areas of practice, advocacy and communication skills, and other topics specific to the students' social work education. Attendance is required at two full-day events and designated workshops at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, U3 status)
.5 credit, S/U grading

HWC 397A Community Learning and Professional Preparation Year II Part A

This first part of a required two-part course will provide foundational knowledge, values and skills to prepare the BSW Senior as a Social Work professional for entry to the job market and MSW degree programs. Topics covered in this course include professional pathways, advocacy and communication skills, and other topics specific to the students' social work education. Attendance is required at two full-day events and designated workshops at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, U4 status)
.5 credit, S/U grading

HWC 397B Community Learning and Professional Preparation Year II Part B

This second part of a required two-part course will provide foundational knowledge, values and skills to prepare the BSW Senior as a Social Work professional for entry to the job market and MSW degree programs. Topics covered in this course include professional pathways, advocacy and communication skills, and other topics specific to the students' social work education. Attendance is required at two full-day events and designated workshops at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, U4 status)
.5 credit, S/U grading

HWC 399 Maintenance of Matriculation

For students who are maintaining matriculation while engaging in consultation with faculty regarding completion of courses. Students will be graded S/F.
1 credit, S/F graded

HWC 427 Soc Work in the Political Process: Campaign School

Social Workers, and the people they work with, are fundamentally dependent on the decisions made by the people who are elected to the executive and legislative branches of government. In order to advance the values of the Social Work profession, and advocate on behalf of clients, Social Workers must participate and engage in the political process. This course is an exploration of the world of partisan electoral politics as an area of social work practice. Social workers can, and do, play many roles in the political arena. These roles can include, staff to elected officials, volunteer and staff positions on political campaigns, political appointments, lobbying roles and as elected officeholders. This course makes it clear why it is important for social workers to be in the political arena. The specific techniques and requirements for running for office, or serving in a leadership role on a political campaign, will be covered throughout this course. This is a hybrid course that combines

ten class sessions, hybrid learning hours, and required attendance at a two day conference, titled "Campaign School".
3 credits

HWC 454 Legislative Advocacy for Social Workers

The course will introduce students to the role that social workers play in shaping and influencing the legislative process - from advocacy and lobbying, to elections, to research, writing and passing legislation. This course will focus on the New York State legislature or the Nassau and Suffolk legislature¿s, depending on the year. Students will be introduced to the role that social workers can play in shaping policy and how to go about influencing policy. Students will develop the skills necessary to succeed in legislative advocacy on behalf of their clients and the profession.
3 credits

HWC 461 Anti-Racist Social Work: Understanding White Fragility and Black Rage

The course will assist social work students in understanding the complex nature of the dynamics of social oppression, racism, and anti-racist practice. Students will explore their own personal values, beliefs, and behaviors that may limit their ability to practice effective social work with people of diverse backgrounds, in particular, disadvantaged and oppressed persons. Students will acquire the knowledge needed for practice using an anti-oppressive and anti-racist lens framed by an understanding of systemic racism. Prerequisites: HWC310.
3 credits

HWC 477 Program Evaluation

This course provides an in-depth analysis of the technical requirements of program evaluation and the organizational and political constraints that influence the evaluation process. Techniques in the design and implementation of evaluation research in the health and human services fields are covered.
3 credits

HWC 479 Special Topics in Social Welfare

These courses examine significant timely issues confronting the profession. Topics include violence as a public health problem, issues of aging, racism, gender, AIDS, the media, and others. Topics vary each term as faculty develops specific modules that address one or more of these issues. Permission required for students not enrolled in the School of Social Welfare. Prerequisites: HWC310
3 credits

HWC 500 Practicum Education I

Placement in practice settings under supervision of a licensed M.S.W. Students will be graded S/F. Corequisite: HWC 513.
4-6 credits, S/F graded

HWC 501 Practicum Education II

A continuation of HWC 500. Students will be graded S/F. Corequisite: HWC 514. Prerequisites: HWC 500 and 513.
4-6 credits, S/F graded

HWC 502 Practicum Education III

Placement in advanced social work practice settings. Supervision provided by a licensed M.S.W. Students will be graded S/F. Corequisite depending on specialization- HWC 531 (for FYT) or HWC 564 (for IH) or HWC 570 (for CPPSA). Prerequisites: HWC 500, 501, 513 and 514
4-6 credits, S/F graded

HWC 503 Practicum Education IV

A continuation of HWC 502. Students will be graded S/F. Corequisite depending on specialization- HWC 571 (CPPSA), HWC 532 (FYT), HWC 565 (IH). Prerequisites: HWC 502
4-6 credits, S/F graded

HWC 504 Human Behavior and the Social Environment: Critical Applications of Social Work Theory

This course applies a multi-theoretical and critical approach to social inquiry in the examination of complex theories, metaperspectives, and knowledge about individuals, families, groups, organizations, institutions and urban, suburban, and rural communities. The course encourages students to maintain a view of people and their environments as heterogeneous and sociohistorically embedded, as well as adaptable and resilient. Throughout the course, special consideration is given to social and cultural diversity. Students will develop a multi-dimensional (e.g., social, psychological and cultural) understanding of human behavior as applied to contemporary issues in social work practice. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 505 Integrating Seminar

This course extends the work covered in HBSE, by applying human behavior theory to social work practice situations. Students will integrate knowledge and skills acquired in social work practice, social justice, policy, field education and research courses to social and clinical issues across diverse topics. Class activities include experiential assignments and project based learning. This course prepares students to practice in interdisciplinary environments. Class meets two hours in-class and one hour of instructor directed assignments. Prerequisites: HWC 504
3 credits, Letter graded (A, A-, B+, etc.)

HWC 506 Human Rights & SW; Tools for Clinical Prac & Advcy

The goals of social work are intertwined with the premise that the realization of universal human rights are essential to a just and ordered society. This class stresses the need for social workers to use a human rights framework for practice, especially in our interconnected global economy. Human rights can help link micro practice to macro practice and connect the varying roles of the social worker. This class will highlight timely issues such as human trafficking and environmental justice. This class will provide students with advanced clinical practice skills rooted in human rights as well as advocacy strategies needed to create policy based on human rights.

3 credits, Letter graded (A, A-, B+, etc.)

HWC 509 Foundations of Social Justice: Challenging Oppression

This course explores the meaning of social justice within the context of political economy, human nature, and health policy. Examination will include the relation of historical implications within contemporary discourse. This course will analyze the foundations of power, privilege, and prejudice in the United States through the lens of social work ethos that values human rights, equality, respect, and health for all. Emphasis will be placed on the identification of social injustice, challenging institutional oppression, and the creation of effective methods to empower marginalized and oppressed populations. Class meets two hours in-class and one hour of instructor directed assignments. Corequisite: HWC 596A.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 510 Social Policy and Social Determinants

This course builds upon the Foundations of Social Justice: Challenging Oppression course through the discussion and exploration of social policies, social determinants of health, and contemporary & historical social movements that have arisen to challenge oppression. This course utilizes frameworks for social policy analysis while addressing continuing dilemmas in policy development. Experiential learning and beyond-the-classroom experiences introduce students to the processes and dynamics of social movements, social change, and their effects on social policy. Class meets two hours in-class and one hour of instructor directed assignments. Prerequisites: HWC 509
3 credits, Letter graded (A, A-, B+, etc.)

HWC 511 Research I

Research I, is the first part of a two-semester course sequence designed to prepare social work students to engage in research informed social work practice and practice informed social work research and evaluation. The first semester (HWC511) provides an overview of the research process from both quantitative and qualitative perspectives and examines how a critical approach to research may form the basis of evidence-based social work practice and client empowerment. The course goes on to examine those elements of the research process that are common to all methodologies: the ethical conduct of research; literature searches and reviews; development of research questions and hypotheses; measurement; and sampling procedures. Quantitative data analysis is introduced in the form of univariate/descriptive statistics. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 512 Research II

Research II is the second part of a two-semester course sequence designed to prepare social work students to engage in research informed social work practice and practice informed social work research and evaluation. The second semester (HWC512) follows-up on the first by examining specific data collection methods (experiments; surveys; interviews; focus groups; ethnographies; etc.), with attention given to understanding how these methods are used appropriately in social work research and evaluation processes. Quantitative data analysis procedures at the bivariate and multivariate levels (t-tests; ANOVA; correlation; regression; chi-square test, etc.), hypothesis testing, inferential statistics, and computer assisted data analysis using SPSS will be presented in the context of appropriate data collection methods. Emphasis placed on research proposal development and critical evaluation of research reports. Class meets two hours in-class and one hour of instructor directed assignments. Prerequisites: HWC 511
3 credits, Letter graded (A, A-, B+, etc.)

HWC 513 Social Work Practice I

Provides a foundation for generalist practice, including the knowledge base, values and skill development necessary for ethical and effective practice with individuals, families, groups and communities. Students are introduced to the helping process across client systems and across the life span through a strengths perspective and empowerment approach to practice. Evidence-based short-term therapies are used to guide direct practice to address resilience and human development. Class meets two hours in-class and one hour of instructor directed assignments. Corequisite: HWC 500.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 514 Social Work Practice II

A continuation of HWC 513. Revisits the helping process in greater depth with specific reference to special consideration for work with families, groups, communities and organizations. The broad range of social work roles across client systems is considered. Deepens knowledge of generalist practice, ethical practice and skill development. Corequisite: HWC 501. Class meets two hours in-class and one hour of instructor directed assignments. Prerequisites: HWC 500 and 513
3 credits, Letter graded (A, A-, B+, etc.)

HWC 518 Forensic Soc Work: Psychosocial and Legal Issues - Civil Law

This course provides the foundational knowledge and skills for forensic social work, with a focus on the proceedings that encompass the civil law. Using a trauma-informed perspective, students will be introduced to the civil court structure and the many different proceedings that are addressed by the civil courts including: mental capacity, family court, divorce, Adult Protective Services (APS), guardianship, medical legal issues, education issues, and restorative justice. Students will learn about the various social work roles and practices in each of these types of proceedings with an emphasis on understanding racial and ethnic disparities.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 519 Clinical Assessment, Diagnosis, and Psychopharmacology

This course expands upon the knowledge base of human behavior and the social environment. It examines symptomatology and the complexity of mental health diagnostic categories. Students will examine the mental health concerns of diverse social, racial, and ethnic groups, particularly those which are historically devalued, marginalized, and oppressed. The aim is to develop

diagnostic and treatment skills by increasing understanding of biological, neurological, social, and cultural contexts--and their interactions-- and how these interactions produce symptoms that are characterized within a constellation of diagnostic categories. The roles and responsibilities of the social worker as a diagnostician and a valued, integral member of the interprofessional team, is emphasized. Focus is placed on the social worker¿s role in leading team members to become sensitized to all factors impacting the individual and the functioning of the client such as the social determinants of health. Additionally, factors influencing support systems will be examined. The use and misuse of the classification system of the current DSM 5 TR is examined. This examination includes the distinction between major mental disorders and other forms of behavior, recognition of symptoms, assessment of psychosocial functioning within a multi-cultural framework, and the relationship between diagnostic assessment and differential diagnosis. Students are introduced to the uses of pharmacological treatment of specific mental disorders and the side effects of these drugs. Advocacy, social justice, and fostering social change regarding mental illness in larger systems is reinforced. Prerequisites: HWC 500, 501, 504, and 513.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 520 Advanced Social Work Practice with the Aged

This course examines concepts and strategies for working with the elderly at the primary, secondary and tertiary levels of intervention. It presents and critically analyzes a variety of approaches in working with the elderly and their families. Interventions with the well elderly living in the community, the elderly who suffer some disabilities but who are still living in the community and the elderly who are institutionalized are examined. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 521 Aging in Place

This course will cover the key domains that enable older adults to age in place -- the ability to stay in one¿s home and community safely, independently and comfortably, regardless of age and income. Participants will acquire the skills and knowledge needed to navigate systems and support older adults, their families and caregivers through transitions and choices. Utilizing an integrated care coordination approach, this course will include behavioral/health issues, family, social and community engagement, along with policy and practice considerations.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 522 Men & Masculinities in the 21st Century

Societal conceptualizations of masculinities directly impacts how men live their lives. This understanding also impacts how men interact with other men as well as with people of all genders. In this class, students will be expected to engage in the active study of how masculinities have influenced their lives and those with whom they interact. how masculinities intersect with issues such as race, class, ethnicity, gender identity and presentation, and sexuality. We will seek to understand these issues as they were historically and as they are today; including a sense of contexts such as those provided by popular media, politics, education, and others.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 523 Growing Old in America: The Social Conditions-Policy and Practice Implications

Explores the social, political and economic conditions related to aging including long-term care in this society. Identifies social policies and program formats that enhance wellness and support dependencies from a positive perspective. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 524 Models of Change - Trailblazers, 'Good' Troublemakers, & Change Agents

This class will explore human rights advocates and dig deep into the social movements that have driven societal change. This class stresses the need for social workers to use a human rights framework for practice, especially in our interconnected global economy. This course will examine human rights, social work as a human rights profession, and in particular, vulnerable populations. This class will highlight timely issues such as human trafficking and environmental justice and will highlight advocates who like John Lewis "Get in good trouble, necessary trouble, and help redeem the soul of America".
3 credits, Letter graded (A, A-, B+, etc.)

HWC 525 Anger Management

This course presents an overview of concepts of anger management within a holistic context. Students learn how to recognize external manifestations of anger in themselves, clients, organizations and communities. Anger management strategies that can be taught to clients as part of an intervention plan will be introduced. Environmental and societal factors as "igniting events" of anger in individuals, families, groups and communities are examined. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 526 Crisis Intervention: Opportunities for Change

This course provides theoretical and substantive content that will enable students to gain knowledge, understanding, and skill in relation to crisis intervention in social work practice. This course defines crisis, provides examples of the types of crises workers will face in various fields of practice, explores the role of the social worker, and the range of interventions needed in response to crisis situations. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 527 Social Work in the Political Process: Campaign School

Social Workers, and the people they work with, are fundamentally dependent on the decisions made by the people who are elected to the executive and legislative branches of government. In order to advance the values of the Social Work profession, and advocate on behalf of clients, Social Workers must participate and engage in the political process. This course is an exploration of the world of partisan electoral politics as an area of social work practice. Social workers can, and do, play many roles in the political arena. These roles can include, staff to elected officials, volunteer and staff positions on political campaigns, political appointments, lobbying roles and as elected officeholders. This course makes it clear why it is important for social workers to be in the political arena. The specific techniques and requirements for running for office, or serving in a leadership role on a political campaign, will be covered throughout this course. This is a hybrid course that combines ten class sessions, hybrid learning hours, and required attendance at a two day conference, titled ¿Campaign School. ¿
3 credits, Letter graded (A, A-, B+, etc.)

HWC 528 Palliative and End of Life Care

This course examines the roles of social workers in palliative and end-of-life care in the context of varied palliative care teams and settings. Particular attention will be given to models of palliative care, interdisciplinary practice, and family-oriented care. Additional attention will be given to the relationship of research and practice in palliative care social work.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 529 Complementary and Alternative Medicine

Human service workers are often required to discuss issues of health and healing. Many individuals, by virtue of their culture, experiences and/or choice, often adhere to a combination of nontraditional and traditional beliefs regarding healthcare. This course familiarizes students with those methods and beliefs most often found in specific cultures. Students will develop an appreciation of each practice in order to interact with clients from a strengths perspective and will gain an international perspective on healthcare modalities. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 530 Case Management in Human Services

Case management has grown dramatically in the human service field over the last twenty years in response to the growing service needs of individuals and families facing complex life situations and issues. Examines both the macro level and micro level issues facing case managers and agencies as they provide quality services to often oppressed populations. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 531 Advanced Practice Skills I: Developmental Processes

This course emphasizes the understanding of developmental theories and application to culturally responsive practice with families, youth, and young adults. Focus is placed on recognizing developmental issues and their implications for assessment, engagement, and early intervention strategies. Familial, cultural, and environmental factors that influence development are discussed. Corequisite: HWC 502 and 534. 3 credits, Fall semester.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 532 Family, Youth, and Transition to Adulthood Advanced Practice Skills II: Intervention Skills

Building on the knowledge and skills in Advanced Practice Skills I, this course focuses on enhancing clinical effectiveness in interactions with children, adolescents, and young adults by strengthening assessment and diagnostic skills and understanding related advanced theory. Topics include child welfare related interviewing skills, parenting and communication, advanced solution-focused therapy, motivational interviewing, cognitive behavioral therapy, behavioral health assessment and interventions, rapid assessment tools, and forensic therapeutic interventions. All of these topics are addressed within a trauma- and culturally-responsive framework. Professional and ethical considerations, evaluation of intervention effectiveness, and service delivery in an agency context are woven throughout the course. Corequisite: HWC 503 and 535. 3 credits, Spring semester.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 533 Family Intervention in Health and Mental Health

This course focuses on family and marital problems. Environmental, social, economic, psychological and institutional pressures that affect family functioning are examined. Emphasis is placed on intervention skills. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 534 Advanced Policy Practice

This course surveys historical and current policies relevant to social work practice with families, youth, and young adults. Students will engage in policy analysis including a critical analysis of oppression and inequality in the context of child and family federal policies. In addition, the course will explore culturally sensitive skill development and competencies related to policy practice including social action and activism. Corequisite: HWC 502 and 531. 3 credits, Fall semester.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 535 Org Ldrship Across FYT Systems of Care

This course provides an evidence-based and empirically supported practice framework for developing advanced organizational leadership skills across various systems of care that impact the lives of youth, families, and young adults. Focus is placed on strategic planning, effective communication, anti-oppressive organizational development and evaluation, and organizational analysis including inter- and intra-organizational contexts.3 credits, Spring Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 536 Fathers and Families

This advanced practice elective focuses on engagement, assessment, and interventions with fathers in social work practice. The course provides an historical overview of fatherhood, the socio-cultural context of fatherhood and masculinity, considerations for work with diverse fathers, engagement of men in various settings to enhance fathering, and child support policy in the context of work with men and fathers. This course is offered online with scheduled guest speakers from various father-serving organizations including NYC Office of Child Support Services.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 538 Death and Dying; Loss and Separation

This course explores student values, attitudes, fears and conceptions relating to death and dying. Issues of loss and separation in relation to various age groups, cultural orientations and societal expectations are examined. The focus is on the acquisition of bereavement counseling skills. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 539 Ancestral Health Practices

There is an increasing integration of complementary medicine and allopathic medicine. As health professionals, it is important to understand the beliefs and practices of our clients in order to maximize their options and choices. Professionals must be knowledgeable about the healing traditions anchored in different cultures and ethnicity. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 540 Therapeutic Approaches for People with Disabilities

This course will provide a framework for practice with individuals with disabilities based on cognitive-behavioral and solution-focused therapies. Emphasis will be placed on understanding the acute issues facing individuals with disabilities primarily from a social model lens which focuses on socio-environmental constraints and barriers. These include limited human rights, access to care and treatment choices, and socio-cultural forces. Psychosocial factors will also be explored. The empirical knowledge base that informs and guides the assessment and theory based interventions of individuals with disabilities will be examined and critiqued.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 541 Leadership in Education in Neurodevelopmental Disorders from a Multidisciplinary Lens

This course addresses the interdisciplinary role of care for children and adults with autism spectrum disorder (ASD) and other related neurodevelopmental disorders (ND) across the core LEND designated disciplines (nursing, public health, physical therapy, social work, psychology, adult medicine, child medicine, adult/pediatric dentistry, disability studies, family leadership and self-advocacy). The Stony Brook LEND course aims to reduce health disparities by training graduate students and providers from diverse disciplines who may provide care to individuals with ASD/ND across the lifespan. LEND interdisciplinary work will be framed to support policies and practices that bring care closer to the patient/client with ASD/ND and their families and challenge traditional professional boundaries.
0 credit, S/U grading

HWC 542 School Social Work: Practice Policy and Research

Examines the practice of school social work in an in depth manner. It gives an overview of the central issues that occur in schools. It discusses strategies to build a positive and safe school climate for diverse and disenfranchised populations. The course will cover evidenced-based practices including DBT and CBT for schools. It examines the social/political context of working in the school. Topics will also include working with students struggling with psychiatric, psychological, substance use, and familial issues as well as assisting students in special education. Crisis intervention techniques and trauma-informed educational practices will be discussed.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 543 Advanced Clinical Skills for SW in Education

This class will instruct students about clinical interventions and policy issues in school social work and in social work in colleges and universities. Clinical intervention include-mindfulness and acceptance-based approaches such as acceptance and commitment therapy (ACT), dialectical behavioral therapy skills (DBT), mindfulness-based cognitive therapy (MBCT), and mindfulness-based stress reduction (MBSR).
3 credits, Letter graded (A, A-, B+, etc.)

HWC 544 Overview of Substance Abuse

This course is an examination of the history and development of alcohol and substance abuse problems in the United States. It focuses on the etiology, psychopharmacology and ethical and legal ramifications of the use of licit and illicit substances in our culture. The course provides information on a variety of services available to drug abusers, addicted individuals and their families in the fields of prevention, education and treatment. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 545 Assess & Trtmt of Alch & Sub Misuse

Students will learn to recognize the bio-psycho-social aspects of addiction and recovery; implement an SBIRT assessment utilizing evidence-based practice models (e.g. Motivational Interviewing; Stages of Change);and develop a foundation of clinical skills to treat addiction.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 546 Interv in Treating Alcohol and Sub Misuse

Students will develop a comprehensive assessment and apply it to an intervention plan based on client need and best practices in the addiction field. The importance of culture, gender, age, and class, as key considerations in the intervention process will be highlighted throughout the course.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 547 Managing Conflict: Groups, Organizations, and Communities (FYT) (CPPSA)

A major concern for health and human service managers is conflict in organization, community and group settings. The various types of conflicts and the concepts of negotiation and mediation as interventive strategies are considered. Didactic and experiential learning experiences are utilized. Focus is on analyzing conflict situations and selecting interventive strategies to reduce, contain or heighten the conflict situation. Oppressive conditions, structures and processes are considered major determinants of human suffering and individual and social problems; students examine how these oppressive conditions are present in conflict situations and consider ways of dealing with them. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 548 Adolescent Development and Health Promotion

The effect on adolescent development of physiological changes, relationships with peers and family, and societal expectations are examined. Emphasis is on the development of assessment and engagement skills for working with adolescents and their families to help counteract adolescent self-destructive behavior and promote well-being. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 549 Overview of Social Work with Special Populations

This course examines the issues that social workers must consider when working with traditionally disenfranchised populations. Emphasis will include micro and macro issues when intervening with gay and lesbian individuals, members of diverse racial and ethnic groups, and women, as well as others. The historic as well as contemporary experiences of these individuals' interactions with the health and human service delivery system will be explored. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 550 Culture-Centered Approach to Social Work Practice

This course provides students with an opportunity for self growth while preparing to work with individuals and their families from a culture-centered value base. Culture-centered foundation practice provides students with a frame of reference for better understanding and appreciation of the difference of their own culture from the cultures of others. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 551 Law and Social Change

This course introduces students to the interrelationship of the legal process in the United States and the profession of social work. Focuses on the legal process in general, social welfare law, in particular, and the implications for effective social work practice. Students will be required to explore and integrate the ways in which legal frameworks determine the nature of practice processes and structures within their chosen field of Specialization. Permission required for students not enrolled in the School of Social Welfare. 3 credits, semester varies
3 credits, Letter graded (A, A-, B+, etc.)

HWC 552 LGBT Social Work Practice: Micro Intv and Pol Chg

The purpose of this course is to enhance students¿ professional competence with lesbian, gay, bisexual, and transgender (LGBTQ) people. Content explores social work practice at the micro, mezzo, and macro levels and across social, political, and economic realms. Students will be introduced to LGBTQ civil rights movement and the underlying theories of sexual orientation and sexual identity development. As sexual orientation in contemporary culture is politically charged and socially regulated, students will be taught macro-level advocacy skills to fulfill their call as social workers by promoting social justice and equality. On the micro level, students will learn appropriate clinical assessment tools and social work intervention skills for use with LGBTQ people. A life cycle perspective will be presented to highlight the unique issues of LGBTQ people at various stages of human development, from the very young to the very old. Special concerns within the population, such as the coming out process, adolescent suicide, aging, and coping methods, will be considered.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 553 Chemical Dependency in Special Populations

This course covers alcoholism and substance abuse with populations that have been traditionally devalued and oppressed. It focuses on development of skills and sensitivity to ethical issues and the needs of ethnic groups, women, the elderly, the mentally ill and LBGTQ people who are chemically dependent. Policy and practice issues related to these populations are considered. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 554 Legislative Advocacy for Social Workers

The course will introduce students to the role that social workers play in shaping and influencing the legislative process - from advocacy and lobbying, to elections, to research, writing and passing legislation. This course will focus on the New York State legislature or the Nassau and Suffolk legislature¿s, depending on the year. Students will be introduced to the role that social workers can play in shaping policy and how to go about influencing policy. Students will develop the skills

necessary to succeed in legislative advocacy on behalf of their clients and the profession.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 555 Supervision in Health and Human Service Organizations

This course prepares social workers for the variety of tasks related to supervisory practice in health care agencies. Supervision is introduced as a teaching process, as an administrative function and as a program development tool. Emphasis is on helping workers function effectively with culturally diverse clients, populations at risk and the chronically ill. Content includes: historical perspective of supervisory practice; supervisor and agency structure; the organizational context of practice; learning theories; concepts of power, authority and accountability; ethical and clinical issues; supervisory techniques, skill and self awareness; staff and program development and evaluation. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 556 Proposal Writing in the Health and Human Service Fields

This course provides a comprehensive study of the principles and methods used to prepare program, training, research, demonstration and other types of proposals. Extensive workshop practice in developing appropriate writing skills and in locating and accessing funding sources is included. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 558 Human Services Administration

An introduction to the practice of administration of public and non-profit agencies, theories of management including alternative decision-making models, understanding of organizational structure and process, external and internal functions including interagency collaboration and personnel and financial management, affirmative action and ethical issues. The course combines theory with case examples, practical exercises and other experiential learning modes. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 559 Mental Health Evidence-Based Practice

This course develops the knowledge and skills necessary for working with individuals with a diagnosis of serious mental illness using recovery-oriented evidence-based practices. This course is designed for M.S.W. students and M.S.W. mental health practitioners. The course familiarizes students with evidence-based practices, within a recovery-oriented paradigm, as a general approach to practice as well as specific evidence-based interventions to use for individuals with a diagnosis of serious mental illness. Students should have a basic knowledge of serious mental illness as pre- or co-requisite, however a review will be provided. Research literature is examined to determine the various levels of support for specific interventions and essential principles for translating research into practice. Appropriate treatment outcomes that reflect effective quality mental health practice are identified. Focus is on providing assessment and treatment to a diverse group of individuals with a diagnosis of serious mental illness. 3 credits
3 credits, Letter graded (A, A-, B+, etc.)

HWC 560 Social Work with Immigrants and Refugees

This course examines pre-migration, migration, and post-migration influences and experiences of immigrants and refugees. The course will also explore the coupolitical, social, economic, and environmental context of life in the United States, including the health and mental health, community, and legal systems. Students will learn and apply concepts relevant to social work that define specific strengths, needs, and challenges facing migrant well being from practice and policy levels. Mastery of course content will provide students with an understanding of and appreciation for diversity in self and others from a human rights perspective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 561 Anti-Racist SW: Undrstd White Frag & Black Rge

The course will assist social work students in understanding the complex nature of the dynamics of social oppression, racism, and anti-racist practice. Students will explore their own personal values, beliefs, and behaviors that may limit their ability to practice effective social work with people of diverse backgrounds, in particular, disadvantaged and oppressed persons. Students will acquire the knowledge needed for practice using an anti-oppressive and anti-racist lens framed by an understanding of systemic racism.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 563 Homelessness, Politics and Public Health

This course analyzes homelessness as an issue of social policy, including its history, recent causes and current demographics. It emphasizes the political and economic context that has made homelessness a major social problem. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 564 Advanced Practice I: Assessment and Skills in Integrated Health

This course will build advanced competencies as applied in health and mental health settings. Students will learn how to conduct assessments that engage the family and the community, and develop skills for relationship building, care coordination, and strategies for defining and addressing the social determinants of health, utilizing interprofessional practice skills. Topics include primary prevention; acute and long term care; rehabilitation in inpatient and outpatient clinics; forensic social work; substance abuse; medically managed systems; chronic disease; HIV/AIDS; trauma and co-morbid psychiatric issues; cancer. Corequisite: HWC 502 and 574. 3 credits Fall semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 565 Advanced Practice II: Strategies and Interventions in Integrated Health

Building on the knowledge and skills in Advanced Practice I, students will learn current practice strategies, technological advancements, and interventions to address the major health concerns that impact society. Students will investigate population based treatments across systems that are trauma responsive, build on client's strengths, and that are culturally congruent. Corequisite: HWC 503 and 576. Prerequisites: HWC 564. 3 credits, Spring Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 566 Student-Community Development Student Portfolio Project

Provides an opportunity for students to create a portfolio composed of various components that integrates the student's educational experiences and achievements in the Student-Community Development Specialization. Components may include literature reviews, abstracting research articles, analysis of field placements, and integration of social work and student affairs literature. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 568 The Workings of the Brain: Practice Issues for Social Workers

Addresses the organization, development and functions of the brain and how this influences how we think, feel and behave. Causes of organic changes in the brain such as substance abuse, disease and injury are addressed. Advances in neuroscience that have aided in diagnosis and social work practice are covered. Innovative treatment modalities such as EMDR, biofeedback and vagal nerve implants are presented. Strongly emphasizes the combination of science and practice issues. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 569 Child and Adult Sexual Violence: Acute and Long-term Sequelae

This course focuses on the health and mental health issues presented by individuals who have experienced sexual violence. The different types of sexual violence that occur across the lifespan will be reviewed as well as treatment modalities designed to address these issues. Treatment dynamics such as client safety; stabilization; emphasis on strengths-based treatments that assist clients in regaining a sense of control; and a strong therapeutic alliance are presented. The importance of phase-oriented treatment and post-traumatic growth (PTG) will be reviewed. Countertransferential dynamics and clinician self-care will also be presented.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 570 Advanced Tools for Change: Practice I

Building on foundation knowledge, values and skills, this course will deepen student capacity to work for social change. Students will build their expertise using interpersonal communication, relationship building, organizing skills in select areas such as visioning, problem analysis, community engagement, assessment, action research and mobilizing communities to work for change. This course expands upon the students' learning in their first year policy courses to utilize advanced critical theories to analyze social problems and develop tools for social change with a special emphasis on community and empowerment. Corequisite: HWC 502 and 572. 3 credits, Fall Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 571 Advanced Tools for Change: Practice II

Building on the knowledge and skills in the first semester of Advanced Tools for Social Change, Part II focuses on developing students' skills in analyzing issues, developing powerful arguments and communicating persuasively with multiple audiences using multiple media platforms. Using a lens of critical theories, students will learn to engage with and mobilize constituents, form coalitions, lobby policymakers and leverage political power to challenge systemic structures of power and privilege and effect positive social change in the areas of students' passion. Corequisite: HWC 503 and 573. 3 credits, Spring Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 572 Leadership for Social Change

Leadership is widely understood as a critical success factor for advancing social change. In this class, students are educated to develop advanced leadership skills to create and sustain social-change organizations that address societal inequities. The course covers the many facets of social change leadership, including effective communication, strategic planning, and program development. The course will consider what it means to be a leader, the kinds of skills leaders need to succeed in diverse community settings, and what are the necessary preconditions for social change. Additional focus will be on anti-oppressive organizational and program development, management, resource development and financial management. Specific focus will be devoted to providing students with opportunities to develop their presentation and analysis skills and to receive peer feedback. Corequisite: HWC 502 and 570. 3 Credits, Fall Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 573 Social and Political Change (Hybrid)

By its nature, social and political change is action oriented. This course will provide students with the opportunity and value, knowledge and skill based guidance to undertake an actual advocacy/community change oriented capstone project. Students will work with community based social change organizations on a social change project for approximately 35 hours during the semester in lieu of classroom meetings. During the 5 in-class meetings and online discussions, students will act as consultants to one another, reflecting on learning from project work, readings and other courses in the specialization. Corequisite: HWC 503 and 571. 3 credits, Spring Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 574 Clinical Skills: Motivational Interviewing & Cognitive Behavioral Therapy in Integrated Health

This course introduces students to advanced evidence-based clinical modalities, that include group treatment, and short term interventions with an emphasis on Motivational Interviewing (MI) and Cognitive Behavioral Therapy (CBT) as applied in health and mental health care settings. Corequisite: HWC 502 and 564. 3 credits, Spring semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 575 Child Welfare: An Overview

This course covers the impact of historical and contemporary developments within the field of child welfare. It examines the evaluation of child welfare services and the role of child care workers. It also examines out-of-home care, foster care, group home care and institutional care within the context of traditional public/voluntary structure of services and the social/political context. Services in relation to the changing roles of the family and emergence of child care are covered. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 576 Integrated Health: Advanced Health Policy Systems

The course will address local, federal, state, and organizational policies and funding mechanisms impacting health and mental health. Topics include recent developments in health care reform and current issues and trends in primary and behavioral health care integration. The course will emphasize diversity, health disparities, and social and economic justice. Corequisite: HWC 503 and 565. 3 credits, Fall semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 577 Program Evaluation

This course provides an in-depth analysis of the technical requirements of program evaluation and the organizational and political constraints that influence the evaluation process. Techniques in the design and implementation of evaluation research in the health and human services fields are covered. Prerequisites: HWC 511 and 512. 3 credits
3 credits, Letter graded (A, A-, B+, etc.)

HWC 578 Advanced Social Work with Groups

This course explores the principles and practice of group work in assisting clients to maximize psychosocial functioning. Class members will participate in an experience that encourages them to realize the power of group work process and usefulness of this modality. Group work techniques, context, dynamics, skills and the role of the group facilitator are discussed. In presenting group work with special populations students learn about the impact of issues including development, discrimination, illness, addiction and separation on the commonality of the human experience as it presents in group practice. 3 credits
3 credits, Letter graded (A, A-, B+, etc.)

HWC 579 Special Topics in Social Work

These courses examine significant timely issues confronting the profession. Topics include violence as a public health problem, issues of aging, racism, gender, AIDS, the media, and others. Topics vary each term as faculty develop specific modules that address one or more of these issues. Class meets two hours in-class and one hour of instructor directed assignments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 581 Public Health and Community Health Intervention

This course examines many of the critical public health issues of today. Students gain an understanding of the concepts underlying social epidemiology and develop an appreciation of the ways in which the health status of different populations in this country is differentially impacted. Community health planning strategies (e.g. health promotion and health education) are examined. 3 credits
3 credits, Letter graded (A, A-, B+, etc.)

HWC 582 Organizational Dynamics and Legal and Ethical Issues in Health Care

This course examines some of the traditional, as well as newer, models through which healthcare services are delivered. Particular emphasis is given to the issue of access to health services as well as the location of the professional social worker within these systems. Students gain the ability to conceptualize many of the critical ethical and legal issues impacting the field today. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 584 Community Analysis and Health Promotion

Explores diverse concepts of community, analyzes a range of community structures, processes and power relationships. Investigates contemporary models, strategies and tactics of community organizing and health promotion in the United States and in selected other countries and emphasizes efforts made by poor people, ethnic minorities of color and women to organize and mobilize community groups and movements. Highlights group and community analysis and organization skills. Class meets two hours in-class and one hour of instructor directed assignments. Advanced Practice Elective.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 587 Social Work Practice with the Military and Military Families

This course focuses on the specific challenges of those who serve in the military and the response of social work practitioners to those challenges. The course will explore the nature of war, its impact on those who are wounded - physically and mentally -- and the impact of the military experience on them and their loved ones/caregivers. Particular emphasis will detail the impact of recent wars in Iraq and Afghanistan on returning veterans, many suffering with PTSD, Traumatic Brain Injury and substance abuse problems. Additional areas of exploration include the challenges faced by women in the military, the wounded, those who contemplate

suicide. Intervention strategies and case material will enhance student understanding. 3 credits, Fall Semester
3 credits, Letter graded (A, A-, B+, etc.)

HWC 588 The Dynamics of Trauma

This course will examine the complexity and range of traumatic events. For example, the way temperament, genetic pre-disposition and environment impact traumatic reactions; as well as the physiological and psychological reactions that individuals experience. Throughout this course we will examine therapeutic interventions with different populations (children, adults, groups, elders) as they recover from trauma experiences. This course will cover the range of psychological models that comprise trauma theory and examine the protective factors that mediate post-traumatic growth. Throughout this course we will examine cultural, legal, judicial and policy issues that impact trauma treatments.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 589 Therapeutic Interventions for Trauma

This course will examine therapeutic interventions with different populations (children, adults, groups, elders) as they recover from trauma experiences. This course will appraise the range of psychological models that comprise trauma theory and examine the promotive factors that mediate Post-traumatic Growth. Throughout this course we will examine cultural, legal, judicial and policy issues that impact trauma treatment.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 590 Overview of Family Violence

This advanced elective provides an overview of family violence in the United States including child abuse, intimate partner violence (IPV), and elder abuse. The course covers the etiology of each form of family violence, current evidence-based treatment modalities, and mental health and judicial approaches to these issues. Current research for each type of family violence and social policies will also be covered.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 591 SW in Higher Ed: Prac in College & Univ

Through an interdisciplinary approach, which draws from social work strengths and empowerment perspectives, student affairs perspectives, and college student development theories, this course emphasizes how community on the college campus is influenced and shaped. Historical developments in higher education and student development as well as the impact of societal issues are introduced. This course will follow a student-community development lens and discuss a variety of important topics in higher education including: overview of major policies and programming, campus safety, campus climate and inclusion, social determinants, financial aid, relationships, and mental health.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 592 Social Work in Education: Therapeutic Interventons

This course reviews a wide-range of clinical practice methods using a trauma-informed lens that are relevant to high school and higher education settings including crisis intervention, rapid assessment tools, biopsychosocial, and review of wellness and prevention services. Students are encouraged to critically examine components of contemporary education and to devise appropriate intervention strategies to accomplish the development of student-centered services, implement tele-mental health services, and a sense of community within education settings.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 593 Social Work in Higher Education: Wrap-around Care Services

This course reviews the care coordination involved in the many college student support services offered across various departments including offices of disability support services, counseling and health centers, athletics, student affairs, and campus and residential life. An understanding of the transition from high school to college service systems, transition to adult health care services, as well as how different higher education involved systems function on- and off-campus will also be discussed. Leadership development and social work practice roles to promote student success in higher education settings are emphasized.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 594 Continuation of Practicum Work Experience

Continuation of placement in practice settings under supervision of a licensed M.S.W.
0 credit, S/F graded

HWC 595 Independent Study

Independent study with an individual faculty member. Designation as enrichment or advanced practice elective is determined with faculty sponsor.
1-3 credits, Letter graded (A, A-, B+, etc.)

HWC 596A Community Learning and Professional Preparation Year I Part A

This first part of a required two-part course will provide foundational knowledge, values and skills to prepare the student as a social work professional. Topics covered in this course include professional pathways, areas of practice, advocacy and communication skills, and other topics specific to the students' social work education. Attendance is required at two full-day events at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, G1 status. Co requisite HWC 509)
.5 credit, S/U grading

HWC 596B Community Learning and Professional Preparation Year I Part B

This second part of a required two-part course will provide foundational knowledge, values and skills to prepare the student as a social work professional. Topics covered in this

course include professional pathways, areas of practice, advocacy and communication skills, and other topics specific to the students' social work education. Attendance is required at two full-day events at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, G1 status. Co requisite HWC 509)
.5 credit, S/U grading

HWC 597A Community Learning and Professional Preparation Year II Part A

This first part of a required two-part course will provide advanced knowledge, values and skills to prepare the student as a Social Worker for entry into the profession. Topics covered in this course include professional pathways, licensure, advanced advocacy and professional communication skills, and other topics specific to the students' social work specialization. Attendance is required at two full-day events at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, G2 status. Co requisite depending on specialization- HWC 534 (for FYT) or HWC 564 (for IH) or HWC 570 (for CPSA)
.5 credit, S/U grading

HWC 597B Community Learning and Professional Preparation Year II Part B

This second part of a required two-part course will provide advanced knowledge, values and skills to prepare the student as a Social Worker for entry into the profession. Topics covered in this course include professional pathways, licensure, advanced advocacy and professional communication skills, and other topics specific to the students' social work specialization. Attendance is required at two full-day events at the Stony Brook campus per academic year. Dates will be posted at the beginning of the Fall term. Students graded S/U. (0.5 credit, G2 status. Co requisite depending on specialization- HWC 534 (for FYT) or HWC 564 (for IH) or HWC 570 (for CPSA)
.5 credit, S/U grading

HWC 598 LMSW Licensing Preparation

This is a free non credit course designed to help students pass the LMSW exam. The course will cover test-taking strategies, critical thinking skills for analyzing the test questions, and include review of sample practice questions. Classes will meet twice during the spring semester and in between the two sessions, students will have an opportunity to take the online practice exam and identify the areas requiring further review.
0 credit, S/U grading

HWC 599 Maintenance of Matriculation

For students who are maintaining matriculation while engaging in consultation with faculty regarding completion of courses and/or the Master's Project. Students will be graded S/F.
1 credit, S/F graded

HWC 600 Statistics I

Provides instruction in the computation, interpretation, and application of data analytic procedures used in social research. Discusses procedures such as descriptive statistics, chi-square, and t-tests, while examining their relevancy for analyzing issues in social work practice. Fall Term.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 601 Statistics II

Introduces students to multivariate techniques used in the analysis of various kinds of data. Analysis of Variance, Multiple Regression Analysis, Logistic Regression Analysis, and Log-Linear Regression Analysis, as well as more advanced techniques, such as path analysis and survival analysis, are discussed.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 602 Research Methods I

Presents an overview of the variety of research methodologies utilized in social science and social work, with the goal of providing students with the knowledge and competencies needed to develop and conduct their own research. The course will lead to a sophisticated understanding of the research process including the formulation of research questions, hypothesis development and testing, and choice of research method, involving both quantitative and qualitative methods. Material on quantitative designs will include experimental and quasi-experimental designs, data collection methodologies, scaling, instrument development, and sampling procedures. Material on qualitative designs will address focus groups interviews, key informant interviews, participant observation, unobtrusive observation, text and content analysis, and the use of archival and historical data. Special attention is given to ethical and political issues in the conduct of research.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 603 Research Methods II

A continuation of HWC 602 Research Methods I.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 604 Naturalistic and Qualitative Research

Considered is the application of alternative research methods for different questions. The distinction between quantitative and qualitative approaches and methods in the analysis of qualitative data is explored.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 606 Research Practicum I

Students undertake significant and methodologically rigorous research involving design, implementation, analysis, and dissemination of a research project. The substantive areas will include health, mental health, or substance abuse. School of Social Welfare faculty, affiliated faculty members from the Health Sciences Center and University social science departments, and principal investigators in community research projects will serve as preceptors. Students will spend ten hours each week for two semesters in a practicum setting. Students have a supervised hands-on, practical experience with an ongoing research project. Typical activities include

data analysis, interpretation of results, research report writing, subject recruitment and screening, instrument development, or data collection. The primary objective is to strengthen students' ability to synthesize various phases and components of social research. A focus is on articulating linkages among the research questions, the data gathered to address these questions, the techniques selected for manipulating and analyzing the data, and the interpretation of findings. Students are encouraged to pursue publication stemming from the practicum. While the research practicum may not necessarily expose students to the specific population or problem of greatest interest to them, the skills or competencies mastered can prepare students methodologically to carry out their dissertation research plans.
3 credits, S/U grading

HWC 607 Research Practicum II

A continuation of HWC 606 Research Practicum I.
3 credits, S/U grading

HWC 608 Social Welfare Policy Analysis I

An analytical approach to public policy formulation in the areas of health, mental health, and substance abuse involving the impact of environmental forces on policy content. Considered are the effects of various institutional arrangements and political processes as well as inquiry into the consequences of various contemporary public policies. Tools and frameworks of policy analysis are examined. Policy alternatives and policy development and implementation are also considered.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 609 Social Welfare Policy Analysis II

A continuation of HWC 608 Social Welfare Policy Analysis I. Prerequisites: HWC 608. Spring
3 credits, Letter graded (A, A-, B+, etc.)

HWC 610 Organizational Theory and Social Welfare Administration

The focus is on theories and methods available to planners and administrators who function in complex organizational settings. Decision making, political and economic factors, information systems, value conflicts, and adaptations of rational models to emerging realities will be studied. Health and mental health programs will be utilized as exemplars.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 611 Knowledge Building in Social Work: The Philosophy of Applied Social Research

An examination of the major currents of thought that shape the meta-theoretical, theoretical, and methodological issues related to knowledge building in social work. The impact of pragmatic philosophy on the current "science versus non-science" debate within social work is reviewed. Special attention is given to epistemological approaches and their relation to qualitative and quantitative research strategies. Fall
3 credits, Letter graded (A, A-, B+, etc.)

HWC 612 Social Science Theory for Social Welfare

In this course, we explore the nature of social theory and the normative project of social welfare by examining theories of social justice, human rights and oppression. We consider the nature and structure of power, the role of ideology and their impact in a society defined by inequality. Social Construction and critical theory are particularly relevant as their assumptions align well with those of social welfare. Lastly, we explore the tensions and possibilities of democratic theories and ideals, given the current context, as a means to further social welfares normative project. Throughout the course, students are challenged to explore existing theory and, importantly, to learn and engage in the process of theorizing, themselves.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 613 Seminar in Social Work Education

Focus is on the place of social work education in the university with attention to issues of current concern such as the integration of professional education with the scholarly research focus of other academic disciplines. Consideration will be given to educational program structure, content, curriculum development, evaluation, and teaching methodologies. Students will be required to teach a course in the B.S.W. or M.S.W. curriculum under mentorship of a senior faculty member.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 614 Teaching Practicum

The teaching practicum is a supervised experience in teaching at the master's or undergraduate level in the School of Social Welfare, or in some aspect of academic administration, such as curriculum development, project planning, and/or proposal development. The educational practicum is typically available to doctoral students in the third year. An individualized plan will be developed for implementing the teaching practicum. Practica may include teaching a section of a required graduate/undergraduate course, working as a teaching assistant with a faculty member, and/or co-teaching and working with the curriculum committees and area sequences in curriculum development. Spring
3 credits, S/U grading

HWC 615 Dissertation Seminar I

Students are expected to survey the current state of the art in their area of interest and to develop a written prospectus on a question suitable for dissertation research. In the second semester, students will refine dissertation proposals through presentation and critique in the seminar. Specific techniques and alternatives in studying a variety of dissertation questions are compared.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 616 Dissertation Seminar II

A continuation of HWC 615 Dissertation Seminar I.
3 credits, Letter graded (A, A-, B+, etc.)

HWC 679 Special Topics in Policy Research

Discusses timely policy research issues such as violence as a public health problem, aging, racism, gender, AIDS, poverty and international social work. Topics vary each term as faculty

develop specific modules that address one or more of these topics. Offered
Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HWC 695 Independent Study

Spring, 3 credits, Letter graded (A, A-, B+, etc.)

HWC 699 Dissertation Research on Campus

Dissertation research under direction of advisor.
Fall, 1-9 credits, S/U grading

HWC 700 Dissertation Research Off Campus - Domestic

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate student insurance plans and should be advised by an International Advisor.
Fall, Spring, 1-9 credits, S/U grading

HWC 701 Dissertation Research Off Campus - International

Prerequisites: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver be second week of classes. The charge will only be removed if other plan is deemed comparable.
Fall, Spring, 1-9 credits, S/U grading

HWC 800 Full Time SUMMER RESEARCH

F T SUMMER RESEARCH
0 credit, S/U grading

HWL

HWL 500 Study at Touro Law

For students in the M.S.W./J.D. program and who are maintaining matriculation while enrolled at Touro Law Center.
0 credit, S/U grading

MCR

MCR 501 Experimental Clinical Research

This course will (1) introduce trainees to formulation of a research question and hypothesis testing and; (2) introduce trainees to various research methodologies and how they are used to answer clinical research questions. This is not a clinical trials design course but rather is focused on how a clinical paradigm is used to formulate a research question and develop a hypothesis.
Summer, 1 credit, Letter graded (A, A-, B+, etc.)

MCR 506 Biostatistics 1 for Clinical Scientists

This is Part One of a two-part biostatistics training sequence. This course serves as an introduction to the principles and methodologies of biostatistics for clinical researchers. The material covered includes probability and distribution, descriptive statistics, point and interval estimation, hypothesis testing, correlation, linear regression, ANOVA, ANCOVA, logistical regression, survival analysis, and non-parametric tests.
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

MCR 507 Biostatistics II

The second course in biostatistics in the clinical scientists training sequence is intended to further aquaint the traniees with the commonly used procedures covered in the first course and to learn to apply these procedures to real and simulated datasets using statistical software. As part of the course requirement, the trainees will need to complete a course project analyzing an appropriate research data set.
Spring, 3 credits, Letter graded (A, A-, B+, etc.)

MCR 514 Epidemiology for Clinical Scientists

The aims of this course are to introduce trainees to basic epidemiologic concepts, methods and topics, and to provide them with skills to critically evaluate published literature, interpret data, and develop and evidence based approach to medical practice. Upon completion, trainees will be able to apply basic epidemiologic principles and methods to problems encountered in clinical medicine. Co-requisites: MCR 506 Offered
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

MCR 525 Contemporary Topics in Clinical and Translational Research

This monthly lunchtime seminar is designed to expose clinical and basic science students to contemporary topics in clinical and translational research. Topics include. "-Omics", Biobanking and Biorepositories, Biomedical Informatics, Imaging and Big Data. Lunch will be provided.
1 credit, S/U grading

MCR 549 Legal and Regulatory Issues in Clinical Research

Major contemporary legal and regulatory issues associated with scientific research will be discussed. Additionally, this course will introduce students to the history behind the regulations that safeguard human subjects, will educate students in detail about their responsibilities as clinical investigators.
Summer, 1 credit, Letter graded (A, A-, B+, etc.)

MCR 562 Data Management and Informatics for Clinical Scientists

This course provides students with computer and data management skills required to complete a research project. Questionnaire development, data processing and analysis, and issues surrounding data security are covered. Students will learn to use Excel, Access and Velos eResearch for data input and management, SPSS for data processing and analysis, and powerpoint and Word for presentations and report generation. Hands-on exercises are used to develop skills.
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

MCR 566 Clinical Research Methods

This course aims to introduce trainees to the different aspects of clinical trial design, conduct, management and analysis; and to provide trainees with a basic understanding of the key elements of clinical trial design and practice.. 2 credits, Fall term, Professor Leslie Hyman, PhD
2 credits, Letter graded (A, A-, B+, etc.)

MCR 567 Research in Population Health and Clinical Outcomes Research

This course provides an overview of research methods as applied to questions raised in the fields of population health and clinical science. It covers the topics of risk adjustment, cost assessment, access to, utilization and quality of care, outcomes and health status measurement, and health system performance.
Fall, 3 credits, Letter graded (A, A-, B+, etc.)

MCR 580 GCRC/SAC Scientific Review Process

Students will understand and participate in the process of scientific review of human subject research protocols submitted to the GCRC.
Fall, 1 credit, Letter graded (A, A-, B+, etc.)

MCR 601 Ethics and Professionalism in Clinical Research

Using an interative case-based format, the topics covered include the justification of human research and reasonable balance of risk versus benefits; the use of animals in biomedical research; issues of informed consent and IRB paperwork processing; the ethical challenges of clinical research; ethical concerns associated with genetic testing and screening; research involving minors and adults of questionable capacity to consent; conflict of interest and funding of research for individuals and institutions; investigator responsibilities with regard to fulfilling government regulations; scientific fraud and whistle blowing; the scientific community and mentoring; authorship and attribution; special populations and inclusion of minorities and; mergency research-related special requirements.
2 credits, Letter graded (A, A-, B+, etc.)

MCR 630 Technology Transfer

Students will be exposed to concepts including disclosing inventions, protecting intellectual property, working with industry/working with university faculty, licensing, collaborative agreements, intellectual property protection and management and commercialization.
Spring, 0-6 credits, Letter graded (A, A-, B+, etc.)

MCR 650 Molecular and Laboratory Methods in Clinical Research

The aims of this course are to introduce trainees to laboratory methods relevant to clinical research with an emphasis on molecular medicine.
Fall, 2-3 credits, Letter graded (A, A-, B+, etc.)

MCR 684 Writing a Research Proposal

This course will help students develop the skills necessary to design a research proposal including framing the specific aims, evaluation of the literature, description of preliminary data and research methods, proposed biostatistical analysis and power calculations, defining eligibility criteria, and development of a safety plan, issues of recruitment including under-represented ethnic and racial groups.
Summer, 1 credit, Letter graded (A, A-, B+, etc.)

MCR 692 Research in Progress

This course meets weekly and is attended by all trainees and mentors. Trainees present updates of their research endeavors and receive input from experienced mentors. Trainees are exposed to discussion among mentors on research design and interpretation.
Fall and Spring, 1 credit, S/U grading

MCR 693 Clinical Research Opportunities at Stony Brook University and Affiliated Institutions

The aims of this series are to familiarize trainees with the range and breadth of multidisciplinary clinical research carried out at Stony Brook and its affiliated institutions, and to provide examples of successful team approaches to study design, data analysis and ethical issues in clinical research. At each semester, a research team will be highlighted that will describe how the team came to be formed followed by a presentation about the research hypothesis, study design, data collection and analysis, and future work to follow.
Fall, Spring, and Summer, 1 credit, Letter graded (A, A-, B+, etc.)

MCR 694 Seminars in Clinical Research

Offered
Fall and Spring, 1 credit, Letter graded (A, A-, B+, etc.)

MCR 695 Defining and Developing a Career Path in Clinical and Transnational Research

Students will read and discuss chapters from the Howard Hughes Medical Institute "Making the Right Moves" online textbook and develop a career plan. Topics include how to set up your lab, networking, conflicting resolution and managing your staff.
1 credit, S/U grading

MCR 696 Presenting Research Results to Peer Audiences

Students will have reading assignments on designing and giving a great talk as well as how to write a paper suitable for publication in a peer reviewed journal. Students will have an opportunity to practice giving a talk about their research projects. Masters students will present a summary of their thesis project to date. Each student in the Masters in Clinical Research Program will present a final project as part of the Annual Research Symposium help the last day of class.
1 credit, S/U grading

MCR 698 Practicum in Teaching

The course provides hands-on experience in classroom teaching and mentoring students in the conduct of clinical research. Other activities may include preparation and supervision of class projects, exams, homework assignments, creation of voice over PowerPoint lectures, and participation in interactive Blackboard student discussions. A final report that summarizes the activities completed and provides a self-reflection on the experiences gained during the practicum is requires at the conclusion of the course. Participation by advanced graduate student under the supervision of program faculty. Prerequisites: Permission of the supervising faculty. 3 credits, S/U grading May be repeated 2 times FOR credit.
3 credits, S/U grading

MCR 699 Masters Thesis

Original investigation in clinical research undertaken with the supervision of the student's Thesis Committee. 1-6 Credits, ABCF Grading
1-6 credits, Letter graded (A, A-, B+, etc.)

MST

MST 501 Selected Topics in Translation/ Research and Clinical Pathological Correlations

The learning goals of this course are for the students to gain an appreciation of examples of research by physician scientists and its clinical application. A clinical case will be presented by faculty or senior students and this case will be discussed in the light of a recent biomedical research publication. The publications are presented, analyzed and discussed by the students as a group. Topics are selected from the recent biomedical literature and can involve any clinical discipline, basic life science research topics as well as bioengineering topics.
0-1 credits, S/U grading

MST 502 Clinical Scientist Seminar Series

The learning goals of this course are for the students to gain an appreciation of examples of research by physician scientists and its clinical application. A clinical case will be presented by faculty or senior students and this case will be discussed in the light of a recent biomedical research publication. The publications are presented, analyzed and discussed by the students as a group. Topics are selected from the recent biomedical literature and can involve any clinical discipline, basic life science research topics as well as bioengineering topics.
0-1 credits, S/U grading

MST 698 Practicum in Teaching

Teaching practicum, supervised by a faculty member, for the MSTP Program. Course to be identified by the student and graduate studies director.
0-1 credits, S/U grading

NUR

NUR 630 Philosophical Foundations of Nursing Science

This course explores historical and current views of knowledge development underpinning philosophies of science, social science, and nursing science. Underlying ontological and epistemological assumptions of philosophical views and how they influence scientific inquiry in nursing will be addressed. A key component of these discussions will be the implications of diverse perspectives on theoretical thinking, scientific inquiry, and knowledge development in nursing.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 631 Concepts, Theories and Knowledge Development in Nursing Science

This course will provide doctoral students with a systematic overview of concepts and theories as a foundation for knowledge development in nursing. Conceptual and analytical skills are developed through analysis and critique of nursing concepts, clinical phenomena and science-based theories. The course examines the theoretical and empirical foundation of nursing, approaches to the analysis and development of nursing concepts, the role of concepts in nursing science, and the applicability of nursing concepts and theories to clinical practice. Focus will be on development and use of conceptual language, critical thinking skills, and in analyzing literature portraying key nursing concepts.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 635 Biostatistics

This course will provide the student with knowledge of statistical approaches used in research. Applying statistical methods to critically evaluate & evidence used in clinical decision making will be an important aspect of this course.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 636 Advanced Statistical Methods

This course will build on the foundations of NUR 635 and extend the doctoral student¿s exposure to more complex inferential statistics used in healthcare research. Statistical applications will be explored in the context of nursing research. Practical application of these statistical methods will be conducted using SPSS statistical software.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 647 Doctoral Research Seminar

This course builds on research and nursing core in the development of doctoral-level academic skills essential for

conducting a thorough literature search in the development of a scholarly paper on the state of the science on a selected topic. Emphasis is place on establishing a scientific foundation of nursing practice, policy, and research.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 660 Quantitative Designs and Methods in Nursing Research

Students will explore and analyze quantitative research methods used in the biomedical, behavioral, social and nursing sciences that are appropriate for the investigation of nursing research questions. This course explores the major designs and methods used for the investigation of problems requiring quantitative approaches. Types of research designs are analyzed including major strengths and limitations of each. Population sampling, participant selection, data collection and analysis methods are compared and contrasted. Data analysis will be incorporated using SPSS and other software programs.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 661 Qualitative Designs and Methods in Nursing Research

This course explores the major approaches to qualitative inquiry. Philosophical or theoretical underpinnings specific to each approach are analyzed. Selected frameworks for data collection and analysis are presented. Selection of participants, data collection and analysis of each tradition are compared and contrasted. The elements of rigor in qualitative inquiry are explored.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 662 Data Management and Informatics for Clinical Scientists

The aims of this course will be achieved by participation in a 45-hour (3 credit) course consisting of lectures, hands-on computer application training/labs, hands-on exercises/assignments, discussions and quizzes, and an individual final presentation. The course will provide training in questionnaire design, the use for REDCap for data input and managements, Excel for budget management, SPSS for data processing and analysis, and Power Point for print/slide presentations and report generation. Trainees will be instructed in the conduct for good clinical practice as it relates to data collection and data management. Trainees will be introduced to available comprehensive systems for collaborations, data management and data capture (e.g., REDCap, on Core) and issues of data security as it relates to clinical research. The hands-on exercises/assignments, discussions, quizzes, and homework assignments will help to develop skills in questionnaire design, methods of data study collection, data capture, and data management while enforcing skills for data analysis and presentation of study results. This course includes issues related to data management and data collection for a clinical research project to meet the needs of this group of trainees. Trainees will be evaluated by participation in the class exercises, homework assignments, quizzes, on-line course discussions through Blackboard, development of an individual simulated project, and an individual oral presentation of the student¿s simulated project describing their choices for data management methods and results to be presented during the last two classes. The individual project will include development of a questionnaire, codebook, database and creation of a test data set for use in conducting analyses and the final presentation.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 670 Independent Studies

This student-initiated elective course provides an opportunity to use enhance the depth of a student's chose area of research. The independent student can be in specific content areas or methodological or analytical approaches. Independent Studies cannot replace courses for a degree.
1-3 credits, Letter graded (A, A-, B+, etc.)

NUR 680 Integrating Big Data to Evaluate Population Health

This course will focus on available sources of population data, how to access them, and begin to explore geographic regions through data. Students will be introduced to the field of Biomedical Informatics. Innovative tools developed at Stony Brook by informaticians to evaluate population health will be presented. Students will learn how to use data to identify populations at risk ¿ who they are, where they live and to identify key focus areas to target intervention. With this knowledge students will be able to outline programs that may reduce health disparities, as well as evaluate other health risks in regional populations.
1-3 credits, Letter graded (A, A-, B+, etc.)

NUR 690 Dissertation Seminar I

This course focuses on the development of the doctoral dissertation proposal. Students will apply their theoretical knowledge and research proficiency to transform their general ideas about their dissertation topic into a research strategy. Students will prepare key elements of the dissertation proposal, including Statement of the Problem, Research Questions and/or Hypotheses Conceptual/Theoretical Framework, Literature Review, and Research Methods. Using a seminar format, teaching-learning strategies are designed to promote critical/analytical thinking and scholarly discourse.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 691 Dissertation Seminar II

This course focuses on the conduct of the doctoral dissertation under the guidance of the student's dissertation committee. Students will secure applicable human subjects protection, carry out their research methodologies, and complete analyses of data. The course culminates in a scholarly paper (Dissertation) that exemplifies the student's expertise and their new and creative contribution to nursing. Using a seminar format, teaching-learning strategies are designed to promote critical/analytical thinking and scholarly discourse. Students are required to provide regular updates of the study's progress to the dissertation committee chairperson.
3 credits, Letter graded (A, A-, B+, etc.)

NUR 697 Seminar Series: Investigator Role and Research Practicum

The course introduces graduate students to significant and methodologically rigorous research. School of Nursing faculty

and affiliated faculty from Stony Brook Medicine and Stony Brook University will serve as preceptors as students engage in a supervised, hands-on practicum with ongoing research. Students will develop contracts that identify individualized learning outcomes of the practicum that will be facilitated by direct advisement and mentorship of School of Nursing and affiliated faculty. Opportunities during the practicum will include subject recruitment and screening, data collection and analyses, interpretation of results, research report writing an preparation of products for scholarly dissemination. While the research practicum may not necessarily expose students to the specific population or problem of greatest interest to them, the skills or competencies mastered can prepare students methodologically to carry out their dissertation research strategy.
3 credits, S/U grading

NUR 698 Seminar Series: Academic Role and Teaching Practicum

The course introduces graduate students to the major pedagogical theories and practices in academia. Students will develop contracts that identify individualized learning outcomes of the practicum that will be facilitated by direct advisement and mentorship of School of Nursing faculty. The practicum will include the student teaching part of a course, developing learning modules and student assignments, evaluating student performance, and evaluating their own teaching performance.
3 credits, S/U grading

NUR 699 PhD Dissertation Research -On Campus

3 credits, S/U grading

NUR 700 PhD Dissertation Research-Off Campus

3 credits, S/U grading

NUR 701 PhD Dissertation Research-Off Campus (International)

3 credits, S/U grading