

School of Health and Medical Sciences



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Departments

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Interprofessional Health Sciences and Health Administration
Terrence Cahill, Ed.D., FACHE, Chair
Anne M. Hewitt, Ph.D., MHA Program Director

Occupational Therapy: Ruth Segal, Ph.D., OTR, Chair

Physical Therapy: Doreen M. Stiskal, PT, Ph.D., Chair
Physician Assistant:

Christopher Hanifin, M.S., PA-C, Chair

Speech-Language Pathology:

Vikram N. Dayalu, Ph.D., CCC-SLP, Chair

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The School of Health and Medical Sciences offers two distinct educational programs for healthcare professionals: medical residency and fellowship training for physicians, dentists and pharmacists; and graduate programs in health sciences. By design, the programs are intended to prepare healthcare practitioners to competently, competitively and creatively function in a dynamic healthcare environment.

Note: A Master of Science in Jurisprudence in Health Law is offered through Seton Hall University School of Law. For more information about the program, please see the Law School section of this catalogue.

General Information

The School of Health and Medical Sciences, established in 1987, is a professional school within the University structure. The School's mission is to prepare healthcare professionals to assume leadership roles in the healthcare arena. To achieve this goal, a variety of unique and innovative educational programs are offered utilizing a multi-institutional/integrated approach to graduate education. The School comprises three distinct educational programs: residency and fellowship training, continuing professional development and graduate programs in health sciences.

Residency programs offer training for physicians in specialty areas such as internal medicine, surgery, neurology, orthopedics, podiatry, AOA internship, internal medicine and emergency medicine. There also is subspecialty training available for qualified candidates who have completed the appropriate prerequisite training. All residency and fellowship programs are ACGME, AOA, APMA accredited. Residency training is also available in pharmacy. The training occurs at participating institutions: Saint Michael's Medical Center in Newark; St. Joseph's Regional Medical Center in Paterson; Trinitas Hospital in Elizabeth; St. Francis Medical Center in Trenton and John F. Kennedy Medical Center in Edison. The hospitals and the University jointly attest to the successful completion of the residency training through issuance of a certificate.

The School offers several innovative graduate programs in the health sciences that prepare healthcare professionals for leadership roles in clinical practice, healthcare management, education and research. These programs are designed to provide healthcare professionals with an enhanced knowledge base through a flexible and diverse curriculum. The school offers a Doctor of Philosophy degree in Health Sciences with specializations in health professions leadership, movement science, and speech-language pathology. The school offers a Master of Healthcare Administration degree that prepares

individuals to assume leadership responsibilities in a variety of healthcare organizations. The School of Health and Medical Sciences offers a Master of Science in Occupational Therapy program designed to prepare healthcare practitioners who will: provide a broad range of patient care services to persons of all ages within the scope of occupation-based interventions addressing self-maintenance, self-care, school, work and play/leisure occupations; critically analyze and convey research information to provide a broad range of patient care services; conduct clinical research; and carry out administrative responsibilities.

The Master of Science in Physician Assistant program prepares post-baccalaureate students to perform as certified physician assistants in the broad healthcare arena.

The School offers a Master of Science in Speech-Language Pathology. The program prepares practitioners with the broad-based knowledge and skills to work with the infant-toddler, preschool, school-age, adolescent, adult, and geriatric populations in all settings that employ speech-language pathologists.

The School offers the only Master of Science in Athletic Training in New Jersey, and is one of less than two dozen entry-level master's programs in the country. The program prepares students to practice as entry-level athletic training practitioners who provide a wide range of patient care services.

The School offers a Doctor of Physical Therapy program. The program is intended to prepare individuals to become professional doctors of physical therapy, who are competent and autonomous practitioners, possessing a depth and breadth of knowledge to support the best practice of physical therapy.

Center for Interprofessional Education in Health Sciences

Genevieve Pinto Zipp, PT, EdD, Director

The Center for Interprofessional Education in Health Sciences (CIEHS) is the result of the School of Health and Medical Sciences' (SHSM) faculty-led Task Force on Interprofessional Education's (IPE) strategic planning efforts to create meaningful and cross-disciplinary educational and research experiences for students, faculty and clinical partners in order to further develop SHSM's patient-centered care mission. Innovative research, productive scholarship and the creation of several "Core Signature IPE Experiences" provide a solid foundation for continuous growth, ground-breaking developments and, ultimately, synergistic collaboration. A cornerstone of the CIEHS is interprofessional involvement from across and beyond the Seton Hall community.

Institute for Advanced Study of Rehabilitation and Sports Science

Michael LaFontaine, EdD, ATC, Director

The Institute for Advanced Study of Rehabilitation and Sports Science (IASRSS) provides an interdisciplinary forum for the conduct of clinical research on injuries that result

from individuals' participation in recreational exercise or competitive sports, as well as research on the physiological and biomechanical elucidation of novel or minimally explored topics in sports medicine, exercise and movement science or physical rehabilitation. A hallmark of IASRSS is its fostering of interprofessional dialogue on contemporary issues in sports, exercise and physical rehabilitation through hosted journal clubs, continuing education seminars and outreach within and beyond the Seton Hall community. The IASRSS Scientific Advisory Board, comprised of volunteer leaders, will present opportunities for faculty and clinical staff to become more involved in the Institute's worthwhile pursuits.

The Seton Center for Community and Population Health

Anne M. Hewitt, Ph.D., Director

The Seton Center for Community Health (SCCH) was established in 2004 as an academic resource for collaboration, learning, and research to enhance the quality of life for individuals and improve the health status of New Jersey residents. The SCCH is located in the Department of Interprofessional Health Sciences and Health Administration in the School of Health and Medical Sciences. It provides technical assistance and scholarship to local community agencies using a partnership approach and involves students who are pursuing the M.H.A., Ph.D. in Health Sciences, and other graduate degree programs.

Class Attendance and Academic Integrity

Attendance at each class meeting is expected. Instructors may take class attendance into account when determining grades.

All forms of dishonesty, whether by act or omission, including, but not limited to, cheating, plagiarism, and knowingly furnishing false information to the University, are prohibited. Intentional disruption or obstruction of teaching, research or administrative proceedings is prohibited. University sanctions may extend to suspension and dismissal.

Work submitted in courses must be the product of the efforts of the student presenting it, and contributions of others to the finished work must be appropriately acknowledged. The presentation of another's work as one's own is a serious violation of the academic process, and it is penalized accordingly. The decision on the appropriate penalty is in the first instance the professor's, and it may extend to a failing grade for the course.

Admission Criteria

Admission to the School of Health and Medical Sciences is competitive. Admission decisions are holistic and based on multiple indicators of likely student success; it will not be possible to admit every student who meets minimum qualifications for any one criterion. Program needs and capacities are also factors in the admission decisions.

Grading Policy/Repetition of Courses

Students who have completed SHMS courses and received a grade of C or higher are not permitted to repeat such courses. However, any student receiving a grade of less than "C" (including a grade of "U" when applicable) will receive an automatic failure ("F" grade) and shall be required to repeat the course the next time the course is offered to earn a grade of "B" or higher (or "S", when applicable), in the repeated course and maintain a cumulative grade point average of 3.0 or better. As a result of a course failure, the student shall be placed on academic probation. A student will have only one opportunity to repeat a failed course. Failure to successfully retake and/or pass a failed course shall result in a recommendation of dismissal from the program.

For further information see the SHMS Academic Performance Standards Policy and Student Performance Review Committee (SPRC) Procedures document.

Ph.D. in Health Sciences

The Department of Interprofessional Health Sciences and Health Administration offers the Doctor of Philosophy in Health Sciences (Ph.D. in H.S.) degree. The Ph.D. in Health Sciences is distinguished by its interdisciplinary and intradisciplinary approach to graduate study. The fundamental design of the program is a model of post-professional education that is broadly based with a core curriculum in health sciences and varied specialization tracks, which permit healthcare professionals to assume leadership roles as advanced practitioners, researchers, managers or health professions educators. The program is designed for health professionals interested in pursuing advanced education at the doctoral level.

A core group of courses provide the basis for an understanding of the healthcare delivery system and an understanding of the role and importance of communication skills within organizations. Additional courses in research methods and scientific writing, taken by students in all tracks, promote the development of critical thinking necessary to achieve career goals. Students select specialized courses designated for each track, which provide them with the opportunity to design an individualized plan of study that meets their needs and interest. The coursework is enhanced through participation in seminars, practica, research projects, independent studies and research forums.

The three tracks in the Doctor of Philosophy program are health professions leadership, movement science, and speech-language pathology. The program is committed to the enhancement of leadership and clinical practice applications by assisting students in the development of basic research skills; the investigation of research questions in the clinical, healthcare services or health professions education environment; and the acquisition and distribution of new information to society. Flexible scheduling allows for full-time and part-time studies.

Specialization in Health Professions Leadership

The health professions leadership specialization track is designed to provide doctoral education for those healthcare professionals seeking leadership roles in a variety of healthcare settings, as well as teaching and research careers. The leadership track prepares these individuals to design and evaluate methodologies for the delivery of high-quality, cost-effective and integrated healthcare services and health professions education programs. The specialization also prepares students to apply the theories and functions of healthcare management, strategic planning, finance, budgeting and marketing in the design and delivery of healthcare services and health professions education programs; influence healthcare policies and regulations that effect the delivery of healthcare and the education of health professionals; and utilize tools for managing healthcare and educational information.

Specialization in Movement Science

A trend toward the multidisciplinary study of human movement and motor control has resulted in a restructure and redesign of traditional theories of movement. This has contributed to the need for rehabilitation professionals who read and apply new knowledge and findings for clinical or educational practice, and for educators to alter what is taught at the entry-level of practice. Students specializing in a concentration in movement science develop a coherent view of theory, clinical practice and research in motor learning and control. Study is directed at both normal and dysfunctional movement.

The goal of the specialization is to prepare students for research and teaching careers. This goal is met by the comprehensive educational program, which is complemented by a mentoring model of graduate education emphasizing research under the direction of experienced faculty.

Specialization in Speech-Language Pathology

The specialization track in speech-language pathology offers a flexible program of advanced study tailored to address the individual needs of doctoral students with a primary interest that can range from basic research in speech, voice or language science to applied research and/or clinical applications related to speech and language disorders. Doctoral-level courses are offered in the various areas of communication science and disorders, as well as in a large number of related disciplines. This coursework can be combined with independent study in order to design a program of study that provides an even closer match for the individual's interests and professional goals. Supervised research and teaching experiences further supplement this comprehensive and rigorous training program which culminates in the completion of the doctoral dissertation.

Program Goals, Objectives and Outcomes Goals

The overall goal of the Doctor of Philosophy (Ph.D.) is to prepare healthcare providers, managers, academics and health science researchers to assume leadership roles in professional leadership, research, teaching and practice

within the changing healthcare system. To achieve this goal a flexible and diverse curriculum has been designed to develop individuals who:

- exhibit advanced communication, educational and research skills to serve as active contributors to the healthcare system;
- consider ethical values and principles fundamental to the provision and receipt of healthcare services and research;
- use pedagogical and organizational skills necessary to deliver health care in an efficient and effective manner;
- critically appraise health science literature and apply the appropriate principles and procedures to the recognition, evaluation, interpretation and understanding of current issues;
- apply the principles of scientific inquiry to investigate problems at the frontiers of knowledge; and
- demonstrate knowledge and sensitivity of culturally diverse populations and their attitudes toward health and illness.

Objectives

On completion of the Doctor of Philosophy program, graduates should be able to:

- demonstrate proficiency in a chosen area of specialization;
- demonstrate the integration of research methods for scholarly outcomes;
- synthesize concepts, models and theories through the appropriate application of theoretical and empirical knowledge in a chosen area of specialization;
- integrate professional and ethical values and behaviors in research activities;
- engage in analytical research that fosters change in the delivery of health care;
- advance the scientific base within healthcare;
- assume responsibility for learning and professional growth.

Outcomes

Upon completion of the Doctor of Philosophy program, graduates will:

- demonstrate oral and written competency in both scholarly and technical formats;
- conduct and defend original research to generate knowledge in their field;
- design and evaluate methodologies for the delivery of high-quality, cost-effective and integrated health care, research endeavors and health professions education programs; and
- demonstrate knowledge of scientific advances in their field of practice.

Criteria for Admission

The following are prerequisites for admission to the program leading to the Doctor of Philosophy in Health Sciences:

- graduate of an accredited college with a master's degree. For the movement science and speech specializations, proof of eligibility for licensure to practice in New Jersey is also required;
- two letters of recommendation indicating that the applicant possesses the aptitude and ambition to complete a course of doctoral study. Preferably, letters should be from current or previous employers and/or from last school attended;
- statement of goals and research career interests;
- personal interview: this may be accomplished via a telephone conference;
- completion of an application for admission along with official transcripts from all undergraduate or graduate study. Applicants with international degrees must have their academic records evaluated by a member agency of the National Association of Credential Evaluation Services (NACES)
- minimum GPA of 3.0 on a 4.0 scale on all graduate work;
- curriculum vitae; and
- if English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) Score Report documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above. Exception to this requirement may be granted if the applicant is a U.S. resident and a graduate of a U.S. college within the previous two years.
- GRE test score within five years of application is preferred.

For program admittance consideration, a completed application should be received by:

November 1 - Spring Semester
April 1 - Summer/Fall Semesters

Curriculum Requirements

This program of study requires a minimum of 57 credits. For students who hold a clinical doctorate, the minimum number of credits is 48. The educational program plan is developed by the student in consultation with and approval by an academic adviser who is assigned to the student upon admission to the program. This adviser serves as the student's academic adviser while the student is pursuing course work and participates in selection of the dissertation committee. All students who require a minimum of 57 credits complete 12 credits of core courses; 18 credits of specialization courses; 15 credits of research courses; and 12 credits of dissertation. Specific specialization courses are selected by the student in consultation with the academic adviser to ensure a flexible and creative process of continuing personal and professional development. Substitutions for courses identified as "required" and curriculum adjustments for students holding a clinical doctorate must have the approval of not only the academic advisor but also the Department Chair.

Core (12 credits)

The goal of this portion of the program is to provide the basis for an understanding of the healthcare delivery system, scientific inquiry process, the philosophical basis for research and an understanding of the importance of professional communication skills (both oral and written) within an organizational structure.

Research (15 credits)

The goal of this portion of the program is to provide the student with a broad and comprehensive understanding of statistics, qualitative and quantitative research methods and designs, and the methods for communicating those findings to others.

Dissertation Process (12 credits)

Students conduct and defend an original research investigation for the purpose of advancing the body of knowledge in their own field.

Specialization (18 credits)

For this area of study, students with their advisors select specialized coursework designed to provide the student with the content knowledge needed to pursue their area of research interest and achieve their professional goals. A maximum of 9 of credits Independent Study may be taken for the 18 specialization credits.

Ph.D.

Core Courses (12 credits - Required)

GMHS 6110	Health Services Issues and Trends
GMHS 7403	Philosophy of Science
GMHS 7503	Scientific Inquiry/Writing
GMHS 6409	Styles of Teaching and Learning in Health Professions Education

Research (15 credits)

GMHS 7500	Intermediate Statistical Methods (required)
GMHS 7501	Quantitative Research Methods (required)
GMHS 7502	Quantitative/Survey Methods(required)
GMHS 7508	Intermediate Statistical Methods II (required; prerequisite GMHS 7500)
GMHS 7602	Dissertation Seminar (required)
RGCN 8000	Research Advisement

Dissertation Process (12 credits)

GMHS 9504	Dissertation I (prerequisite: student must have attained doctoral candidacy)
GMHS 9505	Dissertation II (prerequisite: GMHS 9504)
GMHS 9506	Dissertation Advisement (prerequisite: GMHS 9505)

Specialization (18 credits)

Select one of the three specialization tracks:

Health Professions Leadership

GMHS 6210	Curriculum Development in Health Professions Education
GMHS 6211	Institutional Culture and Human Relationships
GMHS 6212	Finance in Health Care
GMHS 6230	Leadership Theory and Practice
GMHS 6240	Management and Leadership in Health Professions
GMHS 6301-3	Topical Seminar
GMHS 6307	Integrating Technology and Education in Health Professions
GMHS 7110	Strategic Planning for Healthcare Professions Education
GMHS 7204	Health Perspectives Topical Seminar
GMHS 7316-18	Independent Study in Health Sciences
GMHS 7603	Biomedical Ethics and Legal Issues in Healthcare
GMHS 8400	Grantsmanship
GMHS 8508	Practicum

Movement Sciences

GMHS 6301-3	Topical Seminar
GMHS 7202	Issues in Motor Control: Reaching and Manipulation
GMHS 7203	Issues in Motor Control: Gait
GMHS 7306	Investigatory Methods in Electromyography
GMHS 7316-18	Independent Study in Health Sciences
GMHS 8113	Principles of Motor Control and Learning
GMHS 8305	Movement Science Topical Seminar
GMHS 8402	LabVIEW
GMHS 8508	Practicum
GMHS 9305	Biomechanics of Human Movement

Speech-Language Pathology

GMHS 8200	Topics in Articulation/Phonological Development and Disorders
GMHS 8201	Topics in Dysphagia
GMHS 8203	Topics in Language Acquisition and Disorders
GMHS 8204	Topics in Neurogenic Disorders of Cognition and Language
GMHS 8205	Topics in Neurogenic Disorders of Speech
GMHS 8206	Topics in Speech Analysis Methods and Instrumentation
GMHS 8207	Topics in Autism Spectrum Disorders
GMHS 8208	Topics in Speech Motor Control
GMHS 9000	Independent Study

Qualifying Examination

All Ph.D. students are required to pass a qualifying examination which assesses the student's understanding of research methodologies. Students are eligible to sit for the exam once they have completed the following research requirements for the program: GMHS 7500, GMHS 7501, GMHS 7502, GMHS 7508. (Note: For students admitted prior to academic year 2009-2010, only GMHS 7500 and 7501 are required.) The examination is a written pass/fail examination given on the Seton Hall University campus in January and June. Students must pass the qualifying exam in order to proceed with the program. If a "pass" is not achieved on the first exam, a student has up to two additional opportunities to re-take the exam in order to achieve a "pass" and remain in the program.

Candidacy Examination

All Ph.D. students are required to pass a candidacy examination. Once students pass the candidacy examination, they are considered doctoral candidates and are eligible to begin the dissertation process. The examination is a written examination given on the Seton Hall University campus in January and June.

Students may apply to take the candidacy exam when they have completed 39 credits of coursework, including completing the required core courses and research courses (Note: Students who have a clinical doctorate may apply to take the candidacy exam when they have completed 27 credits of coursework. If a "pass" is not achieved on the first candidacy exam, a student has up to two opportunities to remediate (e.g., re-take part or all of the exam, take additional coursework, etc.) in order to achieve a "pass" and remain in the program.

Dissertation Guidelines

With input from the academic adviser, students must select a dissertation committee chair prior to initiating the dissertation proposal process. This occurs following successful completion of the candidacy examination. The chair shall hold an earned Doctorate and a faculty appointment (excluding adjunct positions) in the Department of Interprofessional Health Sciences and Health Administration. The chair will act as the student's primary research adviser and advocate throughout the dissertation process and assist the student in the selection of the other committee members.

Proposal Hearing and Dissertation Courses

Dissertation I culminates when the candidate orally defends the proposal. Candidates must receive written approval of the proposal from the dissertation committee. Candidates register for Dissertation II and undertake the research investigation outlined in the proposal following receipt of IRB approval for the dissertation study. It is expected that candidates will register for Dissertation Advisement following completion of data collection and completion of the first draft of the Discussion section. Candidates will continue to register for Dissertation

Advisement until the dissertation document has been fully approved and accepted by the Dissertation Committee and the document has been defended in the oral dissertation defense. Students must complete a minimum of 12 credits of dissertation.

Dissertation Defense

The candidate must submit to all committee members a “near” complete (i.e., minimal changes expected post-defense) dissertation manuscript a minimum of two weeks prior to the scheduled oral defense of the dissertation. Students must submit the application for Dissertation defense three weeks prior to the scheduled defense date. Public notification of the author, title, date and location of the defense will be made to the Office of the Provost, SHMS faculty, students and the University community two weeks prior to the event. A dissertation will not be considered approved and accepted until all members of the dissertation committee sign the manuscript’s signature page. A dissertation may be signed only when no revision or only minor revisions are required. Candidates must adhere to all dissertation guidelines as specified by the program and the university.

Graduation

Students are expected to complete the Ph.D. degree within eight years from the date of their initial program beginning. Under exceptional circumstances, a student’s dissertation committee may apply to the department faculty for a one year extension on the condition that the student is expected to complete the degree requirements within that one year. An additional and final one year extension may be granted by the department faculty; failure to complete the degree in this ten year period may result in dismissal from the program. Note for students admitted to the program prior to AY 2016-2017, the maximum time-to-completion will be addressed on an individual basis.

Also, effective spring term 2016, in addition to completing all required coursework and successfully defending the dissertation study, in order to graduate with the Ph.D. degree, students must also submit their dissertation document digitally to the Library and Proquest and have it successfully accepted.

Master of Healthcare Administration (M.H.A.)

Faculty: Anne M. Hewitt, Ph.D., Program Director

The Department of Interprofessional Health Sciences and Health Administration offers the Master of Healthcare Administration (M.H.A.), a graduate Certificate in Healthcare Administration, and a graduate Certificate in Global Health. The M.H.A. degree requires 42 credits, while the certificate program requires 15 credits. Students who complete the Certificate program in Healthcare Administration with a 3.0 GPA or higher can apply all

earned credits toward the M.H.A. degree if they wish to continue their education. Courses are offered in the late afternoons and evenings, and online to accommodate the schedules of working professionals.

The M.H.A. program is a member of the Association of University Programs in Healthcare Administration, a national association of university-based educational programs, faculty practitioners, and provider organizations whose members are dedicated to continuously improving the field of health management and practice. The program is accredited by the Commission on Accreditation of Health Management Education (CAHME). Specific information regarding the M.H.A. program’s application process, competencies, curriculum, and student achievement is available at the M.H.A. web page at www.shu.edu/mha.

Healthcare Administration

Today’s fast changing healthcare system has a critical need for managers with advanced managerial competencies and leadership skills. Seton Hall University’s Master of Healthcare Administration (M.H.A.) and the Certificate in Healthcare Administration programs prepare managers for leadership roles within the healthcare industry

Housed in the Department of Interprofessional Health Sciences and Health Administration in the School of Health and Medical Sciences, the M.H.A. degree and the Certificate in Healthcare Administration are designed around the student’s professional interests and career challenges. Providing a rigorous and thorough understanding of the healthcare environment, the programs address “real world” strategies and skills that will help managers make significant contributions to their organizations. Designed for professionals who wish to advance in their management career or individuals interested in pursuing a healthcare management position, it draws students from a broad array of health service organizations such as healthcare systems, hospitals, assisted living facilities, medical group practices, managed care organizations, home care agencies, pharmaceutical companies, management consulting firms and industries that supply services to healthcare organizations.

The 42-credit M.H.A. program may be completed in a 24-month period. The curriculum consists of courses designed to develop core competencies vital to the success of the contemporary healthcare manager. These courses address topics such as strategic leadership, emergency management, financial management, healthcare ethics, policy and economics. The Certificate in Healthcare Administration consists of three required courses and two electives for a minimum of 15 credits. This graduate certificate is designed for individuals who (1) want to explore a career in healthcare management (2) possess a graduate degree and need to develop specific management skills, or (3) want to take some graduate courses without applying for the M.H.A. degree program. Students who complete the Certificate in Healthcare Administration with a minimum 3.0 GPA or higher can apply all earned credits toward the MHA degree.

M.H.A. On-campus and Online Formats

The Master of Healthcare Administration (M.H.A.) program is a 42 credit curriculum that is offered in two delivery formats: on-campus courses or online courses. Students are admitted to either the on-campus format or the online format and complete their degree requirements according to their selected format.

M.H.A. On-campus

Students enrolled in the 42 credit M.H.A. on-campus format take courses during the late afternoon and early evening hours. The on-campus M.H.A. program may be completed in a 2-year timeframe or with the approval of the student's Advisor, the time-to-complete the degree may be extended. This latter option allows students to maintain their employment while they pursue the M.H.A. degree. All M.H.A. courses are offered each academic year to accommodate student scheduling needs. Students selecting the M.H.A. on-campus format do not attend M.H.A. online courses.

M.H.A. Online

Students selecting the 42 credit M.H.A. online format complete all of their coursework online or at one of the three mandatory on-campus residencies. Online M.H.A. students complete the degree in a 24 month timeframe. Mandatory/intensive residencies are held at the beginning of the program (orientation), at one year into the program, (mid-residency), and at the completion of the program (final residency & graduation). The M.H.A. online format is a cohort model and students selecting this format do not attend M.H.A. on-campus courses.

Program of Study

The Master of Healthcare Administration program is a 42-credit curriculum with courses designed to develop core competencies vital to the success of the contemporary healthcare manager. The curriculum provides a synthesis of general management concepts and healthcare specific applications emphasizing analytic and management decision-making skills. Regardless of whether a student selects the on-campus or the online learning option, the curriculum is the same. All students are required to complete a non-credit professional development e-portfolio under the direction of the M.H.A. faculty and oversight of their Adviser throughout the duration of the program. The requirement must be completed to be eligible for graduation.

The 42 credits required for the degree are designed to be taken in a proscribed sequence and prerequisites are included in the catalogue course descriptions. The degree requirements below are listed in numerical order.

Degree Requirements

HCAD 6002	Research Methods and Statistical Analysis for Healthcare
HCAD 6005	Financial and Managerial Accounting and Costing in Healthcare
HCAD 7513	Healthcare Management

HCAD 7514	Healthcare Financial Management
HCAD 7518	Managing Community and Population Health Systems
HCAD 7521	21st Century Healthcare System (2 credits)
HCAD 7522	Healthcare Policy (2 credits)
HCAD 8514	Healthcare Economics
HCAD 8517	Strategic Planning and Marketing in Healthcare Organizations
HCAD 8518	Legal Aspects of Healthcare Organizations
HCAD 8521	Quality and Information Management Systems
HCAD 8523	Ethics in Healthcare Administration (2 credits)
HCAD 8531	Emergency Management and Health Security
HCAD 8711	Leadership Institute
	Applied Research and Practice Capstone Experience
	HCAD 7991-7993, 7997 (3 credits)

Note: Online students beginning in August will be required to register for RGCN 8000 – Continuation during the Fall semester following their final Residency.

Students must complete a 3-credit Applied Research and Practice (Capstone) experience toward the end of their course of study. The requirements depend on the student's managerial experience. The three options are an internship/field placement (HCAD7991), a practicum (HCAD 7992), or the research seminar (HCAD 7993). Online students have an additional option of completing a Capstone Paper (HCAD 7997).

Criteria for Admission to the M.H.A. Program

The following are prerequisites for admission to the program leading to the Master of Healthcare Administration degree (M.H.A.):

- graduate of an accredited college with a bachelor's degree.
- three letters of recommendation indicating that the applicant possesses the aptitude and ambition to complete a course of study for the M.H.A. degree. Preferably, letters should be from current or previous employers and/or from last school attended;
- statement of goals and career interests;
- completion of an application for admission along with official transcripts from all undergraduate courses and, if applicable, graduate courses. Applicants with international degrees must have their academic records evaluated by a member agency of the National Association of Credential Evaluation Services (NACES).
- minimum cumulative GPA of 3.0 on a 4.0 scale in the coursework of the most recently conferred undergraduate or graduate degree (note: applicants with a cumulative GPA of 2.8-2.99 who have a minimum of 2 years post-degree healthcare experience are also encouraged to apply)

- curriculum vitae or resume; and
- If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) Score Report documenting an internet-based score of 90 or above. The International English Language Testing System (IELTS) can also be accepted documenting a score in the 6.5 band or above. Exception to this requirement may be granted if the applicant is a U.S. resident and a graduate of a U.S. college within the previous two years.
- International Students: The M.H.A. at Seton Hall University has always welcomed international students as members of its learning community. All students must meet the established admission requirements. M.H.A. protocols and policies are shared with the Director of the Office of International Programs to ensure compliance with all federal and university rules. All international students are required to complete 9 credits per semester per their visa and university requirements. Given the requirement of 9 credits of study per semester, international students are expected to follow the 2 year plan to finish within the time allotted by their visa. International students admitted to the M.H.A. program are responsible for obtaining their own housing and transportation as well as living expenses and any other incidental program expenses. Students who wish to enroll in HCAD 7991 – Internship are required to obtain authorization from the M.H.A. Program Director and the Office of International Programs. Additionally, students are responsible for their own transportation to and from any internship site.

Application Deadlines

Applicants may apply online at the Seton Hall University website: www.shu.edu Applications are processed on a “rolling admission” basis with deadlines for the on-campus format of August 1 for the fall term and December 1 for the spring term and for the online format July 15 for the fall term.

Graduate Certificate in Healthcare Administration

The Department of Interprofessional Health Sciences and Health Administration also offers the Certificate in Healthcare Administration.

Admissions Requirements for Graduate Certificate in Healthcare Administration

Applicants for the Certificate in Healthcare Administration must meet the same admission requirements as applicants for the M.H.A. degree:

- graduate of an accredited college with a bachelor’s degree.
 - statement of goals and career interests;
 - completion of an application for admission along with official transcripts from all undergraduate courses
- and, if applicable, graduate courses. Applicants with international degrees must have their academic records evaluated by a member agency of the National Association of Credential Evaluation Services (NACES):
- minimum cumulative GPA of 3.0 on a 4.0 scale in the coursework of the most recently conferred undergraduate or graduate degree (note: applicants with a cumulative GPA of 2.8-2.99 who have a minimum of 2 years post-degree healthcare management experience are also encouraged to apply)
 - curriculum vitae or resume; and
 - If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) Score Report documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above. Exception to this requirement may be granted if the applicant is a U.S. resident and a graduate of a U.S. college within the previous two years.

Applicants for the Certificate in Healthcare Administration may be asked to complete a personal interview, either in person or via telephone.

Application Deadlines

Applicants for the Certificate in Healthcare Administration may apply online at the Seton Hall University website: www.shu.edu. Applications are processed on a “rolling admissions” basis, with deadlines for the on-campus format of August 1 for the fall term and December 1 for the spring term and for the online format July 15 for the fall term and February 15 for the spring term.

M.H.A. Academic Credit for Certificate Course Work

The Certificate in Healthcare Administration is awarded for the successful completion of 15 graduate credits as designated. Students in the certificate program are subject to the same academic policies of the School of Health and Medical Sciences as degree students. These graduate credits can be applied toward the M.H.A. degree, provided the student achieves a B or better in each course, and, attains a 3.0 cumulative GPA or higher in the certificate program and satisfies the admission requirements for the M.H.A. program.

Certificate Curriculum (minimum 15 credits)

The Graduate Certificate in Healthcare Administration is earned by successfully completing three required and three elective courses.

Required Courses (8 credits)

HCAD 7521	21st Century Healthcare Systems (2 credits)
HCAD 7513	Healthcare Management
HCAD 6005	Financial and Managerial Accounting and Costing in Healthcare

Elective Courses (minimum 7 credits)

Complete any three of the following list of courses:

HCAD 7522	Healthcare Policy (2 credits)
HCAD 7518	Managing Community Health Systems
HCAD 8523	Ethics in Health Care (2 credits)
HCAD 8514	Healthcare Economics
HCAD 8517	Strategic Planning and Marketing in Healthcare Organizations
HCAD 8518	Legal Aspects of Healthcare Organizations
HCAD 8521	Quality and Information Management Systems
HCAD 8531	Emergency Management and Health Security

Graduate Certificate in Global Health Management

Recognizing the importance of a global focus on health, the Department of Interprofessional Health Sciences and Health Administration in the School of Health and Medical Sciences, in collaboration with the School of Diplomacy and International Relations, also offers the on-campus Graduate Certificate in Global Health Management.

Admissions Requirements for Graduate Certificate in Global Health Management

Applicants for the Graduate Certificate in Global Health Management must meet the following admission requirements:

- graduate of an accredited college with a bachelor's degree;
- statement of goals and career interests;
- completion of an application for admission along with official transcripts from all undergraduate courses and, if applicable, graduate courses. Applicants with international degrees must have their academic records evaluated by a member agency of the National Association of Credential Evaluation Services (NACES) or the American Association of Collegiate Registrars and Admissions Officers (AACRAO);
- minimum cumulative GPA of 3.0 on a 4.0 scale in the coursework of the most recently conferred undergraduate or graduate degree (note: applicants with a cumulative GPA of 2.8-2.99 who have a minimum of 2 years post-degree experience in a related field are also encouraged to apply);
- three letters of recommendation;
- curriculum vitae or resume; and
- If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) documenting an Internet-based score of 90 or above. The International English Language Testing System (IELTS) can also be accepted documenting a score in the 6.5 band or above. Exception to this requirement may be granted if the applicant is a U.S. resident and a graduate of a U.S. college within the previous two years.

Application Deadlines

Applicants for the Graduate Certificate in Global Health Management may apply online at the Seton Hall University website. Applications are reviewed on a "rolling admissions" basis with preferred deadlines of August 1 for the fall term and December 1 for the spring term.

Certificate Curriculum (minimum 15 credits)

The Graduate Certificate in Global Health Management is earned by successfully completing 15 credits (6 credits in the School of Health and Medical Sciences, 6 credits in the School of Diplomacy and International Relations, and 3 credits of electives).

SHMS Requirement: 2 of the following courses (6 credits):

		Credits
HCAD 7513	Healthcare Management	3
HCAD 7518	Community and Population Health	3
HCAD 8531	Emergency Management and Health Security	3

Diplomacy Requirement: 2 of the following courses (6 credits):

DIPL 6277	Global Health, Bioterrorism, and International Security	3
DIPL 6279	Contagion and Conflict: Global Impact of Infectious Disease	3
DIPL 6280	International Health and Development	3

ELECTIVES: at least 3 credits from:

HCAD 7521	21st Century Healthcare Systems	2
HCAD 7522	Healthcare Policy	2
HCAD 8523	Ethics in Healthcare Administration	2
HCAD 7992JA	Practicum / Independent Study / Real World Application	1
GMHS 7316	Independent Study	1
DIPL 7411	Journal Editorial Board Assistant	1
DIPL 6278	Global Health Diplomacy	3
DIPL 6129	Preventing Humanitarian Crises	3

Students can also choose any of the core SHMS or Diplomacy classes not taken as part of the requirement to satisfy the 3 credit elective.

For course descriptions of DIPL courses, please refer to the School of Diplomacy and International Relations section of the catalogue.

M.S. in Physician Assistant

Physician Assistants (PAs) are healthcare professionals licensed to practice medicine with physician supervision. As part of their comprehensive responsibilities, PAs conduct physical exams, order and interpret tests, diagnose illnesses, counsel patients on preventive healthcare issues, assist in surgery, and prescribe treatments. Within the physician-PA relationship, PA exercise autonomy in medical decision making and provide a broad range of diagnostic and

therapeutic services. A PA's practice may also include education, research and administrative services. PAs are found in all areas of medicine. They practice in the areas of primary care medicine, family medicine, internal medicine, medical sub-specialties (pediatrics, and obstetrics and gynecology) as well as emergency medicine and other medical and surgical subspecialties.

The Master of Science - Physician Assistant program is designed to develop healthcare practitioners who:

- Provide a high quality, comprehensive didactic education which ensures graduates possess the basic science and clinical knowledge to serve as an effective PA.
- Provide a wide range of clinical experiences to ensure that graduates have the broad patient exposure necessary to develop essential clinical skills.
- Prepare graduates to function as competent entry-level PAs in diverse settings.
- Foster an appreciation for interprofessional patient care.
- Afford students the opportunity to develop a foundation for competence in research.

This 96-credit, three-year professional program includes courses specific to PA practice that are intended not only to provide students with the technical skills necessary to perform as certified practitioners, but also provides the foundation for graduates to become critical thinkers, life-long learners, and empathetic clinicians.

Mission

The mission of the Physician Assistant program at Seton Hall University is to prepare primary care PAs who practice in a variety of settings. The program provides the foundation for graduates to become critical thinkers and life-long learners who excel in servant leadership, research and the practice of medicine.

Accreditation

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) has granted Accreditation-Continued status to the Physician Assistant Program sponsored by Seton Hall University.

Accreditation-Continued is an accreditation status granted when a currently accredited program is in compliance with the ARC-PA Standards.

Accreditation remains in effect until the program closes or withdraws from the accreditation process or until accreditation is withdrawn for failure to comply with the Standards. The approximate date for the next validation review of the program by the ARC-PA will be March 2017. The review date is contingent upon continued compliance with the Accreditation Standards and ARC-PA policy.

Admission

The curriculum of the PA program is rigorous, and the admissions process is extremely selective. In reviewing applications, the Admissions Committee considers academic

performance, performance on the Graduate Record Examination (GRE), healthcare experience, and letters of recommendation as outlined below. Special admissions consideration is given to students enrolled in the dual degree program at Seton Hall University.

Academic Requirements for Admission

Application to the program is open to individuals who:

- possess a baccalaureate degree* from an accredited institution and have a cumulative GPA of 3.2 or greater
- have a 3.2 GPA in the following prerequisite courses, with no grade lower than a "C."

Course	Credits
Chemistry I with Lab	4
Chemistry II with Lab	4
General Biology I with Lab	4
General Biology II with Lab	4
Microbiology with Lab	4
Precalculus, Calculus, or Statistics	3
Psychology	3
Anatomy and Physiology I with Lab	4
Anatomy and Physiology II with Lab	4
OR	
Human Anatomy with Lab	4
Human Physiology with Lab	4

As noted above, prerequisite science courses listed above must include a laboratory component and must have been completed within 10 years prior to matriculation. Prerequisite courses must be completed at an accredited institution of higher education. College Level Examination Program (CLEP), Advanced Placement (AP), and International Baccalaureate (IB) credits cannot substitute for prerequisite courses required for admission. Students with incomplete prerequisites may apply; however, they must state how they will satisfy the prerequisites by June 1st prior to the start of the program.

*Individuals who do not possess a baccalaureate degree should consult the Undergraduate Catalogue for the Dual Degree program (BS/MS) with the College of Arts and Sciences - Department of Biological Sciences.

Standardized Testing

The Graduate Record Examination (GRE) is required of all applicants. While the program does not use a strict cutoff score, most competitive applicants will have scores at or above the fiftieth percentile in each test area.

The Test of English as a Foreign Language (TOEFL) is required of any applicant who is not a native speaker of English. A score report must be forwarded documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above. All international transcripts must be evaluated by a member agency of the National Association of Credential Evaluation Services (NACES).

Letters of Recommendation

Applicants are required to obtain three letters of recommendation from sources able to attest to an applicant's academic ability and character. It is recommended that letters be obtained from course instructors and clinical supervisors. Letters from family members and casual acquaintances are not acceptable.

Healthcare Experience Requirement

Applicants are required to complete a minimum of 100 hours observing or participating in the delivery of healthcare in a clinical environment. This requirement may be met through paid or volunteer experiences. While shadowing a physician assistant or physician will meet this requirement, priority consideration is given to experiences where the applicant has assumed responsibility for patient care. Past experiences that students have used to meet this requirement include but are not limited to: shadowing a PA or physician in an office or hospital; volunteering or working as an emergency medical technician; working as a nurse, nurse's aide, respiratory therapist, paramedic, athletic trainer or other healthcare provider, or volunteering in a healthcare facility. The healthcare experience is intended to strengthen interpersonal skills and to develop an understanding of the role of healthcare provider.

Interviews

All applicants being considered for admission will be invited to campus for an interview. The interview is used to assess an applicant's knowledge of the PA profession, their motivation for becoming a PA and communication and interpersonal skills. Meeting the minimum standards for admission does not guarantee that an applicant will be invited for an interview.

Advanced Standing and Transfer Students

Regardless of previous educational or work experience, all students are required to complete the entire PA curriculum. No advanced placement, transfer credit, or credit for experiential learning will be granted.

Application Deadlines

Applicants may apply online at the Seton Hall University website: www.shu.edu. Seton Hall University does not participate in CASPA. Seats fill quickly, and applicants are encouraged to apply as early as possible.

General Admission: Applications for general admission are accepted from June 15 through a deadline of December 15. Students with incomplete prerequisites may apply; however, they must state how they will satisfy the prerequisites by June 1st prior to the start of the program. Applicants may be asked to provide proof of enrollment in any outstanding prerequisite courses. Information regarding application procedures and deadlines may be obtained from the School of Health and Medical Sciences, (973) 275-2596.

Employment During the Academic Year

Training to become a PA demands a full-time commitment. Due to the rigorous nature of the curriculum, it is recommended that students not engage in outside employment. If a student chooses to work during the academic year, the work schedule must not interfere with class performance or clinical rotation schedules.

Curriculum Requirements

Professional Year I

Fall Semester

GMPA 6001	Human Anatomy
GMPA 6111	Human Physiology
GMPA 6104	Psychiatry
GMPA 6108	Health Maintenance and Education
GMPA 6203	Introduction to Clinical Medicine I

Spring Semester

GMED 6102	Neuroscience
GMPA 6107	Pathophysiology
GMPA 6112	Pharmacology and Clinical Therapeutics
GMPA 6205	Introduction to Clinical Medicine II
GMPA 6206	Electrocardiography
GMPA 6207	Diagnostic Imaging
GMPA 6208	Laboratory Diagnostics

Professional Year II

Fall Semester

GMPA 7313	Clinical Transitions
GMPA 7312	Fundamentals of Clinical Medicine
GMPA 8510	Biostatistics
Two clinical rotation blocks*	

Spring Semester

GMPA 7404	Research Methods I
GMPA 7500	Professional Seminar I
Six clinical rotation blocks*	

Professional Year III

Fall Semester

GMPA 6102	Principles of Epidemiology
GMPA 8604	Biomedical Ethics
GMPA 8509	Research Methods II
GMPA 7501	Professional Seminar II
Four clinical rotation blocks*	

Spring Semester

GMPA 8512	Research Methods III
GMPA 8603	Healthcare Policy
GMPA 7502	Professional Seminar III
Four clinical rotation blocks*	

**The number of rotation blocks indicated for each semester is an approximation. Student rotation schedules will vary based upon clinical site availability.*

Clinical Rotations

Students shall not be permitted to begin clinical rotations until they have successfully completed all preceding didactic coursework. Students are required to complete a minimum of 16 clinical rotation blocks. Required clinical experiences include the following: outpatient medicine (three blocks), internal medicine (two blocks), surgery (two blocks), pediatrics (two blocks), obstetrics/gynecology (one block), behavioral/mental health (one block), geriatrics (one block), emergency medicine (one block), elective rotations (three blocks).

Graduation Requirements

Students will not be eligible for graduation until all didactic coursework and required clinical rotations have been successfully completed. Successful completion of clinical rotations requires that students document exposure to patients across the lifespan and across a variety of clinical settings. Specific documentation requirements may be found in the Program Handbook and Policy Manual. Students who fail to meet documentation requirements will be required to register for additional rotation blocks at the current graduate tuition schedule. Students who are required to complete additional rotation blocks may experience a loss of vacation time and/or delayed graduation.

As required by the Accreditation Review Commission on Education for the Physician Assistant, the Department conducts summative assessments during the final semester of the program. A variety of measures are used to assess clinical knowledge, patient skills and professional development. No student will be eligible for graduation until all summative assessments have been successfully completed.

Doctor of Physical Therapy (DPT)

The Doctor of Physical Therapy is the post-baccalaureate degree conferred upon successful completion of a professional entry-level physical therapy educational program. Physical therapy is a dynamic profession with an established theoretical base and widespread clinical application in the preservation, development and restoration of optimal physical function. This Doctor of Physical Therapy program is intended to prepare physical therapists to be employed within the healthcare delivery system. Upon graduation, these practitioners will be able to provide a broad range of patient care services as well as perform research, teaching and administrative responsibilities. The curriculum also provides graduates with the skills to assume leadership roles in rehabilitation services, prevention and health maintenance programs, and professional and community organizations.

The Commission on Accreditation in Physical Therapy Education (CAPTE) grants specialized accreditation status to qualified entry-level education programs for physical

therapists and physical therapist assistants. CAPTE is listed as a nationally recognized accrediting agency by the U.S. Department of Education and the Council for Higher Education Accreditation (CHEA). The Doctor of Physical Therapy program at Seton Hall University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; Telephone: 703-706-3245; email: accreditation@apta.org; website: <http://www.capteonline.org>. The program's accreditation has been granted for a period of ten (10) years effective November 17, 2010.

Mission

The mission of the program is to educate individuals to become competent and autonomous Doctors of Physical Therapy who possess the depth and breadth of knowledge to support the best practice of Physical Therapy. Through diverse academic and clinical experiences, graduates are prepared to advance the field of physical therapy and assume leadership roles within the profession and health care environment. As a program within a Catholic university, graduates learn to provide care with sensitivity and respect for all individuals within the communities they serve.

The shared missions of physical therapy and the other professional entry programs within the School of Health and Medical Sciences provide opportunities for mutual support, sharing of resources and interactive development of programs.

This is a three-year academic program that includes academic and clinical experiences in physical therapy that foster the integration of foundation sciences, clinical practice, professional roles and expectations, and servant leadership, and allow students to acquire the necessary knowledge and hands-on skills to enter a variety of practice settings. The coursework emphasizes the application of theory and research to practice, with emphasis on the human movement system and collaboration within inter- and intra- professional teams. Upon completion, graduates will be thoroughly prepared for the National Physical Therapy Examination.

Admission

The curriculum of the Doctor of Physical Therapy Program is rigorous, and the admissions process is extremely selective. Applicants holding a bachelor of science degree must complete an application through the Physical Therapist Centralized Admissions Service (PTCAS); this is located at www.ptcas.org. In reviewing applications, the Admissions Committee will determine candidates' eligibility upon review of the following: undergraduate academic performance, performance on the Graduate Record Examination (GRE), and non-quantifiable items such as letters of recommendation, healthcare experiences, professional and community activities, and essay review. Special admissions consideration is given to students enrolled in the dual degree program at Seton Hall University, who do not participate in the PTCAS process

Admission

Admission to the program requires:

- official transcripts from all colleges and universities attended;
- a baccalaureate degree from an accredited institution with a cumulative grade point average (GPA) of 3.2 on a four-point scale;
- completion of the following prerequisite courses with a GPA of 3.2; and a grade of “C” or better in each course;
 - Human Anatomy and Physiology (8 credits);
 - Physics (8 credits);
 - Chemistry (8 credits);
 - College Math or Statistics (3 credits);
 - English/Communication (6 credits);
 - Social and Behavioral Sciences (6 credits);
 - General Psychology (3 credits);
- a minimum of 50 hours of clinical observation with a licensed physical therapist in the delivery of physical therapy services in a clinical environment;
- three letters of recommendation, one from a physical therapist;
- the Graduate Record Examination (GRE), Seton Hall PTCAS GRE Code is 3886;
- a written essay; and
- completion of the essential functions statement.

As noted above, prerequisite science courses listed above must include a laboratory component (online laboratories are not accepted) and must have been completed within 10 years prior to matriculation. Students with incomplete prerequisites may apply; however, they must state how they will satisfy the prerequisites by June 1st prior to the start of the program.

Individuals who do not possess a baccalaureate degree should consult the Undergraduate Catalogue for the Dual Degree program (BS/DPT) with the College of Arts and Sciences - Department of Biological Sciences.

Standardized Testing

The Graduate Record Examination (GRE) is required of all applicants. A minimum of 150 (400 on older version) on the verbal portion and a cumulative score of at least 310 (900 older version) on the verbal and quantitative reasoning portions are required. Candidates who have already earned a graduate degree may request that the GRE be waived. Such requests will be considered on a case-by-case basis.

If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) Score Report documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above. All international transcripts must be evaluated by a member agency of the National Association of Credential Evaluation Services (NACES).

Advanced Standing and Transfer Students

Regardless of previous educational or work experience, all students are required to complete the entire doctor of physical therapy curriculum. No advanced placement, transfer credit, or credit for experiential learning will be granted.

Information regarding the application deadline may be obtained from the School of Health and Medical Sciences, (973) 275-2051.

Curriculum Requirements

The Doctor of Physical Therapy Program is a full-time lock-step program and requires continuous enrollment throughout the three years of study. Students who have interrupted enrollment will be required to register for a 1 credit Independent Study course prior to beginning courses with clinically-related experiences. This independent study will emphasize continued mastery of previously learned knowledge and skills. Permission of the department chairperson is required. The following courses must be taken in the predetermined sequence.

Professional Year I**Summer Session II**

GDPT 6150	Physiology I: Foundations of Human Physiology
GDPT 6160	Kinesiology I: Biomechanics of Human Motion
GDPT 6170	Critical Thinking and the Clinical Reasoning Process
GDPT 6180	Professional Roles in Physical Therapy

Fall Semester

GDPT 6270	Human Anatomy
GDPT 6260	Kinesiology II: Applied Structure and Function
GDPT 6250	Physiology II: Systems Pathophysiology
GDPT 6280	Clinical Assessment and Diagnostic Skills I
GDPT 6240	Therapeutic Interventions I
GDPT 6290	Critical Inquiry I

Spring Semester

GDPT 6330	Neuroscience
GDPT 6360	Kinesiology III: Control and Analysis of Posture, Gait and Balance
GDPT 6350	Physiology III: Bioenergetics of Exercise
GDPT 6380	Clinical Assessment and Diagnostic Skills II
GDPT 6340	Therapeutic Interventions II: Functional Mobility
GDPT 6390	Critical Inquiry II
GDPT 6370	Community Health and Wellness Outreach I

Professional Year II

Summer Session I

- GDPT 7190 Pharmacology
- GDPT 7180 Clinical Assessment and Diagnostic Skills III: Diagnostic Imaging and Electrodiagnostics
- GDPT 7140 Therapeutic Interventions III: Motor Learning and Exercise
- GDPT 6370 Community Health and Wellness Outreach I

Summer Session II

- GDPT 7150 Movement Development Across the Life Span
- GDPT 7170 Clinical Diagnosis and Management I: Cardiovascular and Pulmonary Conditions

Fall Semester

- GDPT 7270 Clinical Diagnosis and Management II: Congenital and Developmental Conditions
- GDPT 7280 Clinical Diagnosis and Management III: Lower Quarter Musculoskeletal Conditions
- GDPT 7240 Therapeutic Interventions IV: Rehabilitation Technology
- GDPT 7250 Psychosocial and Ethical Issues in Health Care
- GDPT 7230 *Optional Elective: Clinical Research Experience I*

Spring Semester

- GDPT 7370 Clinical Diagnosis and Management IV: Upper Quarter Musculoskeletal Conditions
- GDPT 7380 Clinical Diagnosis and Management V: Neurological Conditions
- GDPT 7390 Clinical Diagnosis and Management VI Integumentary Conditions:
- GDPT 7340 Management and Regulatory Issues in Health Care
- GDPT 7350 Community Health and Wellness Outreach II
- GDPT 7330 *Optional Elective: Clinical Research Experience II*

Professional Year III

Summer Session I

- GDPT 8170 Clinical Diagnosis and Management VII: Progressive Multi-system Conditions
- GDPT 8180 Clinical Diagnosis and Management VIII: Urogenital Conditions

Summer Session II

- GDPT 8190 Clinical Internship I (8 weeks)
- GDPT 8160 Clinical Reasoning: Capstone Project I

Fall Semester

- GDPT 8290 Clinical Internship II (12 weeks)
- GDPT 8260 Clinical Reasoning Capstone Project II

Spring Semester

- GDPT 8390 Clinical Internship III (12 weeks)
- GDPT 8360 Clinical Reasoning Capstone Project III
- GDPT 8370 Professional Development and Leadership Seminar (3 weeks)

M.S. in Occupational Therapy

The Master of Science in Occupational Therapy (M.S.O.T.) professional program is designed to educate occupational therapists who are practitioners, contributors, and managers. As practitioners, occupational therapists establish, restore, maintain or enhance health and wellness through engagement in activities and occupations, and participation in lifestyles that are satisfying to clients. As contributors, occupational therapists advocate for their profession and clients, use current research to inform practice, and participate in the development of occupational therapy scholarship. As managers, occupational therapists plan, establish, supervise and evaluate occupational therapy services, promote occupational therapy services, collaborate with other professionals.

This 84-credit program consists of two years of didactic learning and two Level II fieldwork rotations. The program consists of courses specific to occupational therapy practice that are intended to provide students with the theoretical knowledge and technical skills necessary to perform as entry-level practitioners in a rapidly changing global society. All students must complete Level II fieldwork within 24 months following completion of academic preparation.

The occupational therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its web address is www.acoteonline.org

Graduates of the program are eligible to take the National Certification Examination for the Occupational Therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this examination, the individual will be an Occupational Therapist, Registered (OTR). Most states require licensure to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. A felony conviction may affect a graduate's ability to sit for the NBCOT certification or attain state licensure.

Admission

Admission to the program requires:

- a baccalaureate degree from an accredited institution with a minimum overall GPA of 3.2;
- completion of the following pre-requisite courses with a minimum GPA of 3.2 and a grade of "C" or better in each course; and

- three letters of recommendation, one from a registered occupational therapist (OTR).

Course	Credits
Human Anatomy and Physiology (with Lab)	8
English	3
Statistics	3
Introduction to Sociology	3
Introduction to General Psychology	3
Abnormal Psychology	3
Developmental Psychology (Across the Life Span)	3

Anatomy and Physiology must include a laboratory. Students with incomplete prerequisites may apply; however, they must state how they will satisfy the prerequisites prior to the start of the program. All prerequisite courses must be completed within 10 years of the application date. College Level Examination program (CLEP), Advanced Placement (AP), and International Baccalaureate (IB) credits cannot substitute for prerequisite courses required for admission.

Applicants are required to perform a minimum of 50 hours of volunteer work with an occupational therapist (OTR). One letter of recommendation must be from an occupational therapist (OTR). The Committee on Admissions will determine candidates' eligibility upon review of the following: GPA; non-quantifiable items, including letters of recommendation, occupational therapy volunteer experiences, employment experiences, healthcare experiences, professional and community activities, and a written essay demonstrating understanding of and commitment to the profession. If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) Score Report documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above.

Information regarding the application deadline may be obtained from the School of Health and Medical Sciences, (973) 761-7145 or email shms@shu.edu

Curriculum Requirements

First Year

Fall Semester

GMOT 6155	Functional Anatomy and Kinesiology I
GMOT 6185	Introduction to Occupational Therapy
GMOT 6270	The Occupational Therapy Process
GMOT 6160	Neuroscience for Occupational Therapy
GMOT 6100	Professional Formation I

Spring Semester

GMOT 6250	Group Process in Occupational Therapy
GMOT 6170	Occupational Therapy Practice Skills
GMOT 6260	Cognition, Perception, Vision and Function
GMOT 7303	Research Methods I
GMOT 6240	Functional Anatomy and Kinesiology II
GMOT 6200	Professional Formation II

Summer Session

GMOT 6301	Health and Medical Complexities of Older Adults
GMOT 6303	Evaluation of Older Adults
GMOT 6305	Interventions for Older Adults

Second Year

Fall Semester

GMOT 6750	Health and Medical Complexities of Adults
GMOT 6760	Evaluation of Adults
GMOT 6770	Interventions for Adults
GMOT 7320	Research Methods II
GMOT 6700	Professional Formation III

Spring Semester

GMOT 6850	Health and Medical Complexities of Children/Adolescents
GMOT 6860	Evaluation of Children/Adolescents
GMOT 6870	Interventions for Children/Adolescents
GMOT 6880	Wellness and Health Promotion I
GMOT 6780	Professional Ethics in Occupational Therapy
GMOT 6800	Professional Formation IV

Summer Session

GMOT 6980	Wellness and Health Promotion II
GMOT 6965	Health Care Policies and Organizations
GMOT 6970	Fieldwork Preparation

Third Year

Fall Semester

GMOT 7013	Level II Fieldwork I
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Spring Semester

GMOT 7023	Level II Fieldwork II
GMOT 7000	Professional Formation V

Summer Semester (optional)

GMOT 7033	Level II Fieldwork III (optional)
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M.S. in Speech-Language Pathology

The mission of the Master of Science in Speech-Language Pathology program is to prepare students as independent professionals with a broad knowledge base, competency in clinical service delivery, and a strong foundation in the principles of evidence based practice. Aligned with the Catholic mission of Seton Hall University and the School of Health and Medical Sciences, students will be prepared with the skill set to assume servant leadership roles in a global society. The program promotes a culture of life-long learning, collaboration, creation of new knowledge, and contribution to the profession and the community.

This comprehensive 65-credit, five-semester program includes academic courses, experiential learning opportunities, and clinical practica in speech-language pathology that are intended to provide students with the necessary skills to perform as entry-level practitioners and enable students to grow and adapt to the rapid changes in the profession and the health care service delivery system.

Accreditation

The Master of Science in Speech-Language Pathology program received full accreditation for an eight-year period by the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA) effective May 1, 2014 through April 30, 2022. In order for an individual to be eligible to apply for national certification with ASHA, a student must initiate and complete coursework and clinical practicum at a CAA-accredited institution.

Admission

A baccalaureate degree from an accredited institution with a cumulative GPA of no less than 3.2 on a four-point scale is required for all applicants. Admission to the program is open to individuals who have an undergraduate degree in speech-language pathology or who have completed a minimum of 18 credits of pre-professional coursework in communication sciences and disorders with a grade of "B" or better that must include the six courses listed below. The Department of Speech-Language Pathology offers the following undergraduate pre-professional courses:

		Credits
GMSL 5001	Phonetics	3
GMSL 5003	Introduction to Language Development	3
GMSL 5004	Introduction to Audiology	3
GMSL 5005	Anatomy and Physiology of the Speech and Swallowing Mechanism	3
GMSL 5006	Fundamentals of Sound and the Auditory System	3
GMSL 5007	Introduction to Communication Disorders	3

The Admissions Committee determines a candidate's eligibility upon review of all academic transcripts, Graduate Record Examination (GRE) scores within the past five years, a personal statement of professional goals, three letters of recommendation, and 25 hours of observation of a professional holding a certificate of clinical competence (CCC) in Speech-Language Pathology.

In accordance with ASHA's knowledge and skills acquisition (KASA) guidelines for certification in Speech-Language Pathology, completion of at least one course with a grade of "C" or better in each of the following areas is required for admission:

- English Composition
- Statistics
- Social or Behavioral Science (Typically a course in psychology, sociology, or cultural anthropology)

- Biological Science (Typically a course in biology, general human anatomy, physiology, genetics, or zoology)
- Physical Science (Preferably physics or chemistry)

Please note that pre-professional coursework in Speech-Language Pathology cannot be used to fulfill the course requirements in the above mentioned areas (i.e., English composition, statistics, social or behavioral science, biological and physical science). Further, all prerequisite courses must be completed no more than 10 years prior to the application date. If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) score report documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above. Information regarding the application process may be obtained from the Department of Speech-Language Pathology at (973) 275-2825 or e-mail shms@shu.edu

Curriculum Requirements

Professional Year I

GMSL 6007	Physiologic and Acoustic Phonetics
GMSL 6009	Diagnostic and Clinical Principles
GMSL 6010	Child Language Development and Disorders
GMSL 6011	Speech Intelligibility and its Disorders in Children
GMSL 6012	School Age Language and Literacy
GMSL 6022	Biomedical Ethics and Professional Issues in Speech-Language Pathology
GMSL 6141	Neuroscience
GMSL 6518	Acquired Disorders of Language & Cognition
GMSL 6521	Dysphagia
GMSL 6522	Early Intervention
GMSL 6523	Fluency Disorders
GMSL 6524	Augmentative and Alternative Communications
GMSL 7001	Audiology and Aural Rehabilitation for the Speech-Language Pathologist
GMSL 7002	Research Methods I
GMSL 7003	Research Methods II*
GMSL 7010	Traumatic Brain Injury
GMSL 7039	Research Project I*
GMSL 7041	Clinical Practicum/Clinical Seminar I

Professional Year II

GMSL 6013	Adult Neuromotor Disorders of Communication
GMSL 6525	Voice Disorders
GMSL 7013	Craniofacial Disorders
GMSL 7040	Research Project II *
GMSL 7102	Clinical Practicum/Clinical Seminar II
GMSL 7103	Clinical Externship

* To meet the research requirements of the program, students have the option of enrolling in GMSL 7003 Research Methods II (offered in professional year I) or enrolling in a research project sequence [GMSL 7039 Research Project I (offered in professional year I) & GMSL 7040 Research Project II (offered in professional year II)].

Graduate students are required to complete a professional portfolio in order to complete graduation and certification requirements.

M.S. in Athletic Training

The Master of Science in Athletic Training program (MSAT) is intended to prepare graduates to critically analyze and convey information to patients, colleagues and other health professionals. These clinicians will be able to provide a broad range of patient care services and perform research and administrative responsibilities. This is accomplished through students and faculty building collaborations, participating on professional organizations in athletic training, and administering athletic training services.

The mission of the Master of Science in Athletic Training Program is to prepare students to become competent and independent clinicians who will enhance the quality of patient health care and to advance the profession of athletic training. The program teaches and provides practical experiences to enable graduates to assume leadership roles both within the field of athletic training, and within the community.

This is a two year, 64-credit, six-semester Entry-Level Master of Science Degree Program. Students develop the knowledge and skills needed to perform as entry-level athletic training clinicians and to grow and adapt to the rapid changes in the profession and health care. Upon program completion, students will be thoroughly prepared for the Board of Certification Examination (BOC) and prepared to enter the profession as entry-level athletic training clinicians. Additionally, the curriculum prepares students for the Strength and Conditioning Specialist (CSCS) examination.

Accreditation

The Master of Science in Athletic Training is a CAATE accredited professional graduate program. The Commission on Accreditation of Athletic Training Education (CAATE) maintains educational standards for accredited athletic training education programs.

Admission

- Baccalaureate degree from an accredited institution
- Cumulative grade point average (GPA) of 3.0 on a four-point scale. However, applicants not meeting the cumulative 3.0 GPA requirement are encouraged to apply and will be seriously considered
- Completion of the following pre-requisite courses with a grade of "C" or better:

Human Anatomy & Physiology (with lab)	8 credits
Biological or Exercise Science (with lab)	3 credits
Physics* (with lab)	4 credits
English	3 credits
Statistics or College Math	3 credits
Social Sciences	6 credits

* *Kinesiology may be substituted for Physics with MSAT Admissions Committee permission.*

- Fifty (50) hours of clinical observation with a certified athletic trainer
- Official transcripts from all colleges and universities attended
- Current certifications in CPR/AED for the Professional Rescuer
- Letter of recommendation from a certified athletic trainer
- Two additional letters of recommendation required
- Completion of applicant essay question
- Student must read, sign, understand and meet the Standards of Essential Functions of the School of Health and Medical Sciences and the MSAT program.
- If English is not the native language, a student must submit a Test of English as a Foreign Language (TOEFL) Score Report documenting a paper-based score of 550 or above, a computer-based score of 213 or above, or an Internet-based score of 79 or above
- Graduate Record Examination (GRE) is not required.

Qualified students are admitted without regard to race, color, religion, age, disability, natural origin, sexual orientation, ancestry or gender. Students with incomplete prerequisites may apply; however, they must state how they will satisfy the prerequisites by the end of the Spring semester prior to the start of the program. All prerequisite courses must be completed no longer than 10 years prior to the application date.

Curriculum Requirements

Professional Year I

GMAT 6010	Athletic Training Principles I ***
GMAT 6011	Athletic Training Principles II
GMAT 6115	General Medical Conditions
GMAT 6907	Research Methods***
GMAT 7007	Research Project I
GMAT 7107	Research Project II
GMAT 7400	Clinical Practicum I
GMAT 7402	Clinical Practicum II
GMED 6001	Functional Human Anatomy
GMED 6004	Biomedical Ethics
GMED 6009	Surface Anatomy & Palpation
GMED 6012	Kinesiology
GMED 6013	Therapeutic Modalities
GMED 6022	Basic Rehabilitation Procedures

GMED 6101 Human Physiology
 GMED 6104 Exercise Physiology and Nutrition

*** Classes held from mid July through August.

Professional Year II

GMAT 6113 Sports Psychology
 GMAT 6116 Health Care Administration
 GMAT 7207 Research Project III
 GMAT 7403 Clinical Practicum III
 GMAT 7404 Clinical Practicum IV
 GMAT 6015 Pharmacology
 GMED 6016 Orthopedic Clinical Medicine
 GMED 6017 Clinical Imaging
 GMED 6018 Therapeutic Exercise
 GMED 6019 Management of Musculoskeletal Problems:
 Extremities
 GMED 6020 Management of Musculoskeletal Problems:
 Spine
 GMED 6021 Exercise Pharmacology

Course Descriptions

GDPT 6150 (PTFY 4150) Physiology I: Foundations of Human Physiology

This course presents human physiology for the analysis of normal function and adaptive/restorative function available in the presence of health effecting the skeletal, connective tissue, muscular, integumentary, nervous, and other biological systems. Information will be presented at the tissue, organ and system level. *2 credits*

GDPT 6160 (PTFY 4160) Kinesiology I: Biomechanics of Human Motion

This course presents the application of basic principles of physics, anatomy, and physiology to understand human movement. The development and function of the musculoskeletal system (bone, muscle, and ligaments), the mechanical behavior of these biological tissues, the external/internal forces that contribute to normal motion provides the groundwork for understanding, describing and analyzing the biomechanics of human motion. *2 credits*

GDPT 6170 (PTFY 4170) Critical Thinking and the Clinical Reasoning Process

This course introduces the student to the cognitive strategies and processes utilized to (1) collect and interpret information needed to understand a patient's problem/situation, (2) plan and implement appropriate interventions, (3) evaluate the outcomes and (4) reflect on the effectiveness of the reasoning process. Basic clinical and critical reasoning models in the context of patient centered health care and working in a healthcare team is emphasized. *1 credit*

GDPT 6180 (PTFY 4180) Professional Roles in Physical Therapy

The course introduces the student to the physical therapy profession. Five themes of professional practice are explored; the physical therapist as clinician, consumer

of research, inter-professional care provider, lifelong learner and educator. Foundational skills in written and oral communication, professional values and behaviors, population-specific differences, utilization of healthcare informatics and evidenced-based practice are presented. *3 credits*

GDPT 6240 (PTFY 4240) Therapeutic Interventions I

This course introduces the student to the application of physical therapy intervention skills as part of the treatment process. Emphasis is placed on developing skills in fundamental patient care. Students will be introduced to basic manual therapy techniques, therapeutic exercise, and functional training to achieve patient/client goals & outcomes that address problems resulting from evaluation of the movement system. *2 credits*

GDPT 6250 (PTFY 4250) Physiology II: Systems Pathophysiology

This course examines the concepts of pathophysiology and the mechanisms of change that contribute to the genesis of a diseased state. Common diseases and disorders are covered and clinical laboratory measurements and values used in differential diagnosis will be presented from a systems perspective. Clinical cases will be used to present standard patterns of clinical examination, evaluation, diagnosis, prognosis, intervention and communication/referral with other health care practitioners. Discussions will address changes in response to disease or trauma across the lifespan. *2 credits*

GDPT 6260 (PTFY 4260) Kinesiology II: Applied Structure and Function

This course builds knowledge and skills in application of biomechanical principles relative to human motion through regional analysis of body segments. Attention is paid to synovial joints as key linkage in the human mechanical system and how their movements are created and governed. The laboratory component of this course reviews individual joint structure and its application to segmental and overall body movement. *3 credits*

GDPT 6270 (PTFY 4270) Human Anatomy

This cadaveric-based human anatomy course is designed to develop knowledge concerning structural and functional regional gross human anatomy. The course focuses on the clinical application of anatomical concepts in both lectures and laboratory sessions. Structured laboratory sessions also incorporate the use of models, medical terminology and palpation of key anatomical structures. The course utilizes case based vignettes to promote critical thinking and allow students to apply theory to a clinical population. *5 credits*

GDPT 6280 (PTFY 4280) Clinical Assessment & Diagnostic Skills I

The course facilitates skills acquisition for professional physical therapy practice. Emphasis is placed on physical therapy examination, including systems screening of the non-medically complex patient. This includes selection and performance of appropriate tests and measures, interpretation and evaluation of examination findings including

differential diagnosis, clinical decision making leading to an individualized plan of care, referrals and effective communication of patient/client information. *3 credits*

GDPT 6290 (PTFY 4290) Critical Inquiry I

This course is designed to provide students with a working knowledge of the evidence-based research process and its importance in the practice of physical therapy. Students will learn about the variety of research publications and apply the critical appraisal process to the literature. *2 credits*

GDPT 6330 (PTFY 4330) Neuroscience

This course will cover the basic structure, organization, and function of the central nervous system (CNS). Lectures and laboratories focus on understanding the localization of function within specific structures and pathways of the brain and spinal cord, and typical syndromes associated with vascular accidents, trauma or diseases of the various parts of the CNS. *3 credits*

GDPT 6340 (PTFY 4340) Therapeutic Interventions II: Functional Mobility

This course promotes the development of clinical skills related to functional mobility and movement in the home and community including transfers, ambulation, and use of wheelchairs and assistive devices for locomotion and various other activities of daily living (ADL). Therapeutic exercise interventions will be utilized to achieve patient/client goals & outcomes that address problems resulting from evaluation of the movement system. *3 credits*

GDPT 6350 (PTFY 4350) Physiology III: Bioenergetics of Exercise

This course presents both the normal and pathological human body responses to physiological conditions and processes in relationship to their influence on human movement including the nutritional and metabolic mechanisms in relation to movement & functional activities. Included are the study of muscle physiology, metabolism, cardiovascular and respiratory adaptations, aging, thermoregulation, aerobic and anaerobic training exercise prescription, and use of ergogenic aides. Topics will focus on evaluation and management for a healthy population as well as for those with chronic diseases and disabilities. *2 credits*

GDPT 6360 (PTFY 4360) Kinesiology III: Control and Analysis of Posture, Gait and Balance

This course provides continued instruction in the study of human movement with regards to posture, balance and gait. The neuromuscular and musculoskeletal mechanisms involved in the development, maintenance and adaptations of posture, balance, and walking will be presented. Students will participate in the assessment of normal and deviated walking, balance and posture including identification of compensatory mechanisms. *3 credits*

GDPT 6370 (PTFY 4370) Community Health & Wellness Outreach I

This course offers experiential learning in community Health and Wellness outreach while increasing students' awareness of practice settings and offers opportunities for interprofessional collaboration. The course will focus on community assessment utilizing Health/Wellness screening tools appropriate for target populations. *1 credit*

GDPT 6380 (PTFY 4380) Clinical Assessment and Diagnostic Skills II

This course promotes skill acquisition in elements of physical therapy services and professional practice with an emphasis on physical therapy examination, including systems screening of the medically complex, but hemodynamically stable, patient, with a focus on the neurological and musculoskeletal systems including the extremities, trunk and spine and their relationship to posture, balance and gait. Included are the selection and performance of appropriate tests and measures, interpretation and evaluation of examination findings including differential diagnosis, clinical decision making in the establishment of an individualized plan of care to restore normal movement and functional mobility, referrals and effective communication of patient/client information. *3 credits*

GDPT 6390 (PTFY 4390) Critical Inquiry II

This course is a continuation of Critical Inquiry I and includes experimental and non-experimental research designs, methodology and statistical concepts. Students will continue to search for evidence and critically appraise it specifically for application to clinical diagnosis, prognosis and treatment effectiveness. Students develop the skills needed to ask and answer clinical questions using best evidence and practice using sample data and statistical software. *2 credits*

GDPT 7140 Therapeutic Interventions III: Motor Learning and Exercise

This course integrates the principles of motor control and learning into practice for the advancement of motor skill acquisition. Learning theory is explored as it relates to human movement system. Additionally, this course provides knowledge and skills when developing interventions with therapeutic exercise to achieve patient/client goals & outcomes that address problems resulting from evaluation of the movement system. *3 credits*

GDPT 7150 Movement Development Across the Life Span

Overview of human development across the life span from conception to oldest age. Changes in physical, cognitive, and psychosocial development are explored using a framework that highlights the contribution of multiple interacting systems on behavior, performance and movement. Emphasis is placed on the application of tests and measures to discriminate typical from atypical performance, movement and function. *3 credits*

GDPT 7170 Clinical Diagnosis and Management I: Cardiovascular & Pulmonary Conditions

Analysis of common pathologies, clinical tests & measures, and interventions used to diagnose and manage movement dysfunction related to the evidence based practice cardiovascular and pulmonary physical therapy. Clinical skills in differential diagnosis include the interpretation of ECG, monitoring, palpation and auscultation of the chest and abdomen, lab values, imaging studies, and exercise tests is developed. Practice guidelines are presented for the application of selected pharmacological, surgical, and psychological and physical therapy interventions with an emphasis on a team approach to patient care and outcome assessment across practice settings. *4 credits*

GDPT 7180 Clinical Assessment & Diagnostic Skills III: Diagnostic Imaging and Electrodiagnostics

This course presents the theory and utilization of diagnostic imaging and electro-diagnostics in the management of patients commonly seen in physical therapy. Emphasis is placed on the integration of information garnered from diagnostic imaging and electrodiagnostics for multiple systems and organs of the human body to guide clinical decision making and the establishment of an individualized plan of care, referrals and effective communication of patient/client information. *2 credits*

GDPT 7190 Pharmacology

Problem-oriented approach to examining the most commonly used pharmacologic agents seen in clinical practice. Basic principles of pharmacodynamics and pharmacokinetics, along with pertinent physiology are presented. Practical aspects of dosing schedules, therapeutic effects, interactions and adverse reactions is emphasized, especially as they apply to physical performance, movement, functional activities and safety. *2 credits*

GDPT 7230 Optional Elective: Clinical Research Experience I

A faculty mentored research experience involving the collection and analysis of data needed to answer one or more questions related to the practice of physical therapy. Various research options may include experimental studies, surveys, case reports, systematic reviews, and qualitative studies. *1 credit*

GDPT 7240 Therapeutic Interventions IV: Rehabilitation Technology

This course focus on the application of modern technology in interventions utilized to achieve patient/client goals & outcomes that address problems resulting from evaluation of the movement system. Topics will include prescription, application and evaluation of orthotics as well as biophysical agent as a component of the plan of care. *4 credits*

GDPT 7250 Psychosocial & Ethical Issues in Health Care

An exploration of the psychosocial factors that may influence a patient's response to illness or disability. Topics include coping with stress, loss, chronic pain, depression, altered body image, addiction, abuse, caregiving, and grief. Additionally, principles of ethical decision making

are applied to selected health care scenarios along with mechanisms for preventing and reporting fraud, abuse, and unethical conduct. An in-depth review of the physical therapy licensure regulations (state practice act), APTA practice policies, and accreditation standards are also addressed. *3 credits*

GDPT 7270 Clinical Diagnosis and Management II: Congenital & Developmental Conditions

Analysis of common pathologies, clinical tests & measures, and interventions used to diagnose and manage movement dysfunction related to evidence based practice in pediatric physical therapy. Emphasis will be placed on congenital and developmental conditions encountered in pediatrics. The administration, application, and interpretation of common pediatric assessments will be presented to assist in the development of comprehensive plans of care to address the needs of families and children with these conditions. *4 credits*

GDPT 7280 Clinical Diagnosis and Management III: Lower Quarter Musculoskeletal Conditions

Analysis of common pathologies, clinical tests and interventions used to diagnose and manage movement dysfunction of the lower quarter with emphasis on the evaluation, tests and measures for evidence based musculoskeletal physical therapy in surgical and non-surgical conditions. A patient centered care model for intervention of musculoskeletal dysfunction including medical screening, imaging, physical exam, evaluation, post-surgical, manual therapy techniques, therapeutic exercises, patient/client management and goal setting will be stressed. *4 credits*

GDPT 7330 Optional Elective: Clinical Research Experience II

This elective course will allow the student to participate in the analysis and dissemination of information to a professional audience. The selected presentation format may include a journal article, poster presentation or a platform presentation that is ready for submission to a peer-reviewed venue. *1 credit*

GDPT 7340 Management & Regulatory Issues in Health Care

This course addresses the theory and application of leadership and management principles in the context of the evolving health care environment and the role of the physical therapist as an autonomous practitioner and an advocate for health and wellness initiatives. Emphasis is on leadership, entrepreneurship, management, strategic and operational planning, legal structures, business development, networking, marketing, business communication, accounting, finance management, human resource management, third party regulation and reimbursement, and risk management. *3 credits*

GDPT 7350 Community Health and Wellness Outreach II

This course offers experiential learning to facilitate students' foundational habits of servant leadership while advancing the mission and goals of the DPT program and profession of

physical therapy for interprofessional collaborations within community health and wellness outreach. Students will participate in a semester long service project in cooperation with community partners. *1 credit*

GDPT 7370 Clinical Diagnosis and Management IV: Upper Quarter Musculoskeletal Conditions

Analysis of common pathologies, clinical tests, and intervention used to diagnose and manage movement dysfunction of the upper quarter with emphasis on the evaluation, tests and measures for musculoskeletal dysfunction. A patient centered care model for intervention of musculoskeletal dysfunction including medical screening, imaging, physical evaluation, post-surgical, manual therapy techniques, therapeutic exercises, patient/client management and goal setting will be stressed. *4 credits*

GDPT 7380 Clinical Diagnosis and Management V: Neurological Conditions

Analysis of common pathologies, clinical tests, and intervention used to diagnose and manage movement dysfunction following acquired neurological disorders of central nervous system for the adult population. Clinical diagnosis and management includes the examination, evaluation, diagnosis and prognosis of the movement system impacted by these acquired neurological disorders. Practice guidelines based on practice-based evidence are presented for physical therapy treatments with attention to interventions that optimize functional capacity and performance to achieve individual goals and outcomes. *4 credits*

GDPT 7390 Clinical Diagnosis and Management VI: Integumentary Conditions

Analysis of common pathologies, clinical tests, and intervention used to diagnose and manage movement dysfunction related to the integumentary system. This include physical therapy management of patients with wounds, amputations and burns. Development of clinical skills and utilization of practice guidelines are fostered for the prescription and application of selected prosthetic and adaptive devices used to facilitate movement and functional mobility. *2 credits*

GDPT 8160 Clinical Reasoning Capstone Project I [online]

This online course, concurrent with Clinical Internship I, allows the student to practice application of clinical reasoning and critical thinking processes in assignments and case studies related to the concurrent clinical experiences. *1 credit*

GDPT 8170 Clinical Diagnosis and Management VII: Progressive Multi-System Conditions

Analysis of common pathologies, clinical tests and measures, and interventions used to examine, evaluate, diagnose and manage movement dysfunction related to progressive and/or degenerative neuro-musculoskeletal disorders across the lifespan such as multiple sclerosis, Parkinsonism, ALS, rheumatic diseases and Alzheimer's disease. Practice guidelines based on practice-based

evidence are presented for physical therapy treatments with attention to interventions that optimize functional capacity and performance to achieve individual goals and outcomes. *4 credits*

GDPT 8180 Clinical Diagnosis and Management VIII: Urogenital Conditions

Analysis of common pathologies, physical therapy examination, tests and measures, and intervention used to diagnose and manage movement dysfunction following urogenital conditions across the life span. This includes differential diagnosis, interpretation of the imaging studies, pelvic exam, urinary stress testing, pelvic floor muscle strength, posture, and movement patterns. Practice guidelines based on practice-based evidence are presented including application of selected pharmacological, surgical, psychological, with attention to physical therapy interventions that optimize functional capacity and performance to achieve individual goals and outcomes related to the urogenital system. *1 credit*

GDPT 8190 Clinical Internship I (8 weeks)

The course is the first full-time clinical practice internship. Emphasis is on development of professional practice and attainment of skills in physical therapy practice and patient management incorporating evidence-based practice guidelines with progression to an intermediate level performance. *4 credits*

GDPT 8260 Clinical Reasoning Capstone Project II [online]

This online course, concurrent with Clinical Internship II, allows the student to practice advanced application of clinical reasoning and critical thinking processes in assignments and case studies related to the concurrent clinical experiences. *1 credit*

GDPT 8290 Clinical Internship II (12 weeks)

This is the second full-time clinical internship. Emphasis is on the practice of skills in physical therapy with refinement to an advanced intermediate level performance. *6 credits*

GDPT 8360 Clinical Reasoning Capstone Project III [online]

This online course, concurrent with Clinical Internship III, allows the student to practice advanced application of clinical reasoning and critical thinking processes in assignments and case studies related to the concurrent clinical experiences. *1 credit*

GDPT 8370 Professional Development & Leadership Seminar (final 3 weeks)

This capstone course synthesizes curricular threads and serves as the students' final preparation as autonomous practitioners of physical therapy. Students will develop professional goals and a structured plan that prepares them to obtain licensure, develop a professional resume, seek employment as a physical therapist, pursue leadership opportunities within the physical therapy profession and become lifelong learners. *2 credits*

GDPT 8390 Clinical Internship III (12 weeks)

This is the final full-time clinical internship. Emphasis is on the practice of skills in physical therapy with refinement to entry level performance. *4 credits*

GDPT 7567 International Innovation Project

This course incorporates didactic and experiential learning through inter-professional collaboration with international healthcare professionals to address issues in global health. Students will participate in a concentrated learning experience to promote skills in management, strategic planning, leadership, innovation and entrepreneurship within the healthcare sector. In cooperation with community partners, students design proposals for innovative solutions to meet client needs while exploring the global role of the physical therapist. Prerequisite: permission of the physical therapy department. *5 credits*

GDPT 8001 Independent Study

Independent study provided under the supervision of a faculty member to foster student understanding and experience in alignment with the DPT program goals. Subject and meeting hours will be arranged. Credit for this course may be obtained only once. Departmental permission is required. *1 credit*

GMAT 6010 (ATFY 4010) Athletic Training Principles I

This is an introductory course orienting the entry-level athletic training student to the profession of athletic training and discusses the various responsibilities of a certified athletic trainer. Other topics discussed include the recognition of environmental illnesses and emergency situations including the evaluation and management of acute cervical spine-related injuries. This course includes a lab component in which students learn and practice different taping and wrapping techniques, and fabricating protective padding. Students also learn to properly apply different sports equipment. *3 credits*

GMAT 6011 (ATFY 4011) Athletic Training Principles II

This is a continuation of GMAT 6010 and includes discussion of common and acute pathologies of the upper and lower extremity. Mechanism of injury, signs, and symptoms, and on-field injury management is discussed in lecture and practiced in lab. Students demonstrate the appropriate care for these acute conditions as well as demonstrate preventative and protective methods. Prerequisite: GMAT 6010 (ATFY 4010). *3 credits*

GMAT 6113 Sports Psychology

This course introduces the science of sport psychology. Emphasis will be placed on applied sport psychology for the purpose of enhancing athletic performance, as well as understanding the psychology of injuries and the social-psychological aspects of human enrichment. *2 credits*

GMAT 6115 General Medical Conditions

The focus of this course is on standard differential diagnostic procedures used to evaluate medical conditions as well as identifying the appropriate care and referral to medical specialist. During the lab component, students will demonstrate increasing competence in patient examination,

evaluation and management, prognosis, and intervention skills for general medical conditions. Prerequisites: GMED 6101, GMED 6104. *2 credits*

GMAT 6116 Healthcare Administration

This course provides the student with an introduction to the local healthcare delivery system. Students learn the principles of administration and organization specific to the profession of athletic training. *2 credits*

GMAT 6907 (GMAT 4907) Research Methods

Introduces and provides students a working knowledge of the research process with an emphasis on formulating a research question and research design. The goal is to help students prepare a research proposal for a research topic. *3 credits*

GMAT 7007 (ATFY 4007) Research Project I

Students develop a clinically focused research proposal for submission to the University Institutional Review Board. Students work in small classroom groups with a faculty adviser. Prerequisite: GMAT 6907 (ATFY 4907). *1 credit*

GMAT 7107 (ATFY 4107) Research Project II

In this course the student finalizes and implements the research proposal designed in Research Project I. Emphasis is on statistical procedures, data collection, data analysis and interpretation. Students work in small classroom groups with a faculty adviser. Prerequisite: GMAT 7007 (ATFY 4007). *1 credit*

GMAT 7207 Research Project III

The focus of this course is on completion and oral presentation of the student research project to peers and faculty. Throughout this final research process students continue to work in small classroom groups with a faculty adviser. Prerequisite: GMAT 7107. *1 credit*

GMAT 7400 (ATFY 4400) Clinical Practicum I

This is the first of four clinical and seminar experiences. The students continue to develop clinical proficiency through the performance of selected clinical skills. With the clinical preceptor's direct supervision and instruction, the students begin to integrate the examination, evaluation, assessment, and intervention skills learned in the classroom into the clinical setting. The seminar component will engage students in clinical problem-centered discussion providing integration of concepts of evaluation and management of musculoskeletal problems and proper medical documentation. Prerequisite: GMAT 6011 (ATFY 4011). *2 credits*

GMAT 7402 Clinical Practicum II

This course continues to build on preceding classroom and clinical experiences. With more of a guidance approach from the approved clinical instructor, students will further develop clinical proficiency through performance of clinical skills. Students are required to observe health care professionals in a general medical setting as assigned by the program. The seminar component will engage students in concepts of organization and administration related to athletic training. Previous coursework will be reviewed and valued by way of comprehensive exams. Prerequisite: GMAT 7400 (ATFY 4400). *2 credits*

GMAT 7403 Clinical Practicum III

The third clinical practicum occurs concurrently with advanced courses in diagnostic imaging, orthopedic clinical medicine, and therapeutic exercise. With direct supervision from the clinical preceptor, students will demonstrate more advanced clinical techniques and increasing clinical competence with increased independence. Students are required to observe at least two orthopedic surgical procedures, document, and present the experience to peers. The seminar component will assist students in developing effective résumés and cover letters. Students develop a study plan to start preparing for the BOC examination.

Prerequisite: GMAT 7402. *2 credits*

GMAT 7404 Clinical Practicum IV

This clinical experience occurs in the final semester of the academic program. With the instructor providing approval, by the end of this course students will demonstrate clinical competence and independence in the comprehensive management of health-related conditions. The student will have the opportunity to develop competence in non-direct patient care, including consulting, administration, clinical research, and evidence-based practice. The seminar component exposes and gives students the opportunity to develop job interviewing skills. They review the elements of state regulatory bodies, scope of practice, and post certification responsibilities for athletic trainers. Strategies and techniques are reviewed to prepare students for the BOC examination. Prerequisite: GMAT 7403. *2 credits*

GMED 5002 International Innovation Project

This international innovation project course incorporates didactic and experiential learning through transdisciplinary collaboration with international healthcare professionals to address issues in global health. Students will participate in a concentrated 5 week project to promote skills in management, strategic planning, leadership, innovation and entrepreneurship within the healthcare sector. In cooperation with community partners, students design proposals for innovative solutions to meet client needs. This course is designed for exchange students only. *1 credit*

GMED 6001 (GMED 4001) Functional Human Anatomy

Study of human anatomy course in which all systems of the body are studied with special emphasis given to skeletal, muscular, cardiovascular and nervous systems. *3 credits*

GMED 6004 (GMED 4004) Biomedical Ethics

A study of the application of human and professional values, judgment, and choices to selected ethical dilemmas that arise in the profession of athletic training and clinical practice. *2 credits*

GMED 6007 Research Methods and Biostatistics

This course is designed to provide students with a working knowledge of the research process. The importance of research in the practice of physical therapy will be covered. Students will learn about the variety of research publications in physical therapy and how to critically appraise these publications. Evidence-based practice will be emphasized and covered, including how to find and appraise systematic

reviews of the literature. Students will also complete a systematic review of the literature. A variety of research designs will be covered including experimental, quasi-experimental, and non-experimental designs. Methods for gathering representative samples and controlling experiments will also be covered. Students will gain experience collecting and performing elementary statistics on data, and reviewing published research articles. Students will learn about the various sources of research findings in physical therapy.

3 credits

GMED 6009 (GMED 4009) Surface Anatomy and Palpation

This course introduces the student to the application and techniques of palpation and observation as part of the physical examination process. Emphasis is placed on identification, location and palpation of anatomical structures. *1 credit*

GMED 6012 (GMED 4012) Kinesiology

This course presents the application of physics, anatomy, and physiology to the understanding of human movement. Emphasis is on the study of the development and function of bone, muscle, and ligaments in contributing to normal motion. Attention is paid to synovial joints as key linkage in the human mechanical system and how their movements are created and governed. The laboratory component of this course reviews the theory and application of physical examination and evaluation through the use of selected biomechanical instruments. Posture, gait and activity analysis are included. *3 credits*

GMED 6013 (GMED 4013) Therapeutic Modalities

This course emphasizes the use of heat, cold, compression, traction and electrotherapeutic techniques in the management of patients with a variety of medical conditions. This course will stress a problem solving approach for the selection and application of appropriate procedures to manage pain, swelling, and limitations in motion and muscle weakness. Clinical decision-making will be practiced through the course to develop appropriate treatment strategies and applications for the use of these physical agents for initial treatment as well as treatment modification based on the assessment of physiological and physical responses to those interventions. *3 credits*

GMED 6015 Pharmacology

Problem oriented approach to examining the most commonly used pharmacologic agents seen in clinical practice. Basic principles of pharmacodynamics and pharmacokinetics, along with pertinent physiology are presented. Practical aspects of dosing schedules, therapeutic effects, interactions and adverse reactions emphasized, especially as they apply to physical performance and safety. *2 credits*

GMED 6016 Orthopedic Clinical Medicine

This course presents an in-depth analysis of the muscle, bone, and joint structures, with emphasis on the orthopedic surgeon evaluation and medical management in the presence of illness, disease, trauma, overuse, and developmental and aging processes. Case studies will emphasize the clinician's role in clinical decision-making, communication, individual

and cultural differences, screening, examination, diagnosis, and prognosis, prevention and wellness, and the development of a plan of care. *2 credits*

GMED 6017 Clinical Imaging

This course emphasizes the theory and utilization of basic clinical imaging in the management of patients with various and selected medical conditions. *2 credits*

GMED 6018 Therapeutic Exercise

This course provides a foundation of knowledge and skills used to manage the majority of musculoskeletal problems using appropriate exercise principles and rehabilitative techniques. Additionally, this course will examine current concepts in strength and conditioning designed to assist individuals in achieving maximal performance without incurring injury. *3 credits*

GMED 6019 Management of Musculoskeletal Problems I – Extremities

The management of musculoskeletal dysfunction is examined with emphasis on the development of analytical knowledge necessary to evaluate and treat musculoskeletal dysfunction. A problem solving model for intervention of peripheral joint dysfunction including medical screening, physical evaluation and goal setting will be stressed. Students will develop skill in mobilization techniques and integration of these techniques with therapeutic exercise and physical modalities. *3 credits*

GMED 6020 Management of Musculoskeletal Problems II – Spine

The management of musculoskeletal dysfunction is examined with emphasis on the development of analytical knowledge to evaluate musculoskeletal dysfunction related to the spine. A problem-solving model for intervention of spinal joint dysfunction includes medical screening, physical evaluation and goal setting will be stressed. Students will develop mobilization techniques and integration of these techniques with therapeutic exercise and physical modalities. *3 credits*

GMED 6021 Exercise Pharmacology

This course discusses the use of herbal medicine and performance-enhancing substances and provides insight into how drugs, chemicals, and hormones can affect physical performance. It looks into the extent and physiological dangers such substances can adversely alter biological function(s). *1 credit*

GMED 6022 (GMED 4022) Basic Rehabilitation Procedures

Provides the student with an introduction to the principles of patient care. Students are introduced to physical examination skills including: goniometry, range of motion, manual muscle testing, reflex testing and sensory testing. Students engage in the proper fitting and use of assistive equipment for ambulation and ADL activities. *3 credits*

GMED 6101 (GMED 4101) Human Physiology

Analysis of normal physiological function in the presence of disease or trauma affecting all systems. Information is presented at the tissue, organ and system level. Discussion

will address changes in response to disease or trauma over the entire lifespan. *3 credits*

GMED 6102 (GMED 4102) Neuroscience

This course will cover the basic structure, organization, and function of the central nervous system (CNS). Lectures and laboratories focus on understanding localization of function within specific structures and pathways of the brain and spinal cord, and typical syndromes associated with vascular accidents, trauma or diseases of the various parts of the CNS. *3 credits*

GMED 6104 (GMED 4104) Exercise Physiology and Nutrition

This course integrates principles of nutrition and application to exercise. It examines the dietary practices used in pursuit of weight maintenance, health, and fitness. Also, presents the responses of the human body to normal and pathological processes. Emphasis is placed on the study of muscle physiology, metabolism, cardiovascular and respiratory adaptation, aging, thermoregulation, strength training, and exercise prescription. Application of evaluation procedures is provided thru the use of selected human performance instruments. *4 credits*

GMED 6109 Internal Clinical Medicine

Survey of major classes of problems or diagnoses involving pathology of general medical conditions includes the presentation of patterns of practice in the specialties of general medicine. Use of clinical cases to present standard patterns of physician evaluation, diagnosis, intervention and communication/referral with other health care practitioners. *2 credits*

GMHS 6110 Health Services Issues and Trends

An analysis of selected professional and policy issues affecting the present and projected healthcare delivery system. Issues concerning healthcare personnel, patients, healthcare technology, organizational structures and facilities, finance mechanisms and the role of government are stressed in relation to how they influence healthcare services and delivery. The course uses a blended instructional format by combining classroom instruction with virtual instruction. *3 credits*

GMHS 6210 Curriculum Development in Health Professions Education

An intensive study of the basic principles and procedures utilized in the development of health professional curricula, as well as the instruction implemented with the health care facility and community. Students will learn the principles of curricula plans and component parts, and will be engaged in developing evidence-based curricula addressing the current and projected needs of health care and professional education. *3 credits*

GMHS 6211 Institutional Culture and Human Relationships

Communication challenges in the diverse clinical and educational areas are identified as opportunities for organizational enrichment. Issues related to cross-cultural communication and gender, age and other diversity

issues are examined, with a focus on the interdisciplinary perspectives and the relevant psycho-social dynamics inherent to developing sound leadership and staff relations. The course uses a blended instructional format by combining classroom instruction with virtual instruction. *3 credits*

GMHS 6212 Finance in Healthcare

An exploration of the issues that healthcare leaders must understand and care about for institutions to survive during the continual reorganization of healthcare and its payment structures. Students will focus on leadership and policy aspects of various types of healthcare institutions, through examination and thought about the corporate form and requirements dictated by that form, starting with the concept of an integrated delivery system. Some topics will include: regulations, licensure and accreditation standards, corporate forms, health insurance reform, economic regulatory theory and cost containment, certificates of need regulations, Medicare and Medicaid providers, ERISA benefits and the Federal Right to Care. Material will be presented from the law and policy perspectives with emphasis on questioning the benefits and deficits of the current healthcare system in the US. Additional issues will include: reimbursement, DRG coding changes and insurance. *3 credits*

GMHS 6230 Leadership, Theory and Practice

This course focuses on understanding key leadership theories (1920-present) and how they are practiced, particularly in health care organizations; examining critical variables related to the expression of leadership, such as, power, motivation and influence, context, gender, culture, emotional intelligence, and, teamwork; exploring students' personal leadership capabilities through the use of assessment instruments, reflection, and feedback; and, planning leadership development activities. The course is organized as an action learning experience, with equal emphasis on reviewing concepts and engaging in activities in which learning emerges from acting, observing, and critically inquiring. The course uses a blended instructional format by combining classroom instruction with virtual instruction. *3 credits*

GMHS 6240 Management and Leadership in Health Professions Education

This course challenges students to increase their knowledge and understanding of evidence-based management principles and practices, particularly in the four major functions of management (planning, organizing, leading and controlling), to expand their working knowledge of management terminology, and to explore key approaches and tools that managers utilize to influence organizational outcomes. The course uses a blended instructional format by combining classroom instruction with virtual instruction. *3 credits*

GMHS 6301 Topical Seminar: Spring

Provides students the opportunity to participate in an in-depth, literature-based review of special topics. Integration of current information from research findings into clinical practice is a primary focus. Repeated enrollment is permitted when special topic is different. *3 credits*

GMHS 6302 Topical Seminar: Summer

Provides students the opportunity to participate in an in-depth, literature-based review of special topics. Integration of current information from research findings into clinical practice is a primary focus. Repeated enrollment is permitted when special topic is different. *3 credits*

GMHS 6303 Topical Seminar: Fall

Provides students the opportunity to participate in an in-depth, literature-based review of special topics. Integration of current information from research findings into clinical practice is a primary focus. Repeated enrollment is permitted when special topic is different. *3 credits*

GMHS 6307 Integrating Technology and Education in Health Sciences

This course is designed for the healthcare professional/educator, and will expand one's capacity to integrate today's technology with teaching and learning strategies. An overview of the background on the technology's role in education as well as the issues concerning implementation will be explored. An interactive approach to understanding and utilizing various hardware and software products is provided. Topics: networks, the Internet, email, advanced word processing, imaging, CD-ROM and related multimedia, and other applicable healthcare/research/education technologies. Students should be comfortable utilizing the computer, have access to the Internet and email, and be available to access SHU computers outside of class hours. *3 credits*

GMHS 6409 Styles of Teaching and Learning in Health Professions Education

Study of alternative relationships in the teaching-learning process. Course experiences will be guided by the "spectrum of teaching styles," a framework that delineates options in teaching and learning. Organizing students and subject matter; managing time, space and equipment; interacting with students; choosing verbal behavior; and creating cognitive connections with learners. *3 credits*

GMHS 7110 Strategic Planning for Healthcare and Health Professions Education

This course focuses on methods related to strategic planning in healthcare institutions and health professions education programs. The methods include planning, implementing and evaluating clinical or educational outcomes. The course uses a blended instructional format by combining classroom instruction with virtual instruction. *3 credits*

GMHS 7202 Issues in Motor Control: Reaching and Manipulation

This seminar is designed to advance the practitioner's knowledge base and clinical decision-making skills in dealing with issues related to upper extremity control. Upper extremity control is explored using a multidimensional framework that highlights the contribution of the individual, task and environment to the organization and control of reach and manipulation across the life span. *3 credits*

GMHS 7203 Issues in Motor Control: Gait

The course has been designed to advance the practitioner's knowledge base and clinical decision-making skills in dealing with issues related to gait and lower extremity control. This course will examine: 1) contemporary theories of motor control as related to the acquisition, organization and control of locomotor skills, 2) changes in gait and lower extremity control across the lifespan, 3) effects of pathology on gait and lower extremity control, 4) qualitative and quantitative measures of gait, and 5) current treatment approaches used in rehabilitation. Literature from both clinical and experimental research provides the basis for classroom discussion designed to explore the implications of this information for clinical practice. *3 credits*

GMHS 7306 Investigatory Methods in Electromyography

Designed to provide students with knowledge of EMG through a combination of data collection, analysis and interpretation, and discussion of relevant literature. Data acquisition and signal processing of various types of movements will allow the student to explore practical and theoretical issues affecting interpretation. Lab time outside of class period to collect and analyze the data is required to complete required course projects. *3 credits*

GMHS 7316/7317/7318 Independent Study

This course provides the student with intensive study of a specialized area within the field of health sciences under the mentorship of a faculty member. Subject and credit hours will be arranged. Permission of departmental mentor is required. *1-3 credits*

GMHS 7403 Philosophy of Science

This course introduces the student to a broad range of philosophical and sociological concepts in the development of the scientific and medical enterprises. While not a strict philosophy course, the reading encompasses many of the foundations of the body of modern philosophy of science, while at the same time drawing the student into historical readings on medical practice, biology, psychiatry, epidemiology, and mechanisms. Exploration of theory, hypothesis, probability and other related aspects of scientific inquiry are reviewed. Chaos Theory, Quantum Science and String Theory are explored at the end to provide a full spectrum review of scientific research processes. *3 credits*

GMHS 7500 Intermediate Statistical Methods I

Part I - Nature of statistics. This is the first part of a two-part course sequence. The following topics are covered: descriptive statistics, graphical methods, measures of central tendency and variability, probability, correlation and regression. The SPSS Statistical Analysis package will be used throughout the course. *3 credits*

GMHS 7501 Quantitative Research Methods

This course is designed to provide students with an introduction to research in health care. An overview of the research process will be provided, with an emphasis on how a research question is formulated based on a review of literature and identification of an appropriate theoretical framework. Quantitative research design strategies will be presented. *3 credits*

GMHS 7502 Qualitative/Survey Methods

This course continues the introduction to research methods by focusing on qualitative research methods and survey research methods. In the qualitative section of the course, students will consider research elements that are unique to conducting qualitative research such as basic assumptions, sampling, data collection and analysis, and report writing. In the survey methods section of this course the primary focus is on development a survey instrument. Theoretical and practical issues related to the development, validation and implementation of research surveys will be addressed. Key issues include: question construction, questionnaire design, validating and piloting a new survey and survey data collection methods. *3 credits*

GMHS 7503 Scientific Inquiry/Writing

This course is designed to foster student's skills in critical thinking related to the scientific method and to provide students with a foundation in writing and communicating scientific information. A blended instructional format is utilized, combining classroom instruction with virtual instruction. Students will demonstrate a problem-solving approach in the literature search and critical analysis of the scientific literature. Various methods of scientific communication will be addressed, and students will gain practical experience in scientific writing. *3 credits*

GMHS 7508 Intermediate Statistical Methods II

Part II - Nature of statistics. This is the second part of a two-part course sequence. The following topics are covered: sampling distributions, inferential statistics, estimation and hypothesis testing, tests of independence and nonparametric statistics. The SPSS Statistical Analysis package will be used throughout the course. Prerequisite: GMHS 7500. *3 credits*

GMHS 7602 Dissertation Seminar

This course focuses on the application of qualitative and quantitative designs, particularly via critiques of published articles, the development of a hypothetical proposal and an IRB application and the role and scope of the Institutional Review Board. Prerequisites: GMHS 7500; GMHS 7508; GMHS 7501; GMHS 7502. *3 credits*

GMHS 7603 Biomedical Ethics and Legal Issues in Healthcare

This course focuses on the disarray in healthcare based on four distinct themes: 1) malpractice/quality of care; 2) bioethics/individual autonomy; 3) public health/right of patients vs. state; and 4) financing/regulatory/access to and cost of care. The course examines the conceptual whole and fundamental structural relationships while using the traditional themes of quality, ethics, access to and cost of care, while stressing three major themes; practitioner/patient relationships; state oversight of practitioners and patients; and institutional transactions and forms, all while keeping a focus on bioethics and health services research published in health policy literature to get a stronger empirical and theoretical base for exploring healthcare and healthcare law and the two fields' broad social impact where they overlap and compete for placement. *3 credits*

GMHS 8001 Registration Continuation

Matriculated students in GPHS who are not taking any coursework during the Fall or Spring semester of an academic year must register for this course in order to maintain an active status in the program. Students must maintain contact with their advisers and be involved in the research forums while registered for this course. *no credit*

GMHS 8113 Principals of Motor Control and Learning

This course will contain three major topics. The first topic will explore the historical and current theories of motor control. Topics related to the control processes and mechanisms of skilled movement will be addressed. The students will be introduced to the techniques currently available to measure the kinetics and the outcomes of movement. In the second topic, students will learn about the variables that are most important for the learning of new movement behaviors. The third topic will explore issues related to the recovery of motor function such as neural plasticity, cortical reorganization and motor learning following brain damage. The student will have the opportunity to review the literature relevant to each of the topics and to observe and analyze the process and measure the outcome of a subject learning a novel motor skill. *3 credits*

GMHS 8200 Topics in Articulation/Phonological Development and Disorders

Intensive study of selected topics regarding the development of articulatory and phonological processes in children and the development, nature, and clinical management and disorders of articulation and phonology. Topics will vary according to student needs. *3 credits*

GMHS 8203 Topics in Language Acquisition and Disorders

Intensive study of selected topics regarding language acquisition and the etiology and clinical management of language disorders. Topics may vary according to student needs. *3 credits*

GMHS 8206 Topics in Speech Analysis Methods and Instrumentation

Intensive review of, and practical exercises with, laboratory instrumentation for the analysis of acoustic and physiological characteristics of speech production. Topics may vary according to student needs. *3 credits*

GMHS 8207 Topics in Speech Motor Control

Intensive study of selected topics regarding the neuromotor processes underlying normal speech production. Topics may vary according to student needs. *3 credits*

GMHS 8400 Government Regulation/Scientific Inquiry and Grantsmanship

Various grants funding agencies, search tools, and University resources are covered, with an emphasis on identifying appropriate granting sources. Basic principles of grantsmanship and scientific writing, and strategies to improve funding potential are reviewed. Students will review grants in mock study sections. *3 credits*

GMHS 8402 LabVIEW

This course will introduce students to the use of the LabVIEW computer programming language for the collection, manipulation and processing of data collected from instruments which measure various aspects of human movement. *3 credits*

GMHS 8508 Practicum: Teaching Experience

Provides students the opportunity to integrate the goals of the program in a practical situation through the application of clinical, administrative or educational principles in a healthcare organization or institution of higher learning. The type of practicum and facility assigned depends on the student's background and career goals. Prerequisite: Permission of instructor. *3 credits*

GMHS 9305 Investigatory Methods in Biomechanics of Human Movement

Goals of this course are to develop an understanding of the variety of methods of data collection, data processing and analysis used in human movement research. Students gain an understanding of the concepts and techniques required in analyzing human movement. Develops the skills necessary to choose practical research questions and analytical methods concerning human movements. Lab time outside of class period to collect and analyze data is required to complete required course projects. Permission required. *3 credits*

GMHS 9504 Dissertation I

Working with the committee, the student develops his/her study proposal. Areas emphasized include review of the literature, identification of problem statements/research question(s)/hypotheses, selection and application of appropriate methods, conducting a pilot study and consideration of protection of human subjects/IRB requirements. Includes reviews and critiques of sample proposals, mock proposal hearings and candidate presentations of draft proposals. This course culminates in the dissertation proposal hearing. *4 credits*

GMHS 9505 Dissertation II

Working with the committee, the student conducts participant recruitment, data collection, analysis of the data and an initial draft of the study's findings. Prerequisite: GMHS 9504, Dissertation I. *4 credits*

GMHS 9506 Dissertation Advisement

The candidate will submit a completed dissertation and successfully orally defend the dissertation in a public forum. Candidates must adhere to all dissertation guidelines as specified by the program. Prerequisite: GMHS 9505. *4 credits*

GMOT 6155 (OTFY4155) Functional Anatomy and Kinesiology I

This course focuses on understanding and analyzing typical and atypical human movement across the life span using anatomy and kinesiology principles. This course includes labs. *4 credits*

GMOT 6160 (OTFY4160) Neuroscience for Occupational Therapy

This course covers body functions and structures of the nervous system, including the impact of impairment on activity and participation. *2 credits*

GMOT 6170 (OTFY 4170) Occupational Therapy Practice Skills

This course introduces basic health assessment; client and provider safety; and demonstration and integration of occupational therapy practice skills. This course includes labs. *2 credits*

GMOT 6185 (OTFY4185) Introduction to Occupational Therapy

This course introduces the students to the foundations of the occupational therapy profession. This course includes labs. *4 credits*

GMOT 6240 (OTFY 4240) Functional Anatomy and Kinesiology II

This course continues to focus on understanding and analyzing typical and atypical human movements across the life span using anatomy and kinesiology principles. This course includes labs. *2 credits*

GMOT 6100 (OTFY4100) Professional Formation I

This course focuses on the acquisition of professional knowledge and skills expected of graduate students in a professional program. *2 credits*

GMOT 6250 (OTFY4250) Group Process in Occupational Therapy

This course integrates theories of group dynamics and leadership with the development and implementation of functional activity-based groups. This course includes fieldwork I experiences. *4 credits*

GMOT 6260 (OTFY4260) Cognition, Perception, Vision and Function

This course addresses cognition, perception, and visual impairments; their impact on function; and principles of related occupational therapy assessments and interventions. This course includes labs. *3 credits*

GMOT 6270 (OTFY4270) The Occupational Therapy Process

This course introduces the principles and implementation of the occupational therapy process. *4 credits*

GMOT 7303 (OTFY4303) Research Methods I

This course addresses the use of quantitative methods to inform clinical practice and research. *3 credits*

GMOT 6200 (OTFY4200) Professional Formation II

This course develops critical thinking and clinical reasoning skills for occupational therapy practice. *2 credits*

GMOT 6301 Health and Medical Complexities of Older Adults

This course examines common health conditions associated with older adults and how impairment impacts activity and participation. *2 credits*

GMOT 6303 Evaluation of Older Adults

This course focuses on the evaluation and assessment of older adults. *2 credits*

GMOT 6305 Interventions for Older Adults

This course integrates theories and interventions for occupational therapy practice with older adults. This course includes labs and fieldwork I experiences. *4 credits*

GMOT 6750 Health and Medical Complexities of Adults

This course examines common health conditions associated with adults and how impairment impacts activity and participation. *2 credits*

GMOT 6760 Evaluation of Adults

This course focuses on the evaluation and assessment of adults. *2 credits*

GMOT 6770 Interventions for Adults

This course integrates theories and interventions for occupational therapy practice with adults. This course includes labs and fieldwork I experiences. *6 credits*

GMOT 6780 Professional Ethics in Occupational Therapy

This course introduces principles of ethics and law for occupational therapy practice. *2 credits*

GMOT 6700 Professional Formation III

This course continues to develop clinical reasoning, clinical integration and evidence based practice. This course includes service learning experiences. *2 credits*

GMOT 6850 Health and Medical Complexities of Children/Adolescents

This course examines common health conditions associated with children and adolescents and how impairment impacts activity and participation. *2 credits*

GMOT 6860 Evaluation of Children/Adolescents

This course focuses on the evaluation and assessment of children and adolescents. *2 credits*

GMOT 6870 Interventions for Children/Adolescents

This course integrates theories and interventions for occupational therapy practice with children and adolescents. This course includes labs and fieldwork I experiences. *5 credits*

GMOT 6880 Wellness and Health Promotion I

This course examines emerging occupational therapy practices, program development, and research in practice. This course includes service learning and/or capstone project. *3 credits*

GMOT 7320 Research Methods II

This course continues to address research for and in practice. *2 credits*

GMOT 6800 Professional Formation IV

This course advances clinical reasoning, and professional development in clinical practice and the community. *2 credits*

GMOT 6890 Wellness and Health Promotion II

This course continues with the application of service learning/capstone projects developed in Wellness and Health Promotion I. *4 credits*

GMOT 6965 Health Care Policies and Organizations

This course addresses the practice and management of occupational therapy services across healthcare, education and community environments. *2 credits*

GMOT 6970 Fieldwork Preparation

This course addresses expectations, trends and issues in the clinical environment to facilitate successful performance in level II fieldwork. *1 credit*

GMOT 7013 Level II Fieldwork I

The Level II Fieldwork course requires students to integrate the roles of practitioner, contributor, and manager in a clinical setting. Time spent in clinical setting is equivalent to a full time job. *3 credits*

GMOT 7023 Level II Fieldwork II

The Level II Fieldwork course requires students to integrate the roles of practitioner, contributor, and manager in a clinical setting. Time spent in clinical setting is equivalent to a full time job. *3 credits*

GMOT 7000 Professional Formation V

This course focuses on transitioning into professional roles and continued professional development as practitioners and managers. *1 credit*

GMOT 7033 Level II Fieldwork III (optional)

This optional Level II Fieldwork course requires students to integrate the roles of practitioner, contributor, and manager in an additional area. Time spent in clinical setting is equivalent to a full time job. *3 credits*

GMPA 6001 (PAFY 4001) Human Anatomy

The course provides instruction to significant aspects of human anatomy with respect to physician assistant practice. Lecture instruction as well as prosected dissection in cadaver lab are methods used to convey material. Clinical application of anatomic structure and function are emphasized. *4 credits*

GMPA 8604 Principles of Epidemiology

An introduction to the basic epidemiologic strategies and thinking. Epidemiologic sophistication fosters a questioning attitude; without it, medical practices may be introduced and accepted even though they lack adequate support from well-controlled studies. Students will be exposed to the variations that characterize acute/infectious and chronic disease epidemiology. Implications for primary care practitioners will be emphasized. This course is a hybrid course requiring online participation and attendance at class sessions. *3 credits*

GMPA 6104 (PAFY 4104) Psychiatry

An overview of psychiatric concepts and an introductory approach to the evaluation of patients with emotional problems, in preparation for clinical rotations. Includes the various psychiatric syndromes, in terms of causal factors, clinical presentation, diagnosis, treatment and outcome. The impact that psychological problems have on the total health care of the patient will be emphasized. *2 credits*

GMPA 6107 (PAFY 4107) Pathophysiology

Building upon the foundation provided in GMPA6111/PAFY4111, this course provides an in-depth study of the pathophysiologic changes which occur in the body in response to disease and injury. The course discusses how pathologic changes noted at both the cellular and organ system levels alter homeostasis. Correlation to the clinical aspect of disease is emphasized. *3 credits*

GMPA 6108 (PAFY 4108) Health Maintenance and Education

Prepares students to provide preventive health care through the understanding of human development as it relates to illness, proper nutrition and health maintenance. Additionally, this course discusses how religion, culture, ethnicity, education, socioeconomic status, as well as physical and/or mental disabilities impact their health care. Students will receive in-depth instruction in the principles of health maintenance from the Physician Assistant perspective. *2 credits*

GMPA 6111 (PAFY4111) Human Physiology

This course provides an in-depth exploration of the physiologic aspects of homeostasis at both the cellular and organ system levels. Topics include the cell, musculoskeletal, cardiac, pulmonary, digestive, renal, endocrine, and reproductive systems. Open to physician assistant majors only. *3 credits*

GMPA 6112 (PAFY 4112) Pharmacology and Clinical Therapeutics

An introduction to the therapeutic agents most commonly used in the practice of medicine. Emphasis will be placed on drug interaction, adverse reactions, therapeutic effects and dosage schedules. Demonstrates the practical application of the pharmaceutical science as utilized for the formulation of drug therapy decisions. The course will assist the physician assistant student to develop management plans for initiating routine drug therapy, writing prescriptions, monitoring drug therapy, and providing emergency drug therapy. *4 credits*

GMPA 6203 (PAFY 4203) Introduction to Clinical Medicine I

This course introduces interviewing techniques and principles, psychosocial development and behavior, and the fundamentals of a complete medical history and physical examination. Proper communication between the physician assistant, other health professionals, and the patient are emphasized. Students are assigned to preceptors for the purpose of taking complete histories and performing physician examination on clinical patients. *4 credits*

GMPA 6205 (PAFY 4205) Introduction to Clinical Medicine II

A continuation of GMPA 6203, this course provides instruction in the techniques of obtaining a problem-focused history and exam. The course is oriented towards the refinement of history taking, physical exam, and critical thinking skills that are necessary for developing differential diagnosis in clinical practice. A systems-based approach to signs and symptoms of diseases seen in primary care is

discussed. An introduction to documentation is included, with main focus on the subjective and objective portions of patient documentation. *4 credits*

GMPA 6206 (PAFY 4206) Electrocardiography

This course introduces students to analysis of the electrocardiograph. The course will review cardiac electrophysiology and indications for ECG testing. Students will learn how to perform a 12 lead ECG as well as how to analyze an ECG for rate, rhythm, axis, intervals, cardiac hypertrophy and ischemia/infarction. *1 credit*

GMPA 6207 (PAFY 4207) Diagnostic Imaging

This course introduces students to diagnostic imaging. Following an introduction to different imaging modalities and their indications, the course will progress through an organ system based review of normal radiographic anatomy and pathologic findings. *1 credit.*

GMPA 6208 (PAFY 4208) Laboratory Diagnostics

This course introduces students to laboratory diagnostic testing. The course will review indications for testing, normal results, and common pathologic findings discovered in testing blood, urine, stool, cerebrospinal fluid, synovial fluid and other body fluids. Students will have the opportunity to practice laboratory procedures including phlebotomy, urinalysis and guaiac testing for occult blood. *2 credits*

GMPA 7313 Clinical Transitions

Case-based and small student group centered course designed to guide students through the transition from textbook medical knowledge to clinically essential patient care elements of logical differential diagnoses and appropriate patient treatment plans. Using a problem-based learning strategy, students will be guided through the process of developing a differential diagnosis and treatment plan. *2 credits*

GMPA 8604 Biomedical Ethics

The application of human and professional values, judgments and choices to selective ethical dilemmas that arise in practice. Emphasis will be placed upon various traditional and contemporary approaches to normative ethics within decision making models applicable to resolving professional dilemmas in the delivery of health care. Open to physician assistant majors only or permission by department chair. This course is a hybrid course requiring online participation and attendance at class sessions. *3 credits*

GMPA 7312 Fundamentals of Clinical Medicine

Provides a comprehensive systems-based overview of various disease entities in preparation for clinical rotations. Students will gain in-depth knowledge of the etiology, clinical presentation, differential diagnosis, diagnoses and therapeutic approach to diseases processes. The specialties of internal medicine, surgery, pediatrics, and obstetrics and gynecology are addressed. *8 credits*

GMPA 7404 Research Methods I

An exploration in the fundamental concepts of research in the health sciences. Problem finding, formulation of a research question, research methodology, design, and data

collection and interpretation will be addressed. Ethical considerations in research will be discussed. Published research articles will be critically analyzed. At the conclusion of the course, the students will have developed the framework of an original study, which will be further developed in GMPA 8509 (Research Methods II). This course is a hybrid course requiring online participation and attendance at class sessions. *2 credits*

GMPA 7500 Professional Seminar I

An organ-system based review course culminating in formative assessments of knowledge base and hands-on skills. *2 credits*

GMPA 7501 Professional Seminar II

A continuation of GMPA7500, this is an ongoing organ-system based review course culminating in formative assessments of knowledge base and hands-on skills. *2 credits*

GMPA 7502 Professional Seminar III

A continuation of GMPA7501, this is an ongoing organ-system based review course culminating in summative assessments of knowledge base and hands-on skills. *2 credits*

GMPA 8000 Internal Medicine

Required clinical practicum in internal medicine. *4 credits*

GMPA 8001 Surgery

Required clinical practicum in surgery. *4 credits*

GMPA 8002 Pediatrics

Required clinical practicum in pediatrics. *4 credits*

GMPA 8003 Obstetrics and Gynecology

Required clinical practicum in obstetrics and gynecology. *2 credits*

GMPA 8004 Behavioral and Mental Health

Required clinical practicum in behavioral and mental health. *2 credits*

GMPA 8005 Outpatient Medicine I

Required clinical practicum in outpatient medicine. *2 credits*

GMPA 8006 Outpatient Medicine II

Required clinical practicum in outpatient medicine. *2 credits*

GMPA 8007 Outpatient Medicine III

Required clinical practicum in outpatient medicine. *2 credits*

GMPA 8008 Geriatrics

Required clinical practicum in geriatrics. *2 credits*

GMPA 8009 Emergency Medicine

Required clinical practicum in emergency medicine. *2 credits*

GMPA 8010-8012 Elective Rotations

Required elective clinical practica. *2 credits each*

GMPA 8013-8015 Elective Rotations

Additional elective clinical practica. *2 credits each*

GMPA 8509 Research Methods II

Provides experiential learning in the research process as students, working in groups and with a faculty advisor, bring the data collection process for a small scale study to

completion. Data will be further analyzed and discussed in GMPA 8511 (Research Methods III). This course is a hybrid course requiring online participation and attendance at class sessions. *1 credit*

GMPA 8510 Biostatistics

Provides an introduction to statistical research methods in health science as applied to study of distribution of disease in human population. The course is intended to develop students' competencies in the application of the statistical techniques used to explore, describe, and analyze information for research or evaluation purposes. Topics include hypotheses testing, t-tests, analysis of variance, linear correlation and regression, nonparametric tests, and power analysis. An introduction to the SPSS statistical software is included. *2 credits*

GMPA 8512 Research Methods III

The research process will culminate with a full analysis of data collected. Students will be asked to draw a conclusion using appropriate qualitative or quantitative analytic techniques and to present their findings to peers, faculty and clinicians through various media including a paper, poster and presentation. This course is a hybrid course requiring online participation and attendance at class session. *2 credits*

GMPA 8603 Healthcare Policy

An overview of the health care industry and policies with information regarding the various topics related to the US health care delivery system. The impact that health care policy and managed care has on the total health of a patient will be discussed. The course is given in the Spring semester of the third professional year so that the student can incorporate clinical skills with an analytic perspective on those issues that drive the current health care system. This is a hybrid course requiring online participation and attendance at class sessions. *2 credits*

GMSL 6007 Physiologic and Acoustic Phonetics

This course addresses physiological aspects of the ventilatory, laryngeal, supralaryngeal, and orofacial mechanism as it relates to normal speech production. The acquisition and analysis of aerodynamic and acoustic aspects of voice and speech will be reviewed along with its application to disordered speech assessment. *3 credits*

GMSL 6009 Diagnostic and Clinical Principles

This course focuses on assessment in communication disorders as a problem-solving process. Students will develop knowledge and skill competencies in selection, administration, and analysis of testing materials as well as writing and interpreting clinical notes and reports for pediatric populations. The course will also cover review of policies, procedures, expectations, and professional behavior in the clinical environment. *2 credits*

GMSL 6010 Child Language Development and Disorders

This course is an advanced study of the relationship between language development, cognitive development, and language impairment in pediatric populations from birth to five years of age. First, the course begins by giving the student a solid footing in typical developmental milestones

as well as current theories of language development and disorders. Second, populations of children who demonstrate language impairment, including late talkers, Autism Spectrum Disorder, Down syndrome, and Preschool Language Impairment/Specific Language Impairment are explored. Third, the importance of the assessment process in determining a diagnosis, a prognosis, and recommendations for intervention are emphasized. Finally, setting of appropriate language goals and scaffolding of language performance in treatment sessions. Students will gain an understanding of how language development within culturally and linguistically diverse backgrounds differs from language impairment. Students will become familiar with ASHA standards, ethics and scope of practice as it relates to language impairment and working with individuals from diverse cultural and language backgrounds. *4 credits*

GMSL 6011 Speech Intelligibility and Its Disorders in Children

This course provides a strong foundation in the typical development of speech intelligibility and the knowledge and skills needed to assess and treat children with speech intelligibility disorders. Students will learn the developmental milestones related to speech intelligibility development and undergo a review of the normal anatomical and physiological process for producing intelligible speech and review IPA transcription. Students will expand their knowledge of the assessment, diagnostic and treatment aspects of pediatric speech intelligibility. Characteristics of special populations will also be considered. *3 credits*

GMSL 6012 School Age Language and Literacy

This course will cover principles and practices relevant to the assessment and treatment of language and literacy disorders in school age populations including children and adolescents ages 5 to 21. The goal of this course is to equip students with the knowledge and skills that ASHA specifies as necessary for school-based speech-language pathology. Topics covered include: foundational knowledge in the structure of schools; screening, referral, and diagnostic procedures in school settings; collaborating on Individualized Education Plan (IEP) teams; developing evidence-based treatment plans that meet Individuals with Disabilities Education Act (IDEA) guidelines; and theoretical foundations for the treatment of language-based learning disabilities and literacy deficits. *3 credits*

GMSL 6013 Adult Neuromotor Disorders of Communication

An overview of acquired disorders of speech motor planning, programming and execution in neurologically impaired adolescents, young adults and older populations. Special emphasis will be on the methods of assessment and rehabilitation for apraxias and dysarthrias. *2 credits*

GMSL 6022 Biomedical Ethics and Professional Issues in Speech-Language Pathology

This course presents a study of the application of human and professional values, judgment, and choices to selected ethical dilemmas that arise in health care practice. The scope of practice and code of ethics in speech-language

pathology will be explored; theories and styles of counseling and interviewing techniques used with communicatively-impaired individuals and their families will be included. This is a problem based course presented through complex medical case studies relevant to the speech-language pathologist. Ethical clinical decision making models will be explored. *2 credits*

GMSL 6141 Neuroscience

This course offers information pertaining to communication neuroscience. Communication neuroscience is a specialized sub-field of cognitive neuroscience that deals with the neural networks that support human communication. Special emphasis will be placed on topics such as the development, structure, function and pathology of the nervous system in relation to cognition, language and communication. *3 credits*

GMSL 6518 Acquired Disorders of Language and Cognition

The focus of this course will be on theoretically-motivated protocols for diagnostic evaluation and treatment of aphasia. This course, in its entirety, will deal with the conceptual scaffoldings of two major paradigms of thought in the field of aphasia, namely, the impairment approach and the social-functional approach. In addition, this course offers information on the cognitive-linguistic deficits in the right hemisphere damaged adults. *3 credits*

GMSL 6521 Dysphagia

This course is an advanced study of the nature, etiology and physiology of the normal and disordered swallow across the lifespan. Instrumentation as it relates to the diagnosis of dysphagia will be presented. Treatment and clinical decision making will be highlighted. *3 credits*

GMSL 6522 Early Intervention

This course is an intensive study of language impairment and speech and feeding delays and disorders in the infant-toddler population. Specific topics include federal and state mandates for service provision to infants and toddlers, transdisciplinary play-based assessment and intervention models, prematurity and developmental delay. *3 credits*

GMSL 6523 Fluency Disorders

This course is an advanced study of the nature and etiology of stuttering and other fluency disorders. Current assessment protocols and evidence based intervention programs for pediatric and adult populations are emphasized. *3 credits*

GMSL 6524 Augmentative and Alternative Communication

Assessment, treatment, and management of infants and children with speech motor disorders; intensive study of the interdisciplinary approach to augmentative and alternative communication; team approach to designing appropriate treatment plans, neuromotor management, environmental control, computer access and funding support. *3 credits*

GMSL 6525 Voice Disorders

Intensive review of the anatomy and physiology of the vocal mechanism; normal and abnormal ventilatory and laryngeal function; identification, assessment, diagnosis, and outcome-based management of patients with functional, neurogenic, and organic voice disorders. *3 credits*

GMSL 7001 Audiology and Aural Rehabilitation for the Speech-Language Pathologist

The objective of this course is to supply the prospective SLP with the information necessary to interpret and best utilize the results of an audiologic assessment, and enable them to plan and carry out appropriate intervention and management strategies. Students will be provided with the basic knowledge and skill necessary for performing audiologic screenings (pure tone, tympanometric and otoacoustic emissions as per ASHA's Scope of Practice for the SLP) as well as a working knowledge of evaluation procedures and interpretation of audiometric results; normal and abnormal hearing processes; appropriate treatment and referral. Communication assessment, intervention and management of children and adults with hearing loss will be addressed. Students will also gain an understanding of individualization of treatment/rehabilitation plans, the importance of family education and involvement, and collaborative interdisciplinary team models. *3 credits*

GMSL 7002 Research Methods I

This course provides an overview of concepts as it relates to the question, design, and data analysis of a research study. The goal is to help students in developing skills that will make them better consumers of research. *3 credits*

GMSL 7003 Research Methods II

The goal of this course is for students to use critical thinking skills in the evaluation of research in the field of communication sciences and disorders. Students will gain a clearer understanding in evaluating the efficacy of treatment and intervention studies across multiple areas within the field of speech-language pathology. Focus on evidence-based treatment models and single-subject designs will empower students to become better consumers of research. *3 credits*

GMSL 7010 Traumatic Brain Injury

This course offers information pertaining to the effects of traumatic brain injury on human communication and cognition from a life-span perspective. Although a variety of communication disorders can result from traumatic brain injury, this course mainly highlights the cognitive and linguistic deficits in this population. Contemporary approaches to assessment and treatment of such disorders form the core of this course. *3 credits*

GMSL 7013 Craniofacial Disorders

Study of the evaluation and treatment of speech, language, and feeding problems associated with cleft palate and other craniofacial disorders. *3 credits*

GMSL 7039 Research Project I

Faculty-supervised research review or pilot project focusing on a single area within Speech-Language Pathology or Speech, Language, and Hearing Sciences. *2 credits*

GMSL 7040 Research Project II

Faculty-supervised independent research on a single area within Speech-Language Pathology or Speech, Language and Hearing Sciences. *1 credit*

GMSL 7041 Clinical Practicum/Clinical Seminar I

Supervised clinical practicum in speech-language pathology with associated clinical seminar. *3 credits*

GMSL 7102 Clinical Practicum/Clinical Seminar II

Supervised clinical practicum in speech-language pathology with associated clinical seminar. *2 credits*

GMSL 7103 Clinical Externship

Advanced intensive supervised clinical practicum in speech-language pathology with associated clinical seminar. *5 credits*

RGCN 8000 Registration Continuation

Students who are not in the dissertation phase, not on an approved leave of absence and not able to register for another course must maintain continuous program registration by enrolling in this course.

HCAD 6002 Research Methods and Statistical Analysis for Healthcare

This course reviews and applies research study design methodologies (quantitative, qualitative and mixed), as well as statistics for healthcare professionals and practitioners. Topics include descriptive and inferential statistics, issues in sampling and hypothesis testing, analysis of variance, and regression. Students use hands-on applications essential to developing, analyzing, and interpreting healthcare studies. Computer software is used for statistical analysis. *3 credits*

HCAD 6005 Financial and Managerial Accounting and Costing in Healthcare

Provides a hands-on introduction to basic accounting and financial statements and their analysis for planning and decision-making. Emphasizes tools for analyzing financial statements as well as key management issues of profitability, liquidity and costing and pricing decisions. Recent changes in financial regulation of organizations as well as strategic management tools such as Logic Models and Balanced Scorecards are applied to support comprehensive understanding of financial planning, analysis and decision-making. *3 credits*

HCAD 7513 Healthcare Management

This course studies the role of the contemporary healthcare manager with emphasis on identifying basic managerial skills and knowledge that contributes to effective healthcare administration. Course materials focus on contemporary knowledge, skills and real-world applications for management of diverse healthcare organizations. Prerequisite: HCAD 7521 or permission of instructor. *3 credits*

HCAD 7514 Healthcare Financial Management

Designed to enhance both analytical and decision-making skills, this course covers financial analysis such as time value, risk and return, capital structure and cost of capital as applied to healthcare organizations and explores the use of equity and debt as part of financial structure. Understanding and application of financial analysis and related managerial decision making concepts, in turn will lead to the development of better stewards of scarce resources. This

course has been designed to ensure that students understand, think through and correctly apply key financial concepts and processes to better manage healthcare organizations. Prerequisite: HCAD 6005 or permission of instructor *3 credits*

HCAD 7518 Managing Community and Population Health Systems

Designed to examine the manager's role, responsibilities and involvement in developing, implementing, and evaluating strategies for community health initiatives. Topics covered include community health assessment techniques, collaboration strategies, and the application of population management models for health promotion. Emphasis on managerial epidemiology (study of distribution and determinants of diseases) and its integration with health systems planning to meet local community needs. Prerequisite: HCAD 7521 or permission of instructor. *3 credits*

HCAD 7521 21st Century Healthcare Systems

Provides a systematic overview of the structures and organizations in U.S. healthcare delivery systems with emphasis on interactions of governmental policy, authorities, delivery systems, financing of health care, regulation, competition, organizational innovations in healthcare services and alternate delivery strategies. Also examines stakeholder interests. *2 credits*

HCAD 7522 Healthcare Policy

A major overview of current U.S. health policies and their implications with in-depth study of the policy process and analytical approaches to decision making. Special emphasis on the nature and role of healthcare policy studies in decision-making. Also includes an examination of comparative international systems. Prerequisite: HCAD 7521 or permission of instructor. *2 credits*

HCAD 8514 Healthcare Economics

The study and application of economic process and methods pertinent to healthcare managers and policy practitioners. Traditional economic models pertaining to supply and demand, competition, market power, production function and efficiency are applied to the healthcare industry. Case studies reflect recent economic conditions and their application to real world management decisions. Prerequisite: HCAD 7521 or permission of instructor. *3 credits*

HCAD 8517 Strategic Planning and Marketing in Healthcare Organizations

Study of the role, functions and application of strategic planning and marketing in healthcare organizations. Emphasis on the process of strategy assessment, development, and implementation and the unique aspects of healthcare services and service design/performance as they interact with marketing plans. Prerequisites: HCAD 6005, 7513, 7521, and 8514 or permission of instructor. *3 credits*

HCAD 8518 Legal Aspects of Healthcare Organizations

Overview of legal issues associated with the delivery of healthcare and the legal pitfalls surrounding everyday practice and administration. Additionally, explores legal aspects of human resource administration in health care, as well as issues of liability and corporate responsibility. Prerequisites: HCAD 7521, 7513 or permission of instructor. *3 credits*

HCAD 8521 Quality and Information Management Systems

This course provides an overview of quality improvement and information management systems for health care leaders. Quality performance management models, approaches, tools, and techniques are presented in the context of organizational culture and leadership. Management techniques applicable to the use of health information systems are discussed along with QI/QM applications and topics - computerized records, order entry systems, and electronic health care applications. Reviews current ethical, legal and policy implications and regulations. Prerequisite: HCAD 6002 or permission of instructor. *3 credits*

HCAD 8523 Ethics in Healthcare Administration

This course offers students a basis for analyzing medical and healthcare ethics involving clinical practice, legal dimensions, and public policy. Personal, professional, and organizational ethical dilemmas and decision-making responsibilities are discussed in the context of contemporary healthcare factors and environment. *2 credits*

HCAD 8531 Emergency Management and Health Security

As health professionals at all levels seek to understand the impact of natural and man-made disasters on health status, best practices for emergency management strategies are emerging. Using an all-hazards approach, this course provides an overview of emergency preparedness and its application to all aspects of a population's health. Focuses on issues such as bioterrorism, food security, pandemics, and other related topics. Skills necessary for performing risk vulnerability assessments, developing emergency management plans, and crisis versus traditional operational processes will be covered. Prerequisite: HCAD 7521 or permission of instructor. *3 credits*

HCAD 8711 Leadership Institute

This course provides an opportunity for intensive graduate study by examining the dynamic nature of leadership in the context of modern healthcare organizations. Students learn and apply leadership principles, theories, models and skills to enhance personal capabilities. Addresses ways of managing career decisions under conditions of accelerated change and focuses on the development of servant leadership skills. Prerequisites: HCAD 7513, 7514, 7522, and 8518 or permission of instructor. *3 credits*

Applied Research and Practice Experience

Pre-service students are required to take HCAD 7991. Other students may select from HCAD 7991, HCAD 7992, or HCAD 7993, to be decided in consultation with a faculty adviser. Online students have an additional option – HCAD 7997.

HCAD 7991 Internship

Designed for pre-service students or for those with fewer than two years of management experience, this course affords students an opportunity to learn management skills through onsite experience. The students must complete a minimum of 300 hours of managerial or administrative work under the tutelage of a healthcare administrator and complete all assignments associated with the internship. Seminar discussions link students' real world experience with common human resource management topics. Requires instructor approval. *3 credits*

HCAD 7992 Practicum

Consists of a 3-credit, group-consulting project related to an area of healthcare administration or management. The practicum typically requires the writing of a management report and the delivery of an oral presentation for the partner organization. All work is completed under faculty supervision. Requires instructor approval. *3 credits*

HCAD 7993 Research Seminar

Designed for students currently working full time on a supervisory or management level in healthcare, this course gives each individual the opportunity to design and conduct a research project that focuses on a management or policy problem at his/her place of employment or in the public arena. The student presents methodology, results and recommendations both as a written capstone project and as an oral presentation. Requires instructor approval. *3 credits*

HCAD 7997 Project Completion

This course is an independent paper or project based on an aspect of healthcare delivery, administration or policy. With the assistance of the instructor, the topic is of the student's own choosing. The course provides an excellent opportunity for the student to delve more deeply into an area of healthcare which he or she has not previously studied, or to relate the curriculum to their workplace. The intended result of the project is for the student to make a contribution to his or her organization or profession. Requires instructor approval. *3 credits*