



College of Osteopathic Medicine

PATIENTS NAME

TIME OF ADMISSION

42
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11-11-08
3/15

College of Osteopathic Medicine



Anthony J. Silvagni,
D.O., Pharm.D.,
M.Sc., FACOFP
Dean

An Osteopathic Physician

Two types of complete physicians may practice medicine in all 50 states: the doctor of osteopathic medicine (D.O.) and the doctor of medicine (M.D.). While both types of physicians are trained in all aspects of patient care, D.O.s offer a distinct, holistic approach to medicine.

Osteopathic medicine is distinguished by an emphasis on primary care, by using osteopathic manipulative medicine when necessary, and by a tradition of caring for patients in underserved rural and urban areas.

Osteopathic physicians recognize the relationship between physical structure and organic function and view the human body as an interdependent unit rather than an assortment of separate parts and systems.

While all medical and surgical specialties are represented within the osteopathic medical profession, the training of vitally needed family physicians and the drive to reach rural, minority, geriatric, and indigent populations, make the osteopathic medical profession unique.

We are proud of our success in producing vitally needed primary

care physicians—nearly 70 percent of our graduates practice in the primary care disciplines of family medicine, general internal medicine, or general pediatrics—and we remain committed to training physicians capable of delivering the highest standards of total-patient care in all practice settings.

Accreditation

Nova Southeastern University College of Osteopathic Medicine has been granted accreditation by the Commission on Osteopathic College Accreditation of the American Osteopathic Association. This body is recognized by the U.S. Department of Education and the Council of Post-Secondary Accreditation as the accrediting agency for colleges educating osteopathic physicians and surgeons.

Administration

Anthony J. Silvagni, D.O., Pharm.D., M.Sc., FACOFP
Dean

Lawrence E. Jacobson, D.O.
Vice Dean

Leonard Levy, D.P.M., M.P.H.
Associate Dean for Education,
Planning, and Research

Howard Neer, D.O., FACOFP
Associate Dean for Alumni Affairs

Thomas Parrino, M.D.
Associate Dean for Veteran Affairs

Elaine Wallace, D.O., M.S.

Associate Dean for
Academic Administration

Steven Zucker, D.M.D., M.Ed.

Associate Dean for
Community Affairs

Pablo Calzado, D.O., M.P.H.

Assistant Dean for
Clinical Operations

Joseph DeGaetano, D.O., FAAFP

Assistant Dean of Clinical Curriculum and Graduate Medical Education (GME)

Martha Echols, Ph.D.

Assistant Dean for
Medical Education

Albert W. Whitehead, D.M.D., M.Ed., M.B.A.

Assistant Dean for Student and Administrative Services

Margaret Wilkinson, Ph.D.

Assistant Dean for
Preclinical Education

Cyril Blavo, D.O., M.S., M.P.H. and T.M., FACOP

Director, Public Health Program

Jennie Q. Lou, M.D., M.Sc.

Director, Medical Informatics

Admission to the College of Osteopathic Medicine

Requirements for Admission

Applicants for the first-year class must meet the following requirements prior to matriculation:

1. a bachelor's degree is preferred and must be from a regionally accredited college or university. A minimum of 90 semester hours of accepted work

from a regionally accredited college or university may be considered for admission.

2. have successfully completed (with a C or better)

- eight semester hours of each of the following courses, including laboratory for each:
 - a. general biology
 - b. organic chemistry
 - c. general chemistry
 - d. physics
- three semester hours of each of the following courses:
 - a. English literature or equivalent
 - b. English composition or equivalent

Note: These are minimum academic requirements for admission. Students are encouraged to take additional courses such as anatomy/physiology, biochemistry, embryology, genetics, behavioral sciences, and the humanities.

Preference will be given to students with a cumulative grade point average (GPA) of 3.0 or higher. However, the dean is empowered to evaluate the total qualifications of every student and to modify requirements in unusual circumstances.

3. All applicants are required to take the Medical College Admission Test (MCAT). Applications for the MCAT may be obtained from your college's preprofessional adviser's office, or by writing directly to

Medical College Admission
Test Program Office
2255 North Dubuque Road
P.O. Box 4056
Iowa City, IA 52243-4056

MCAT scores must be no more than three years old.

The discipline and intensive study required by the osteopathic medicine curriculum make the attainment of a superior GPA in undergraduate studies essential.

The college receives more than 2,000 applications a year, from which only 230 students are chosen. These students have varied backgrounds, and while some many enter the college directly from an undergraduate program, other students come from successful careers. Entering students have included pharmacists, physician assistants, nurses, teachers, pilots, and engineers.

The committee on admissions recommends applicants to the dean on the basis of demonstrated academic excellence, leadership, compassion, and commitment to the osteopathic medical profession.

Application Procedure

The college participates in the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS) for the receipt and processing of all applications. AACOMAS takes no part in the selection of students.

Application packets may be obtained directly from AACOMAS by calling (301) 968-4190 or writing to

5550 Friendship Blvd., Suite 310
Chevy Chase, MD 20815-7231.

For quick results, applicants may also submit applications electronically through AACOMAS online, an

interactive Web-based application at www.aacom.org.

Listed following are the steps necessary to complete applications before they can be reviewed by the committee on admissions.

1. The applicant should mail the following to AACOMAS by February 1:

- AACOMAS application
- An official transcript from the registrar of each college or university attended, mailed directly to AACOMAS by the college or university
- MCAT scores (must be no more than three years old from the date of application cycle)

2. The applicant should mail the following to the college by March 1 :

- a supplemental application, which will be sent to the applicant by the college on receipt of the AACOMAS application
- a nonrefundable application fee of \$50
- a letter of evaluation from the preprofessional committee, or, if such a committee does not exist, then three letters of evaluation: two from science professors, and one from a liberal arts professor
- a letter of evaluation from a physician

A personal interview is a part of the admission process; however, being interviewed is not a guarantee of admission. Not all applicants will be granted an interview. Those selected for an interview will be notified of the date and time of such interview by the Office of Admissions.

Notice of acceptance or action by the committee on admissions will be on a rolling or periodic schedule; therefore, early completion of the application is in the best interest of the applicant because of the limited number of spaces available in each class.

After acceptance, final and official documents and requirements must be received by the Office of Admissions within 90 days following the start of the first term. If these final and official documents are not received, or other requirements are not met by that time, the student will not be able to continue his or her enrollment. Financial aid will not be disbursed to anyone until he or she has been fully admitted as a regular student (all admissions requirements have been approved by the program office).

Tuition and Fees

1. The anticipated tuition for 2010–2011 (subject to change by the board of trustees without notice): \$34,480 for Florida residents and \$40,375 for out-of-state students. Eligible students must request in-state tuition on their application. For tuition purposes, a student's Florida residency status (in-state or out-of-state) will be determined at matriculation and will remain the same throughout the entire enrollment of the student at NSU.

Accordingly, tuition will not be adjusted as a result of any change in residency status after initial enrollment registration.

2. For first-year students, a microscope/laboratory fee of \$100 is required. In addition, a Health

Professions Division general access fee of \$145 is required each year. An NSU student services fee of \$750 is also required annually. Additional program fees may apply.

3. Acceptance fee is \$950. This fee is required to reserve the accepted applicant's place in the entering first-year class. This advance payment will be deducted from the tuition payment, but is not refundable in case of a withdrawal.

4. Deposit is \$1,050. This advance payment is due March 15. It will be deducted from the tuition payment, but is not refundable in the event of a withdrawal. Applicants accepted after this date will have a due date following the date of acceptance.

Applicants accepted prior to November 15 will have until December 14 to pay the acceptance fee. Applicants accepted between November 15 and February 16 will have 30 days to pay this acceptance fee. Those accepted between February 16 and April 15 will pay the combined acceptance fee and deposit (\$2,000 total) within 30 days after their acceptance. Anyone accepted on April 16 or later will pay the combined acceptance fee and deposit of \$2,000 within 14 days after acceptance.

The first semester's tuition and fees, less the \$2,000 previously paid, are due upon receipt of the NSU invoice. Students will be billed tuition for each subsequent semester. Students will not be admitted until their financial obligations have been met.

The financial ability of applicants to complete their training at the college is important because of the

limited number of positions available in each class.

Applicants should have specific plans for financing four years of medical education, including tuition, living expenses, books, equipment, clinical rotation travel, and miscellaneous expenses.

Schedule of Application for Admission Cycle

June—Application cycle for the next academic year begins. Inquiries are invited by Nova Southeastern University College of Osteopathic Medicine, and AACOMAS forms are made available.

July—Credentials sent to AACOMAS are processed, and applicant records are forwarded to Nova Southeastern University College of Osteopathic Medicine. A supplemental application is then sent to the applicant. When the supplemental application is completed and returned and when recommendations are received, the completed application is evaluated for interview.

August—Personal interviews start.

January 15—Deadline for AACOMAS applications.

March 15—Deadline for NSU-COM supplemental applications.

Financial Aid

The purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their medical education. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of a medical

education. These financial assistance programs are described in a separate university publication: *A Guide to Student Financial Assistance*.

Computer Requirements

Students are required to own a laptop computer. As part of the curriculum, students will develop medical research skills, hone and refine information management skills, and be exposed to medical informatics. Students have access to a variety of computer educational resources and course material, including

- WebCT Courses
- Computer-Assisted Instruction (case studies)
- Medical Spanish
- Course Evaluations
- EMS Accessibility
- Electronic Library
- Up-To-Date
- Kaplan Board Review
- Clinical Procedures Modules
- Integration Week Activities

A campus-wide wireless network exists to provide students with electronic access anywhere on campus.

Academics

Transfer of Credit

Circumstances may warrant that a student enrolled in one osteopathic college seeks to transfer to another institution. Credits may be transferred from medical schools and colleges accredited by the American

Osteopathic Association or by the Liaison Committee on Medical Education (LCME) or from other professional schools if, in the opinion of the dean, these schools have provided coursework comparable to that of the NSU College of Osteopathic Medicine.

- Transfers from one college of osteopathic medicine to another shall require that the last two years of instruction be completed within the college granting the D.O. degree.
- Transfers from an accredited medical school or college shall require that no less than the last 50 percent of instruction be completed within the NSU College of Osteopathic Medicine.
- Transfer credits shall be given only if the student is eligible for readmission to the previously attended college of osteopathic medicine or other medical school.
- Credit is only given for completed courses with grades of 70 percent (C) or greater.

Anyone wishing to transfer to Nova Southeastern University College of Osteopathic Medicine must

1. make a formal application to Nova Southeastern University College of Osteopathic Medicine Office of Admissions
2. meet all admission requirements to Nova Southeastern University College of Osteopathic Medicine, which include submitting official transcripts of all college work (including osteopathic transcripts); MCAT scores; National Board scores, if taken; and letters of evaluation (No

applicant will be accepted without an interview.)

3. be in good standing at the transferring institution, as documented by a letter from the dean of the transferring institution
4. supply a letter of recommendation from a faculty member of the transferring osteopathic institution
5. supply a written statement outlining reasons for request for transfer

Decisions on transfer are made by the dean. The decision will be based on factors which include, but are not limited to, academic record, circumstances leading to the transfer request, available space, and admission standards.

Advanced Placement

Request for advanced placement for any course at Nova Southeastern University College of Osteopathic Medicine must be declared and all supporting documentation must be submitted by the student no later than 45 days prior to the first day of class. The student must present all supporting documents to the College of Osteopathic Medicine Office of Student Affairs.

The student will be required to attend all classes and take all examinations until the disposition of the advanced placement request is finalized.

A student must have significant training or history of accomplishments in a basic science area that warrants consideration for advanced placement examinations. Students must pass a comprehensive examination given for the purpose of determin-

ing the student's competency in the subject involved. The passing requirement will be determined by the College of Osteopathic Medicine.

The decision regarding the request for advanced standing will be transmitted in writing to the student by the dean. The Office of the Registrar will be appropriately notified. Courses for which advanced standing is granted will be designated as advanced placement on the student's transcript and will not show a grade or contribute to the student's grade point average.

Course of Study

The College of Osteopathic Medicine has a dedicated faculty; well established affiliations with medical centers, hospitals, and health care systems; a nationally recognized rural medicine program; and a mission to educate the finest osteopathic physicians possible. We place our students and residents at the nation's fourth largest public hospital system—the North Broward Hospital District—or at one of our regional academic centers throughout the state to improve continuity and coordination of clinical education within our vast and growing clinical training network.

Our innovative curriculum is designed to fulfill our mission of training primary-care physicians. The design of the curriculum is based on successful academic models—carefully developed and integrated. It emphasizes interdisciplinary collaboration, guiding students to develop

a holistic, and more importantly, an osteopathic approach to medicine. We continually correlate basic scientific information with fundamental clinical application. Students are exposed to clinical settings in their first semester, which gives them the opportunity to prepare for the “real world” of medicine.

This clinical exposure continues into the second year when students have increased opportunity to interact with standardized patients on campus as well as be involved, under physician supervision, with real patients in the office and hospital setting.

A notable aspect of the clinical program is a required three-month rotation in a rural practice setting. In rural clinics throughout the state of Florida, our students provide health care to medically underserved and indigent patients. Our students learn to treat various patients whose lifestyles, practices, and attitudes toward health care differ from those seen in more traditional training sites. This enriching educational experience is one that cannot be taught in the classroom.

Physicians do not work in a vacuum, but rather in a health care team, and NSU promotes interdisciplinary cooperation whenever possible. Students share faculty members and campus facilities with NSU's pharmacy, dental, optometry, physician assistant, physical therapy, occupational therapy, public health, nursing, and medical science students.

Curriculum Outline

First Year Curriculum

Credit hours

Fall Term

COM 5021 Medical Biochemistry I.....	3.0
COM 5010 Gross Anatomy	6.0
COM 5020 Medical Histology	3.0
COM 5061 Medical Physiology I.....	3.0
COM 5001 Clinical Practicum I.....	2.0
COM 5121 OPP I.....	2.0
COM 5171 IGC Preceptorship I.....	1.0
COM 5080 Basic Life Support.....	1.0
COM 5100 Medicine, Health, and Society I.....	3.0

TOTAL: 24

Winter Term

COM 5002 Clinical Practicum II	2.0
COM 5172 IGC Preceptorship II	1.0
COM 5030 Medical Microbiology	7.0
COM 5022 Medical Biochemistry II	3.0
COM 5062 Medical Physiology II	4.0
COM 5011 Neuroanatomy	3.0
COM 5122 OPP II	2.0
COM 5900 Principles of Radiology	1.0
COM 5101 Medicine, Health, and Society II.....	3.0

TOTAL: 26

Elective Offerings

COM 9300 Medical Spanish—Fall and Winter	2.0
COM 9400 Preclinical Preceptorship—Summer	2.0
COM 9600 Research—Fall, Winter, and Summer	3.0

TOTAL: 7

Second Year Curriculum

Credit hours

Fall Term

COM 6000 Principles of Clinical Medicine (PCM) I.....	2.0
COM 6050 Principles of Pharmacology	2.0
COM 6040 Principles of Pathology	3.0
COM 6150 Rural Medicine	0.5
COM 6100 Integumentary System	2.0
COM 6101 Hematology and Lymph System.....	2.0
COM 6102 Respiratory System.....	2.0

COM 6103 Cardiovascular System.....	5.0
COM 6104 Gastrointestinal System.....	3.0
COM 6105 Endocrine System	1.5
COM 6107 Musculoskeletal System.....	2.0
COM 6173 IGC Preceptorship III.....	2.0
COM 6090 End of Life Seminar.....	0.5
COM 6123 OPP III.....	2.0
	TOTAL: 29.5

Winter Term

COM 6001 Principles of Clinical Medicine (PCM) II.....	2.0
COM 6221 ACLS	1.0
COM 6091 Psychiatry and Behavioral Medicine.....	2.0
COM 6111 Pediatrics.....	2.0
COM 6174 IGC Preceptorship IV.....	2.0
COM 6108 Nervous System	3.0
COM 6110 Women’s Health System.....	3.0
COM 6124 OPP IV.....	2.0
COM 6082 PALS	1.0
COM 6002 Pre-Clerkship Seminar	0.5
COM 6109 Renal/Urinary System.....	2.0
COM 9501 Integration of Biomedical and Clinical Sciences.....	5.0
	TOTAL: 25.5

Elective Offerings

COM 9300 Medical Spanish—Fall and Winter	2.0
COM 9500 Guided Study—Fall, Winter, and Summer.....	2.0
COM 9600 Research—Fall, Winter, and Summer	3.0
	TOTAL: 7

Fellows Curriculum

Credit hours

Fall and Winter Terms	
COM 9100 Osteopathic Principles and Practice Fellowship	8.0
COM 9200 Research Fellowship	8.0
	TOTAL: 16

Third Year Curriculum

Credit hours

Fall Term—Didactic Course

COM 7090 Geriatrics1.0

Fall and Winter Terms—Didactic Courses

COM 7140 Public Health and Epidemiology2.0

COM 7100 Infectious Disease.....1.0

COM 9502 Integration of Clinical Sciences and Diagnosis1.0

Fall and Winter Terms—Core Clinical Rotations

COM 7093 Geriatrics.....8.0

COM 7131 Pediatrics/Ambulatory8.0

COM 7132 Pediatrics/Hospital.....8.0

COM 7110 Obstetrics/Gynecology.....8.0

COM 7094 Psychiatry8.0

COM 7091 Family Medicine I.....8.0

COM 7092 Family Medicine II.....8.0

COM 7104 General Surgery I.....8.0

COM 7105 General Surgery II8.0

COM 7102 Internal Medicine I.....8.0

COM 7103 Internal Medicine II8.0

COM 7106 Internal Medicine III.....8.0

TOTAL: 101

Fourth Year Curriculum

Credit hours

Fall Term—No Didactic Courses

Winter Term—Didactic Course

COM 8004 Senior Seminar1.0

Fall and Winter Terms—Core Clinical Rotations

COM 7095 Emergency Medicine8.0

COM 7151 Rural Medicine I.....8.0

COM 7152 Rural Medicine II.....8.0

COM 7153 Rural Medicine III8.0

TOTAL: 33

Fall and Winter Terms—Clinical Elective Courses

COM 8103 Allergy and Immunology.....8.0

- Clinical and Laboratory—Immunology

COM 8104 Anesthesiology.....8.0

- Critical Care Medicine
- Pain Medicine
- Pediatric Anesthesiology

COM 8105	Colon and Rectal Surgery	8.0
COM 8108	Dermatology.....	8.0
	• Dermatopathology	
COM 8009	Emergency Medicine	8.0
	• Medical Toxicology	
	• Pediatric Emergency Medicine	
	• Sports Medicine	
COM 8012	Family Medicine	8.0
	• Sports Medicine	
COM 8015	Geriatric Medicine.....	8.0
COM 8018	Internal Medicine	8.0
	• Cardiovascular Disease	
	• Clinical Cardiac Electrophysiology	
	• Critical Care Medicine	
	• Endocrinology, Diabetes, and Metabolism	
	• Gastroenterology	
	• Hematology	
	• Hematology and Oncology	
	• Infectious Disease	
	• Interventional Cardiology	
	• Nephrology	
	• Oncology	
	• Pulmonary Disease	
	• Pulmonary Disease and Critical Care Medicine	
	• Rheumatology	
	• Sports Medicine	
COM 8021	Medical Genetics.....	8.0
COM 8024	Neurological Surgery	8.0
	• Endovascular Surgical Neuroradiology	
COM 8023	Neurology.....	8.0
	• Child Neurology	
	• Clinical Neurophysiology	
	• Neuromuscular Medicine	
	• Pain Medicine	
COM 8022	Nuclear Medicine	8.0
COM 8025	Obstetrics and Gynecology.....	8.0
	• Women's Health	
	• Reproductive Endocrinology	
	• Maternal/Fetal Medicine	
	• Gynecology/Oncology	
COM 8027	OPP Medicine.....	8.0

COM 8028	Ophthalmology.....	8.0
	• Retina	
	• Cornea	
COM 8029	Orthopedic Surgery.....	8.0
	• Adult Reconstructive Orthopedics	
	• Foot and Ankle Orthopedics	
	• Hand Surgery	
	• Musculoskeletal Oncology	
	• Orthopedic Sports Medicine	
	• Orthopedic Surgery of the Spine	
	• Orthopedic Trauma	
	• Pediatric Orthopedics	
COM 8011	Otolaryngology.....	8.0
	• Otology/Neurotology	
	• Pediatric Otolaryngology	
COM 8031	Pathology—Anatomic and Clinical	8.0
	• Blood Banking/Transfusion Medicine	
	• Chemical Pathology	
	• Cytopathology	
	• Forensic Pathology	
	• Hematology	
	• Medical Microbiology	
	• Neuropathology	
	• Pediatric Pathology	
	• Selective Pathology	
COM 8032	Pediatrics.....	8.0
	• Adolescent Medicine	
	• Neonatal/Perinatal Medicine	
	• Pediatric Cardiology	
	• Pediatric Critical Care Medicine	
	• Pediatric Emergency Medicine	
	• Pediatric Endocrinology	
	• Pediatric Gastroenterology	
	• Pediatric Hematology and Oncology	
	• Pediatric Infectious Disease	
	• Pediatric Nephrology	
	• Pediatric Ophthalmology	
	• Pediatric Pulmonology	
	• Pediatric Rheumatology	
	• Pediatric Sports Medicine	
COM 8038	Physical Medicine and Rehabilitation.....	8.0
	• Pain Medicine	
	• Spinal Cord Injury Medicine	

COM 8035	Plastic Surgery.....	8.0
	•Craniofacial Surgery	
	•Hand Surgery	
COM 8030	Preventive Medicine.....	8.0
	•Medical Toxicology	
COM 8036	Psychiatry.....	8.0
	•Addiction Psychiatry	
	•Child and Adolescent Psychiatry	
	•Forensic Psychiatry	
	•Geriatric Psychiatry	
	•Pain Medicine	
COM 8170	Public Health.....	8.0
COM 8020	Radiation Oncology.....	8.0
COM 8037	Radiology—Diagnostic.....	8.0
	•Abdominal Radiology	
	•Cardiothoracic Radiology	
	•Endovascular Surgical Neuroradiology	
	•Musculoskeletal Radiology	
	•Neuroradiology	
	•Nuclear Radiology	
	•Pediatric Radiology	
	•Vascular and Interventional Radiology	
COM 8040	Rural/International Medicine.....	8.0
COM 8014	Surgery—General.....	8.0
	•Hand Surgery	
	•Pediatric Surgery	
	•Surgical Critical Care	
	•Vascular Surgery	
	•Vascular Surgery—Integrated	
COM 8042	Thoracic Surgery.....	8.0
COM 8044	Urology.....	8.0
	•Pediatric Urology	
	TOTAL:	240

Electives may be taken in half-month or one-month increments.
No more than four half-month electives may be taken in the fourth year.

College of Osteopathic Medicine Course Descriptions

COM 5001—Clinical Practicum I

Students will learn the components of a patient history and physical examination and will develop effective interviewing techniques and skills.

2.0 Credit Hours

2.0 Lecture Hours

COM 5002—Clinical Practicum II

This is the second semester of a two-semester course in which the student will learn the components of a patient history and physical examination and will develop effective interviewing techniques and physical examination skills. The course will consist of assigned readings, lectures, and laboratory sessions in which diagnostic techniques will be practiced and performed by students under faculty assistance and supervision. There will also be a simulated patient experience in which each student will perform a complete history and physical examination from memory on a surrogate patient.

2.0 Credit Hours

2.0 Lecture Hours

COM 5010—Gross Anatomy

Study of the structure of the human trunk, extremities, head and neck, including dissection by student teams.

6.0 Credit Hours

5.0 Lecture Hours

1.0 Lab Hour

COM 5011—Neuroanatomy

Study of the gross structure of the brain and spinal cord and the functional relationship among their parts. Emphasizes major motor and sensory pathways and integrative mechanisms of the central nervous system.

3.0 Credit Hours

3.0 Lecture Hours

COM 5020—Medical Histology

Study of cells, tissues, and organs of the body as seen through the light microscope, involving both lectures and laboratory work. Covers transmission and scanning electron micrographs.

3.0 Credit Hours

2.0 Lecture Hours

1.0 Lab Hour

COM 5021— Medical Biochemistry I

Covers biochemical reactions and pathways of normal human health; nutrition from a biochemical viewpoint; and the biochemistry of the gastrointestinal, pulmonary, renal, musculoskeletal, endocrine, and other systems.

3.0 Credit Hours

3.0 Lecture Hours

COM 5022— Medical Biochemistry II

Clinical practice is changing so rapidly that the physician must be a perpetual student and must be able to read and understand the literature in order to keep up to date. We

offer the student the fundamentals of biochemistry, many aspects of which are currently and directly relevant to medicine. Other aspects may seem far removed from practical application, but serve to round out scientific preparation, and in the future, may emerge at the center of medical advances. This course covers biochemical reactions and pathways of normal human health, nutrition from a biochemical viewpoint, and the biochemistry of the body systems including, but not limited to, the gastrointestinal, pulmonary, renal, musculoskeletal, and endocrine systems.

3.0 Credit Hours

3.0 Lecture Hours

COM 5030—Medical Microbiology

This course will be presented in lecture format to emphasize two important medical areas, immunology and microorganisms involved in infectious diseases. The immunology section covers both innate and adaptive immune responses of humans with a focus on the host's interaction with an environment containing a variety of potential pathogens. In addition, other aspects of immunology—such as immunodeficiencies, autoimmunities, allergies, graft rejection, and immunity to tumors—are presented. Viruses, bacteria, fungi, and parasites commonly involved in human diseases, as well as new and reemerging pathogens, will be presented from a clinically relevant perspective. The sections on microorganisms will stress practical clinical skills by presenting case studies, visual illustrations of typical clinical symptoms, and the most common therapies.

7.0 Credit Hours

7.0 Lecture Hours

COM 5061—Medical Physiology I

Study of general physiology (cell function, membrane translocation, electrophysiology, muscle physiology), cardiovascular, renal, gastrointestinal, respiratory, endocrine, and neurophysiology.

3.0 Credit Hours

3.0 Lecture Hours

COM 5062— Medical Physiology II

This is the second semester of a two-semester physiology course. As with the first semester, the material will be presented using an organ systems approach. This semester will include the study of the respiratory, renal, nervous, endocrine, reproductive, and gastrointestinal systems.

4.0 Credit Hours

4.0 Lecture Hours

COM 5080—Basic Life Support

An American Heart Association course that includes both didactic material (including methods of reducing cardiovascular risk) and instruction in the psychomotor skills necessary for the initial resuscitation of the cardiac arrest patient.

1.0 Credit Hour

1.0 Lecture Hour

COM 5100, 5101—Medicine, Health, and Society I and II

This course covers three broad themes: (1) the doctor-patient relationship; (2) health promotion and disease prevention; and (3) law and

health policy. The course links the humanities, social sciences, public health, and law to the practice of medicine.

6.0 Credit Hours

5.0 Lecture Hours

1.0 Lab Hour

COM 5121—OPP I

Introduces general principles and techniques of diagnosis of the axial skeleton and paraspinal regions. Introduces students to basic terminology and examination skills through lecture, demonstration, and hands-on performance.

2.0 Credit Hours

2.0 Lecture Hours

COM 5122—OPP II

Covers principles and techniques on a regional basis. Stresses the neurophysiological aspects of muscle dysfunction and pain mechanisms. Treatment modalities include counterstrain, myofascial release, indirect technique, and muscle energy techniques.

2.0 Credit Hours

2.0 Lecture Hours

COM 5141—Public Health and Epidemiology I

This course will provide the medical student with the skills needed to apply the fundamentals to preventive medicine/public health. The student of public and community medicine will be properly positioned to evaluate whether we have achieved such goals. The success or failure of changes implemented by politicians and economists during the turbulent and controversial period for medicine

will be measured by the epidemiologist and the practitioner of preventive medicine. This course teaches the principles of epidemiology and also provides the basic skills on critical reading of the medical literature and the use of epidemiological methods in the evaluation and development of health care services and policy.

2.0 Credit Hours

2.0 Lecture Hours

COM 5171—IGC Preceptorship I

The Interdisciplinary Generalist Curriculum (IGC) Preceptorship for first-year students is composed of the IGC Physician Mentor Program. The premise of the IGC Program is that exposure to professional role models is a significant determinant of medical students' career choices. In addition, an early clinical experience is an essential learning component for medical students to begin to correlate classroom knowledge with actual patient encounters. The IGC Preceptorship I and II Courses expose first-year medical students to clinical settings by matching each student with a community-based physician mentor for a primary care rotation.

1.0 Credit Hour

1.0 Lecture Hour

COM 5172—IGC Preceptorship II

The Interdisciplinary Generalist Curriculum (IGC) Program has three components: (1) The IGC Physician Mentor Program, (2) The IGC Managed Care/Business of Medicine Program; and (3) the College of Osteopathic Medicine in Community Service (COM Serve) Program. The Premise of the IGC Program

is that exposure to professional role models is a significant determinant of medical students' career choices. In addition, an early clinical experience is an essential learning component for medical students to begin to correlate classroom knowledge with actual patient encounters.

1.0 Credit Hour

1.0 Lecture Hour

COM 5900— Principles of Radiology

This course provides an overview of common imaging modalities used in clinical practice. The course syllabus, as well as selected course content and radiological images, will be posted on the student WebCT throughout the duration of the course. It is the students' responsibility to visit the WebCT prior to and after each lecture and the final exam. Students are responsible for knowing and understanding all posted content and being able to interpret all posted radiological images. Students are also expected to complete the required reading prior to each lecture.

1.0 Credit Hour

1.0 Lecture Hour

COM 6000, 6001—Principles of Clinical Medicine (PCM) I, II

Principles of Clinical Medicine is a full-year course that prepares the student for clinical rotations by providing experience in evaluating standardized patients, performing common medical procedures, and documenting both.

2.0 Credit Hours

28.0 Lecture Hours

COM 6002— Pre-Clerkship Seminar

A series of presentations at the end of the sophomore year to reinforce knowledge and skills useful for clinical rotations. Topics include risk management, medical record documentation, OSHA regulations, doctor/patient relationships, standard health maintenance care of adults and children, hospital protocols, literature research, and educational resources.

0.5 Credit Hours

0.5 Lecture Hours

COM 6040—Principles of Pathology

The purpose of this course is to introduce the fundamental concepts of general pathology so the student may understand the basic pathological processes involved in development of diseases most likely to be encountered in hospitals and clinics. The gap between preclinical and clinical subjects may thus be spanned with a scientific foundation of the etiology, pathogenesis, morphologic alterations, and effects of diseases. The course consists of fundamental principles of general pathology, such as cell injury, inflammation, hemodynamic derangements (including thrombosis, infarction, and shock), basic pathologic processes of infectious diseases, the role of genetics and immunity in contributing to disease, and general discussion of neoplasia.

3.0 Credit Hours

3.0 Lecture Hours

COM 6050—Principles of Pharmacology

Basic pharmacological concepts and principles needed for the applied clinical science courses to follow during the semester.

2.0 Credit Hours

2.0 Lecture Hours

COM 6082—PALS

PALS presents a systematic, interactive approach dealing with the survival of critically ill and injured children. This care includes a broad spectrum of services, from early identification of problems through pre-hospital, hospital, and rehabilitative care. It also presents a way for resuscitation providers to treat a desperately ill patient in a coordinated way, regardless of whether the response team consists of one person, two people, or a team. PALS-trained providers will use the same guidelines and approaches inside and outside the hospital, as well as nationally and internationally. This course will consist of 15 hours of interactive instruction supplemented by audiovisuals; demonstration of required skills on Pediatric Advance Life Support Manikins; and practice using defibrillators, EKG monitors, and intubation equipment.

1.0 Credit Hour

1.0 Lecture Hour

COM 6090—End of Life Seminar

Review of common geriatric syndromes, pertinent pathophysiological processes, and their evaluation and management. Stresses psychosocial aspects, therapeutics, and approach to the dying patient.

0.5 Credit Hours

0.5 Lecture Hours

COM 6091—Psychiatry and Behavioral Medicine

Introduces the major clinical concepts of psychiatry. Emphasizes the biophysical model as it relates to the assessment, diagnosis, and empathic and compassionate treatment of major psychiatric disorders, as listed in the DSM-IV.

2.0 Credit Hours

2.0 Lecture Hours

COM 6100—Integumentary System

Clinical aspects of skin diseases, infections of the skin, skin pathology, pediatric dermatoses, neoplastic disorders of the skin, burn management plastic surgery, skin disorders, and cutaneous manifestations of systemic disorders and diseases of the breast.

2.0 Credit Hours

2.0 Lecture Hours

COM 6101—Hematology and Lymph System

This course covers the diagnosis and management of diseases of the hematopoietic and lymphoreticular system and will consist of 30 hours of lectures. The course begins with a discussion of disorders of red cells white cells, platelets and hemostasis. Myeloproliferative, lymphoproliferative, and immunoproliferative disorders will also be discussed. Discussion of cancer chemotherapy and principles of surgical oncology will be given in the latter part of the course. Indications for, and adverse reaction to, blood transfusion will also be addressed.

2.0 Credit Hours

2.0 Lecture Hours

COM 6102—Respiratory System

This course presents pathophysiology, diagnosis and management of selected respiratory disorders, infectious disorders, and neoplasms of the respiratory system. Ventilatory functions and management of respiratory failure are discussed. Speakers are from the Departments of Internal Medicine, Family Medicine, Pediatrics, Pathology, Pharmacology, OPP, and Surgery including the Division of Otorhinolaryngology. There will be 47 hours of lecture, plus reading assignments and additional topics for independent learning.

3.0 Credit Hours

3.0 Lecture Hours

COM 6103— Cardiovascular System

Pathophysiology, diagnosis, and management of common cardiovascular disorders. Teaches electrocardiography, and includes training in the use of “Harvey.”

5.0 Credit Hours

5.0 Lecture Hours

COM 6104— Gastrointestinal System

This course covers pathophysiology, diagnosis, and management of gastrointestinal diseases and diseases of the lower and biliary system. The instruction involves the participation of the faculty from Departments of Internal Medicine (Gastroenterology division), Surgery, Pediatrics, Pathology, Pharmacology, and Osteopathic Principles and Practice.

3.0 Credit Hours

3.0 Lecture Hours

COM 6105—Endocrine System

This course presents the pathophysiology, diagnosis, and management of hormonal disorders, including diseases of the endocrine glands, as well as neoplasms and infectious diseases affecting the endocrine system. The system component of the interdisciplinary curriculum involves participation by the Departments of Internal Medicine, Pediatrics, Surgery, Pathology, Pharmacology, and Osteopathic Principles and Practice. Lectures are integrated so that clinical aspects, pathophysiology of diseases, and disorders of each system are addressed.

1.5 Credit Hours

1.5 Lecture Hours

COM 6107— Musculoskeletal System

Diseases and disorders of the musculoskeletal system. Addresses pathophysiology; diagnosis and management of rheumatologic disorders; orthopedics; aspects of physical medicine; and rehabilitation. Osteopathic manipulative medicine is in this system.

2.0 Credit Hours

2.0 Lecture hours

COM 6108—Nervous System

Pathology of the nervous system, neurologic dysfunctions, pathophysiologic mechanisms of neurologic diseases, pharmacotherapeutics, and rehabilitative aspects of nervous system dysfunctions. Addresses the application of osteopathic manipulative medicine to nervous system disorders.

3.0 Credit Hours

3.0 Lecture Hours

COM 6109—**Renal/Urinary System**

Renal pathophysiology, glomerular, tubulointerstitial diseases, renal failure, congenital disorders, metabolic disorders, neoplasms of the renal/urinary system, and urology.

2.0 Credit Hours

2.0 Lecture Hours

COM 6110—Women’s Health System

Pathophysiology, diagnosis, and treatment of common gynecologic and obstetric disorders. Special issues are discussed, such as domestic violence.

3.0 Credit Hours

3.0 Lecture Hours

COM 6111—Pediatrics

This course covers normal and abnormal growth and development in children. Preventive care and health interventions of newborns, growing children, and adolescents are also addressed.

2.0 Credit Hours

32.0 Lecture Hours

COM 6123—OPP III

Continues the study of osteopathic diagnosis and treatment and the development of skills learned in previous semesters. High velocity, low amplitude, techniques are included. Interdisciplinary clinical correlation is emphasized.

2.0 Credit Hours

2.0 Lecture Hours

COM 6124—OPP IV

Development of the osteopathic approach to systemic diseases, using

skills learned in previous semesters. Cranial osteopathic technique is included. Interdisciplinary clinical correlation is emphasized.

2.0 Credit Hours

2.0 Lecture Hours

COM 6150—Rural Medicine

Introduces concepts of rural practice, the role of the rural practitioner, and problems associated with health care delivery in rural and medically underserved areas.

0.5 Credit Hours

0.5 Lecture Hours

COM 6173—IGC Preceptorship III

The Interdisciplinary Generalist Curriculum (IGC) Program has four components: (1) The IGC Physician Mentor Program; (2) The IGC Managed Care/Business of Medicine Program; (3) the College of Osteopathic Medicine in Community Service (COM Serve) Program; and (4) the Public Health Field Experience. The premise of the IGC Program is that exposure to professional role models is a significant determinant of medical students’ career choices. In addition, an early clinical experience is an essential learning component for medical students to begin to correlate classroom knowledge with actual patient encounters.

2.0 Credit Hours

2.0 Lecture Hours

COM 6174—IGC Preceptorship IV

The IGC Preceptorship IV course exposes second-year medical students to clinical settings by matching

each student with a community-based physician mentor for a primary care clinical rotation. At this time, students are also exposed to the central role of the primary care physician in managed health care and/or the management of their practices. In addition, students learn about the business aspects of practice and the various components of managed care organizations (MCOs) by being assigned to either an MCO teaching partner or attending a special conference or seminar on health care systems, policy, and access. In addition, students rotate through community-based clinics and other service organizations that provide health care to medically underserved or at-risk populations.

2.0 Credit Hours

2.0 Lecture Hours

COM 6221—ACLS

ACLS presents a systematic interactive approach to dealing with people experiencing a cardiopulmonary emergency or an acute cerebral vascular accident. ACLS presents a way for resuscitation providers to treat a desperately ill patient in a coordinated way, regardless of whether the response team consists of one person, two people, or more. ACLS-trained providers will use the same guidelines and approaches inside and outside the hospital, as well as nationally and internationally. This course will consist of 15 hours of interactive instruction supplemented by audiovisuals; demonstration of required skills on Advanced Life Support Manikins; and practice using defibrillators, EKG monitors, and intubation equipment.

1.0 Credit Hour

1.0 Lecture Hour

COM 7000—

Clinical Core Rotations

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

12.0 Credit Hours

12.0 Lecture Hours

COM 7090—Geriatrics

In this course, M3 students will be exposed to the major syndromes of aging. Case scenarios will be used to review the pathophysiology, diagnosis, and treatment of the key geriatric syndromes.

1.0 Credit Hour

1.0 Lecture Hour

COM 7091—Family Medicine I

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7092—Family Medicine II

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7093—Geriatrics

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7094—Psychiatry

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7095—Emergency Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7100—Infectious Disease

This course covers the diagnostic considerations in the immune-competent adult; the immune-compromised adult; and the elderly adult presenting with the complaints of fever, diarrhea, or cough.

1.0 Credit Hour

1.0 Lecture Hour

COM 7102—Internal Medicine I

Internal Medicine is hospital-based, content-driven specialty training that places a premium on the cognitive work and interpersonal skills necessary for providing well-patient care and for managing medical problems seen on this clinical service. Emphasis is placed on differentiating normal from abnormal history and physical findings, interpreting diagnostic tests, establishing differential diagnoses, developing skills for accurate reporting and recording of data and problems, and developing management plans—including health education for patients and families and referrals.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7103—Internal Medicine II

Internal Medicine is hospital-based, content-driven specialty training that places a premium on the cognitive work and interpersonal skills necessary for providing well-patient care and for managing medical problems seen on this clinical service. Emphasis is placed on differentiating normal from abnormal history and physical findings, interpreting diagnostic tests, establishing differential diagnoses, developing skills for accurate reporting and recording of data and problems, and developing management plans—including health education for patients and families and referrals.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7104—General Surgery I

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty. It will also provide experience and help acquire skills in a surgical setting.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7105—General Surgery II

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7106—Internal Medicine III

Internal Medicine is hospital-based, content-driven specialty training that places a premium on the cognitive work and interpersonal skills necessary for providing well-patient care and for managing medical problems seen on this clinical service. Emphasis is placed on differentiating normal from abnormal history and physical findings, interpreting diagnostic tests, establishing differential diagnoses, developing skills for accurate reporting and recording of data and problems, and developing management plans—including health education for patients and families and referrals.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7110—**Obstetrics and Gynecology**

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7131—**Pediatrics/Ambulatory**

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7132—Pediatrics/Hospital

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

**COM 7140—Public Health
and Epidemiology II**

This course will provide the medical student with the skills needed to apply the fundamentals to preventive medicine/public health. The student of public and community medicine will be properly positioned to evaluate whether we have achieved such goals. The success or failure of

changes implemented by politicians and economists during this turbulent and controversial period for medicine will be measured by the epidemiologist and the practitioner of preventive medicine. This course teaches the principles of epidemiology and also provides the basic skills on critical reading of the medical literature and the use of epidemiological methods.

2.0 Credit Hours

2.0 Lecture Hours

COM 7151—Rural Medicine I

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7152—Rural Medicine II

Rural medicine incorporates family medicine training into the rural setting and stresses the development of the independent practitioner who, with a minimum use of sophisticated technical and ancillary services, will have the ability to diagnose and formulate a treatment plan based on the data gathered through history, physical examinations, and minimal laboratory work. The core medical knowledge and practical experience gained in the didactic years and in family medicine rotations will provide the platform for learning to diagnose and provide cost-effective treatment and education for patients within the rural setting.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 7153—Rural Medicine III

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8004—Senior Seminar

A series of presentations prior to graduation to reinforce knowledge and skills useful for the internship experience. Topics include: medical economics, risk management, on-call medication, physician impairment, professional liability, medical licensure, and emergency management. A mock trial is presented.

1.0 Credit Hour

1.0 Lecture Hour

COM 8009—Emergency Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8011—Otolaryngology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8012—Family Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8014—Surgery—General

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8015—Geriatric Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8018—Internal Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8020—Radiation Oncology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8021—Medical Genetics

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8022—Nuclear Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8023—Neurology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in

the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8024—Neurological Surgery

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8025—Obstetrics and Gynecology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8027—OPP Medicine

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8028—Ophthalmology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8029—Orthopedic Surgery

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8030—Preventive Medicine

Pain management is considered an elective rotation to be taken during fourth-year clerkships. COM students performing this elective clerkship will be exposed to patients with chronic pain syndromes and the management of these unique diseases by a physician who specializes in this area of medicine.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8031—Pathology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8032—Pediatrics

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8035—Plastic Surgery

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8036—Psychiatry

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8037— Radiology—Diagnostic

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8038—Physical Medicine and Rehabilitation

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8040— Rural/International Medicine

Rural medicine incorporates family medicine training into the rural setting and stresses the development of the independent practitioner who, with a minimum use of sophisticated technical and ancillary services, will have the ability to diagnose and formulate a treatment plan based on the data gathered through history, physical examinations, and minimal laboratory work. The core medical knowledge and practical experience gained in the didactic years and in family medicine rotations will provide the platform for learning to diagnose and provide cost-effective treatment and education for patients within the rural setting.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8042—Thoracic Surgery

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8044—Urology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8103—Allergy and Immunology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8104—Anesthesiology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8105—Colon and Rectal Surgery

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8108—Dermatology

The clerkship will expose the student to the practice of medicine in the inpatient and ambulatory environments. Students will be engaged in the care of patients under the direct supervision of a physician certified in a specialty.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 8170—Public Health

A structured and supervised experience at a public health agency or public health-related institution. The student will acquire skills and experiences in the application of basic public health concepts and specialty knowledge to the solution of community health problems.

4.0–24.0 Credit Hours

4.0–24.0 Lecture Hours

COM 9100—Osteopathic Principles and Practice Fellowship

The continuation of the first practicum, this rotation builds on the Fellows' patient care responsibilities and stresses a more intense teaching load.

8.0–48.0 Credit Hours

8.0–48.0 Lecture Hours

COM 9200—Research Fellowship

The goal of the research fellowship is to provide a year-long, structured training experience in conceptualizing, conducting, and disseminating research for select medical students in the College of Osteopathic Medicine (COM). The fellowship consists of three core activities: completing academic coursework, serving as research associate on an existing

research study, and participating in communication of scientific knowledge. The percentage of time each fellow will dedicate to the three activities will be outlined in an individualized fellowship training plan. Following the model of the OPP fellowship, the fellowship year will occur between the M2 and M3 years. In addition to their fellowship year, fellows will receive tuition remission for their M3 and M4 years.

8.0–48.0 Credit Hours

8.0–48.0 Lecture Hours

COM 9300—Medical Spanish

This introductory course will provide the medical student with the fundamentals needed to interview Spanish-speaking patients (history, disease presentation) and provide these patients with basic medical information with regards to diagnosis, treatment, and public health concerns.

2.0 Credit Hours

2.0 Lecture Hours

COM 9400—Preclinical Preceptorship

This course provides the opportunity for the student to participate in a self-guided experience in health-related fields. The student will be under the supervision of a College of Osteopathic Medicine faculty member. Publications and presentations may be generated from this experience.

2.0 Credit Hours

2.0 Lecture Hours

COM 9500—Guided Study

Special assignment on a clinical or scientific subject, under faculty supervision.

2.0 Credit Hours

2.0 Lecture Hours

COM 9501—Integration of Biomedical and Clinical Sciences

Review of basic science as it pertains to osteopathic medical knowledge considered essential for osteopathic generalists to practice medicine without supervision.

5.0 Credit Hours

5.0 Lecture Hours

COM 9502—Integration of Clinical Sciences and Diagnosis

This course is designed to assess the osteopathic medical knowledge considered essential for osteopathic generalist physicians to practice medicine without supervision. Complex Level 1 represents the basic science examination component of the licensing process of osteopathic medicine.

1.0 Credit Hour

1.0 Lecture Hour

COM 9600—Research

This course provides the opportunity for the student to participate in scientific research in health-related fields. The student will be under the supervision of a research scientist/faculty member. Publications and presentations may be generated from this experience.

3.0 Credit Hours

3.0 Lecture Hours

Affiliated Hospitals

Aventura Hospital

North Miami Beach

D.M.E.: Stanley Simpson, D.O.

Bay Pines Veteran Affairs

Medical Center

St. Petersburg

Bethesda Memorial Hospital

Boynton Beach

D.M.E.: Marlene Carabello, D.O.

Broward General Medical Center

Fort Lauderdale

Associate Medical Education

Director: Glenn R. Singer, M.D.

D.M.E.: Gary Hill, D.O.

Columbia Hospital

West Palm Beach

D.M.E.: Bradley Feuer, D.O., J.D.

Copper Green Hospital

Birmingham

DME: Jeremy Alberg, D.O

Coral Springs Medical Center

Coral Springs

Associate Medical Education

Director: Daniel Hurwitz, M.D.

D.M.E.: Gary Hill, D.O.

Florida Hospital East Orlando

Orlando

D.M.E.: Joseph Allgeier, D.O.

Florida Medical Center

Fort Lauderdale

D.M.E.: Lou Isaacson, D.O.

GEO Care

Pembroke Pines

D.M.E.: Luis Castillo, M.D.

Jackson Memorial Hospital North

North Miami Beach

D.M.E.: Stanley Simpson, D.O.

Kendall Regional Medical Center

Miami

D.M.E.: Stanley Simpson, D.O.

Largo Medical

Largo

Regional Dean and D.M.E.: Anthony

Ottaviani, D.O., M.P.H.

Larkin Community Hospital

Miami-Dade

D.M.E.: Mac Cowden, D.O.

Lee Memorial Hospital

Fort Myers

DME: Jeremy Alberg, D.O.

Memorial Regional Hospital

Hollywood

Director of Medical Affairs:

Stanley Marks, M.D.

Miami Children's Hospital

Miami

D.M.E.: Marco Danon

Osteopathic Program Director:

Iran Niroomand-Rad, D.O.

Mount Sinai Medical Center

/Miami Heart

Miami Beach

D.M.E: Gary Melino, D.O.

Naples Community Hospital

Naples

D.M.E.: Dan Kaplan, D.O.

North Broward Medical Center

Pompano Beach

Associate Medical Education Direc-

tor: H. Murry Todd, M.D.

Osteopathic Institute of the South

Atlanta

President: Barry Doublestein

Palmetto General Hospital

Hialeah

D.M.E.: Marc Morganstine, D.O.

Palms West Hospital

Loxahatchee

D.M.E.: Bradley Feuer, D.O., J.D.

Southeast Alabama Medical Center

Dothan, Alabama

D.M.E.: Mark Eaton, M.D.

UM/Jackson Memorial Medical Center

Miami

Director of Emergency Care Center:

Kathleen Schrank, M.D.

West Palm Beach Veterans Affairs Medical Center

West Palm Beach

Chief of Staff: Thomas Parino, M.D.

Administrator: John Ribnikar

D.M.E.: Shanta Loungani, M.D.

Special Academic Programs

The Interdisciplinary Generalist Curriculum (IGC) Program

The IGC Program exposes medical students to primary care clinical settings from the beginning of their first year, with the long-term goal of increasing the numbers of graduates who will pursue careers in family medicine, general internal medicine, and general pediatrics. The premise of the program is that exposure to professional role models is a significant determinant of medical students' career choices, and that an early clinical experience is an essential learning component for medical students to begin to correlate classroom knowledge with actual patient encounters. The IGC Program is composed of three components: (1) the IGC Physician Mentor Program, (2) the IGC Business of Medicine/Managed Care Program, and (3) the College of Osteopathic Medicine in Community Service (COM²Serve) Program.

IGC Physician Mentor Program

Students are placed with physician mentors, either one or two students at a time. They may elect to switch mentors every semester and are required to switch primary care disciplines and mentors after their first year. In addition to providing a broad exposure to the role of a primary care physician, the physician mentor provides the student with the opportunity to perform patient histories and physical examinations within the limits of the student's ability, and educates the student by providing timely feedback and engaging in discussions and explanations of his or her decision making. There are approximately 140 primary care physician mentors who teach first- and/or second-year medical students in their private offices. This network of preceptors is composed of physicians in the three primary care disciplines; they are located throughout the tricounty area.

IGC Business of Medicine/ Managed Care Program

Students learn the business aspects of practice as well as the various components of managed care organizations (MCOs). Each student is either assigned to an MCO teaching partner, or attends a special conference or seminar on health care systems, policies, and access. Students learn how a managed care organization operates by participating in seminars and small group discussions led by professionals representing various departments/experiences such as medical operations, physician committee meetings, utilization management, quality management, and provider/practice management.

IGC COM²Serve Program

This is the community service component of the IGC preceptorship, in which second-year medical students are involved in service learning with community health centers, public health departments, homeless assistance centers, migrant farmworker clinics, and other subsidized community clinics. The COM²Serve partner organizations provide health care and other needed services to medically underserved, minority, and at-risk populations.

Osteopathic Principles and Practice Laboratories

The development of the palpatory skills used for diagnosis and treatment is a significant distinction between the educational programs in osteopathic and allopathic medical schools. *Stedman's Medical Dictionary* defines palpation as “examination with the hands and fingers; touching, feeling, or perceiving by the sense of touch.” Palpation in the osteopathic medical education context is the use of touch to examine the body. Palpatory skills are used in all areas of osteopathic medical practice and are especially important in the evaluation, diagnosis, and treatment of the musculoskeletal system.

The development of palpatory skills is taught in the first- and second-year osteopathic principles and practice (OPP) courses. Successful completion of these courses requires active participation in all laboratory sessions. During the two years, each student will palpate, in the laboratory setting, a variety of people, representing both genders and individuals with different body types to simulate the diversity of

patients expected in a practice setting. Being palpated by other students helps the student understand from the patient's perspective how palpation feels and enables the students to provide feedback to their laboratory partners, thus enhancing the palpatory skills of all students.

The osteopathic medical profession uses a variety of treatment models, and through the skills development process, the student learns the art and skills of manipulative treatment. Psychomotor skills are developed by repeated practice. Reading and observation, although helpful, do not develop the skills required to perform palpatory diagnosis and manipulative treatment. Each student is required to actively participate in all skills development laboratory sessions. These skills are taught by treating and being treated by a cadre of students of both genders and with varying body types to simulate a medical practice setting.

Area Health Education Center (AHEC) Program

The mission of NSU's Area Health Education Center (AHEC) Program is to improve the access to and the quality of primary health care service to medically underserved communities by linking the resources of academic health centers with community-based health care providers. Nova Southeastern University's College of Osteopathic Medicine, the first medical school in the state of Florida to develop an AHEC Program, officially began its program in 1985. Since its inception, the program has worked to develop effective and comprehensive training programs that improve access to quality primary

health care for Florida's medically underserved rural and inner-city urban communities.

Our nationally recognized program now serves underserved communities and populations throughout a nearly 20,000 square mile area of South and Central Florida. Our first AHEC center—the Everglades AHEC—reaches underserved areas within a 10-county region extending from the inner city of northern Miami-Dade County to rural communities around Lake Okeechobee. Based on the success of the Everglades AHEC, the university was awarded additional funding to develop a Central Florida AHEC, which now serves nine counties and extends from Lake Okeechobee to north of Orlando. By including training programs in community settings, we expose students to the challenges, rewards, and practice opportunities related to working in medically underserved areas. Students have opportunities to work together while learning to provide valuable primary care services to the community.

Consortium for Excellence in Medical Education (CEME)

In January 1999, the College of Osteopathic Medicine established an innovative program to revolutionize clinical education and training. The Consortium for Excellence in Medical Education (CEME), in affiliation with NSU College of Osteopathic Medicine, was formed to increase opportunities for postdoctoral medical training, including internships, residencies, fellowships, and continuing education programs.

The CEME is an alliance of affiliated clinical sites linked through elec-

tronic networks; teaching, research, and community health collaborations; and a shared commitment to excellence in the education of tomorrow's physicians. CEME partners are joining forces on postgraduate clinical education, research initiatives, and public health and preventative medicine programs to benefit Florida's elderly, indigent, and minority patient populations. The CEME creates a unified medical education system composed of Nova Southeastern University College of Osteopathic Medicine and 18 teaching hospitals and hospital systems spanning the state of Florida and includes ambulatory centers, county health departments, and social service agencies. Four additional affiliated programs are located in Georgia, Louisiana, and North Carolina.

The CEME, as a dynamic network of affiliated regional academic training centers, uses distance learning systems to strengthen teaching, research, and community health collaboration while also nurturing a shared commitment to excellence in the education of tomorrow's physicians.

West Palm Beach Veterans Affairs Medical Center

The College of Osteopathic Medicine has a major affiliation with the West Palm Beach Veterans Affairs Medical Center (VAMC). This state-of-the-art health care facility's close academic ties with the college includes sharing academic positions, granting faculty appointments to VAMC staff, a shared residency training program in preventive medicine, and major participation in the clinical program of the college. The VAMC employs a computerized paperless patient record system. It

also permits X rays to be visualized with high resolution, includes laboratory and other reports that can be retrieved and tracked, has systems that ensure the selection of appropriate drugs for patient safety, and facilitates arrangements for specialist consultations. Students may spend as much as six months at the facility during their clinical years.

Rural Medicine Program

Since its establishment in 1979, the College of Osteopathic Medicine has been committed to educating students about rural medicine and having them train in underserved communities. The Department of Rural Medicine's instructional programs have been recognized nationally for helping to meet the health care needs of underserved communities and enhancing the medical skills of our students.

Our fourth-year medical students train for three months in rural and underserved settings. They are expected to expand their diagnostic and therapeutic skills as well as their patient and community proficiency in relation to addressing multicultural populations. Training sites include community health centers, private physicians' offices, ambulatory care facilities operated by the West Palm Beach Veterans Affairs Medical Center, and leading health care institutions of the Florida Department of Corrections.

The Rural Medicine Training Program provides our students with a unique and enriching experience. A number of our graduates are now clinical directors at the community health centers

or have established successful practices in a rural Florida region.

Preventive Medicine

Prevention, in its broadest sense, is practiced by all physicians and other health professionals who help their patients to stay healthy. Preventive medicine, however, is also a distinct medical specialty, one of 25 recognized by the American Board of Medical Specialties.

The specialty of preventive medicine is based on our knowledge that promoting health and preventing disease requires work with both individuals and communities. Preventive medicine physicians are trained in both clinical medicine and public health. They have the skills to understand and reduce the risks of disease, disability, and premature death both in individuals and population groups. The distinctive aspects of preventive medicine include knowledge and competence in

- biostatistics
- bioterrorism
- epidemiology
- environmental and occupational health
- planning, administration, and evaluation of health services
- the social and behavioral aspects of health and disease
- the practice of prevention in clinical medicine

The American Osteopathic Association grants certificates to physicians who have successfully completed three years of supervised training and a written examination in any one of three areas: general preventive medicine/public health, occupational medicine, or aerospace medicine. Specialists in general preventive

medicine/public health focus their skills on population groups, such as the residents of a particular community or state or the patient population of a health center, hospital, or managed care organization.

Preventive medicine specialists work in a wide variety of settings, including primary care and managed care settings, public health and community agencies, industry, and academia. These physicians usually engage in multiple activities, including planning, administration and evaluation of disease prevention and health promotion programs, research, teaching, and direct patient care. The varied career paths include managed care, public health, occupational medicine, aerospace medicine, clinical medicine, informatics, policy development, academic medicine, international medicine, and research, covering all levels of government, educational institutions, organized medical care programs in industry, as well as voluntary health agencies and health professional organizations. About 6,000 physicians nationally are board-certified in preventive medicine.

In addition to the need for more physicians trained in the specialty of preventive medicine, there is a need for more training in prevention in all the other medical specialties, especially in primary care. Toward this end, the Department of Preventive Medicine is initiating efforts to strengthen prevention education, particularly in relation to individual patient care. This will be accomplished by weaving the distinctive aspects of preventive medicine throughout all coursework offered to medical students at the College of Osteopathic Medicine. Specialists in

preventive medicine, who have skills in population-based prevention as well as individual preventive interventions, can assist the other specialties in the further development of education in prevention and the population-based health sciences for residents and medical students alike.

Geriatric Teaching Program

The College of Osteopathic Medicine has a strong commitment to teaching students, residents, and physicians about the care of the geriatric patient. As a result, the college requires a didactic geriatric course in the M-2 year, which addresses “successful aging.” Attention is given to elderly populations and their diverse profiles and circumstances. During the M-3 year, students participate in a month-long, required geriatric clerkship, where they care for elders in a variety of settings under the supervision of a geriatric specialist.

The College of Osteopathic Medicine also provides clinical teaching in geriatrics for second-year family medicine residents from its Palmetto Family Medicine Residency during a one-month rotation. The College of Osteopathic Medicine, along with the North Broward Hospital District, sponsors a geriatric fellowship training program for family medicine physicians who successfully complete an American College of Osteopathic Family Physicians (ACOFPP) approved family medicine residency program. This will prepare the physician for a Certificate of Added Qualifications (CAQ) in geriatrics. We are excited about what we are doing in geriatrics and are looking for ways to expand our programs and teaching facilities.

M.B.A. Program

The master of business administration program is available to all students who are academically in good standing and have completed the first semester of their first year. The H. Wayne Huizenga School of Business and Entrepreneurship administers the M.B.A. degree. Students may contact the Huizenga School program representative for details on this program. Participation in this program is at the discretion of the dean of the College of Osteopathic Medicine.

M.P.H. Program

The Master of Public Health Program is available to students who are academically in good standing and have completed the first semester of the first year. This degree program is administered by the College of Osteopathic Medicine. Students may contact the public health program director for further information. Participation is at the discretion of the dean of the College of Osteopathic Medicine.

M.P.H. Scholarship

All College of Osteopathic Medicine students who have completed the first semester of their first year and are currently enrolled in NSU-COM classes and in good academic standing are eligible to receive a scholarship for the payment of M.P.H. tuition if they are enrolled in the on-campus program option. To apply for the M.P.H. scholarship, a brief letter must be submitted to the dean of the College of Osteopathic Medicine. The student should indicate the reasons for requesting the scholarship in the letter. Students who receive the scholarship must remain in good standing with the college. Students are eligible for the scholarship while they are enrolled in the College of Osteopathic Medicine.

The scholarship is not available after graduation, unless the student continues as an intern, resident, or fellow with any of the Nova Southeastern University College of Osteopathic Medicine affiliated institutions. All scholarships require renewal by the College of Osteopathic Medicine each academic year.

Master of Health Law

Students in good academic standing matriculated at the College of Osteopathic Medicine may, with the permission of the dean, apply for admission to the NSU Shepard Broad Law Center for the 30-credit Master of Health Law Program. This program, available to students upon completion of their first year of study, is designed to prepare future physicians to identify legal issues within their health professional responsibilities. It will help them acquire in-depth knowledge of the laws and regulations governing medical care and health professional practice. Students who complete the D.O./M.H.L. dual degree also will be especially qualified for leadership positions in managed health care environments as well as other organizations and programs that continue to evolve in the complex world of health care.

Master of Science in Education

The Fischler School of Education and Human Services, in collaboration with the College of Osteopathic Medicine, offers a certificate or master of science degree in medical education for osteopathic medical faculty members who wish to improve their skills as medical educators. The certificate is 18 credit hours, while the master's degree is 36 credit hours. It is designed for career medical faculty members, helping them to become master educators who are better able to train medical

students and residents, develop curriculum, and evaluate education and training programs.

D.O. Program for Doctors of Podiatric Medicine (D.P.M.)

A program has been established leading to the D.O. degree for D.P.M.s in an accelerated period of time. It is designed for students from podiatric medical schools accredited by the Council on Podiatric Medical Education who have been accepted to a podiatric medical and surgery residencies. Particular interest is in those applicants who intend to acquire the D.O. degree to provide added value to podiatric medical practice. A limited number of D.P.M.s will be accepted each year. The program leads to a D.O. degree and a license to practice osteopathic medicine in states requiring one year of internship as well as to eligibility for certification by the American Board of Podiatric Orthopedics and Primary Podiatric Medicine (ABPOPPM). Applicants admitted to the program will be granted credit for the core basic sciences courses in the D.O. curriculum. The ABPOPPM will determine the amount of credit it will grant toward the completion of the two-year residency in podiatric medicine and surgery. Applicants may apply from all states but preference will be granted to those who are legal residents of Florida. Additional information about the program, including details about the curriculum, may be obtained by contacting the associate dean of education, planning, and research, NSU College of Osteopathic Medicine, 3200 South University Drive, Fort Lauderdale, Florida 33328-2018.

D.O./D.M.D. Dual-Degree Program

In order to address the access to care issue and meet the needs of underserved populations, Nova Southeastern University's (NSU's) College of Dental Medicine and College of Osteopathic Medicine have structured a curriculum that provides students with an opportunity to receive a D.O. (Doctor of Osteopathic Medicine) and a D.M.D. (Doctor of Dental Medicine) degree. This D.O./D.M.D. Dual-Degree Program is in accord with the missions of both schools. This dual program will prepare health care practitioners to use a totally holistic approach to health care that will address preventive medicine and general dentistry, as well as access to care issues, meeting the needs of rural and underserved populations.

Once students complete this six-year program, they will be qualified for licensure in dentistry and for post-graduate, one-year residencies that are required prior to medical licensure. Only a select number of motivated students who have attained the highest academic standards and embody the spirit of this collaborative initiative will be considered.

Master of Public Health Program

The Master of Public Health (M.P.H.) Program is an accredited graduate level program designed to prepare students to define, critically assess, and resolve public health problems. The program provides training in the theories, concepts, and principles of public health and their application.

To meet the rapidly changing needs of health service professionals, including preventive medicine specialists, the curriculum is structured to accommodate a diversity of backgrounds and individual career goals.

The demand for public health professionals is increasing as a result of emerging and re-emerging diseases, environmental health concerns, health care reform, health care system, sociopolitical factors affecting our nation's health, and expansion of health issues that are global in scope. Professionals with the M.P.H. degree may hold positions of responsibility in a variety of settings including health care facilities, county and state health departments, social service agencies, health policy and planning organizations, universities, and community-based health education and health promotion settings, nongovernmental organizations, governmental agencies, international health organizations, and the corporate world. These positions often involve active participation of the M.P.H. graduate in the coordination, planning, development, implementation, and evaluation of health programs and services. Some students pursue further advancement in their graduate education upon completion of the M.P.H. degree program.

Program Mission

To improve the health of the population through education, research, and service, with emphasis on multicultural and underserved populations.

Goal: Education

To provide quality education in public health

Goal: Research

To contribute to the discovery and application of knowledge in public health

Goal: Service

To provide public health leadership and service in the community

Course of Study

The M.P.H. Program offers a general master of public health (M.P.H.) degree, which requires a minimum of 42 semester hours of study. This consists of 27 semester hours of required core courses, including a public health field experience (6 semester hours), and a minimum of 15 semester hours of public health elective courses. Coursework may be taken on a full-time or part-time basis. M.P.H. students are required to complete their course of study within five years of matriculation. A full-time student may be able to complete the requirements within two years or less. The M.P.H. degree may be completed on-site or online. The curriculum for the two options is identical, although the modality of instruction is different. On-site classes are offered in the evening, with each class generally scheduled one evening per week. Up to 15 credits of online courses are allowable to complete the onsite option. The online option requires a weekend on-site session at the beginning of the program and a weekend on-site capstone experience at the end of the program, prior to graduation. There are supervised elective field-based courses, projects, and research opportunities available to students.

The schedule of course offerings and other pertinent information about the program is available on the program Web site: www.nova.edu/ph.

Accreditation

The M.P.H. Program is accredited by the Council on Education for Public Health (CEPH) (www.ceph.org).

The College of Osteopathic Medicine is accredited by the American Osteopathic Association.

Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS).

Admission to the Master of Public Health Program

Admission Requirements

The M.P.H. Program evaluates the overall quality of its applicants, including academic achievement, personal motivation, knowledge about the public health profession, health care and life experience, and recommendations. Criteria for admission are as follows:

- The applicant must hold a bachelor's, master's, or a doctoral degree from an accredited college or university.
- A cumulative grade point average (GPA) of 3.0 and above, on a four-point scale, is preferred.
- Public health or health care related experience is desirable, but not required.
- Evidence of having taken one of the following standardized tests: GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT, if the applicant does not hold a health-related graduate or professional degree. The scores must be no more than five years old. Applicants with a health-related graduate or professional degree may be required to submit

official test scores upon evaluation of their application.

- Applicants enrolled in another area of study within Nova Southeastern University must provide a letter of recommendation from the dean or program director of the other college or program, and must meet the M.P.H. admission requirements.
- All application materials must be received in a timely manner to enable the Office of Admissions and the admissions committee to process the application promptly.

Application Procedures

The Office of Admissions processes applications on a year-round basis. Applicants may apply for matriculation into any one of three semesters (fall, winter, summer), and may contact the Office of Admissions at (954) 262-1111 or access the M.P.H. Program Web site (www.nova.edu/ph) for the exact deadline and start dates. All application materials should be sent to

Nova Southeastern University
Enrollment Processing Services (EPS)
College of Osteopathic Medicine
M.P.H. Admissions
3301 College Avenue
P.O. Box 299000
Fort Lauderdale, Florida
33329-9905

Applicants must provide the following:

1. a completed online application, along with a \$50, nonrefundable application fee
2. official transcripts of all coursework attempted by the applicant at all colleges and universities (It is the responsibility of the applicant to

ensure that arrangements are made for all transcripts to be sent. A final transcript of all the applicant's work up to the time of matriculation must be forwarded to the Office of Admissions prior to matriculation.)

3. official scores of one of the following standardized tests taken by the applicant: GRE, PCAT, OAT, AHPAT, MCAT, DAT, GMAT, or LSAT, if the applicant does not hold a health-related graduate or professional degree (The scores must be no more than five years old. Applicants with a health-related graduate or professional degree may be required to submit official test scores upon evaluation of their application.)

4. official scores from the Test of English as a Foreign Language for international students

5. two letters of evaluation, one of which must be from a health professional (The other letter of evaluation must be from an individual—other than a relative—such as an academic adviser, professor, coworker, or supervisor who is familiar with the applicant's character, scholastic aptitude, and work ethic.)

6. copies of any professional certificates or other relevant credentials earned by the applicant

Upon receipt of the completed application and required material, the committee on admissions will review the application and make recommendations to the program director. The applicant's file is, subsequently, reviewed by the committee on admissions, which submits a recommendation to the program director. The committee may request a phone interview to gather additional information before

a recommendation is submitted. The director submits his or her recommendation on admission to the dean. The final decision on admission is made by the dean of the NSU College of Osteopathic Medicine.

Graduate Certificate Programs

The M.P.H. Program offers graduate certificates in public health and health education.

Criteria for admission are as follows:

- The applicant must hold a bachelor's, master's, or doctoral degree from an accredited college or university.
- A cumulative grade point average (GPA) of 3.0 or above on a 4.0 scale is preferred.

Applicants must provide the following:

- completed online application form
- official transcripts
- nonrefundable application fee of \$50
- one letter of recommendation (academic)

Graduate Certificate in Public Health

The Graduate Certificate in Public Health program is designed to educate students on the fundamental principles, concepts, and skills applied to public health practice. It consists of the following courses, totaling 15 credit hours, and a comprehensive examination (taken within two years of successfully completing the courses):

Fall PUH 5430 Epidemiology
3 Credit Hours

Fall PUH 6001 Social and Behavioral Sciences Applied to Health
3 Credit Hours

Fall PUH 5512 Health Policy, Planning, and Management
3 Credit Hours

Winter PUH 5301 Biostatistics
3 Credit Hours

Winter PUH 5220 Environmental and Occupational Health
3 Credit Hours

This certificate will be presented to the student after all program requirements are successfully met and a comprehensive examination is successfully completed. If, after taking classes in the M.P.H. Program, a certificate-seeking student decides to pursue the M.P.H. degree, the student must submit a new and complete application to the program to become a degree-seeking student and must meet all the requirements for admission to the M.P.H. Degree Program. Previous coursework taken may be transferable if performance equals or exceeds the grade of *B* in the course.

Graduate Certificate in Health Education

The Graduate Certificate in Health Education program is designed to enable the student to learn the fundamental principles, concepts, and skills applied to health education, health promotion, and disease prevention at the graduate level. It consists of the following courses, totaling 15 credit hours, and a comprehensive examination (taken within two years of successfully completing the courses):

Fall PUH 5115 Principles of Health Education
3 Credit Hours

Fall PUH 5516 Public Health Informatics
3 Credit Hours

Winter PUH 5002 Health Promotion and Disease Prevention
3 Credit Hours

Winter PUH 6104 Health Service Planning and Evaluation
3 Credit Hours

Summer PUH 5210 Public Health Communications
3 Credit Hours

This certificate will be presented to the student after all program requirements are successfully met and the comprehensive examination is successfully completed. A student who wishes to pursue National Certification (Certified Health Education Specialists) may take 10 additional credits of recommended coursework to meet the 25 credits, with additional competencies, required to be eligible for the national certification examination.

Nondegree-Seeking Students

A nondegree-seeking student is one who wishes to take a course in the public health program, but does not intend to pursue the master of public health degree at the time of application. The nondegree-seeking student must provide the following admission requirements in order to take classes in the M.P.H. Program:

- completed online application form
- official transcripts
- nonrefundable application fee of \$50
- one letter of recommendation (academic)

Undergraduate students must have a minimum cumulative GPA of 3.0 with at least 90 hours of coursework, 30 hours of which must be upper level courses. An official transcript showing the coursework is required.

Application for nondegree status by students holding a bachelor's degree or higher will be considered by the admissions committee, through a review of the required records.

Nondegree-seeking students are limited to a maximum of 12 semester hours of public health program courses. Enrollment in these courses does not guarantee acceptance into the Master of Public Health degree-seeking program. After taking classes in the program as a nondegree-seeking student, the student must submit a complete application to the program to become degree-seeking. The student must also meet all the requirements for admission.

Graduate students from other NSU programs who elect to take public health courses may do so with the written consent of the course director.

The university reserves the right to modify any requirements on an individual basis as deemed necessary by the dean of the College of Osteopathic Medicine.

The college reserves the right to require the student's withdrawal at any time the college deems it necessary to safeguard its standards of scholarship, conduct, and compliance with the regulations, or for such other reason as deemed appropriate. The student, by his or her act of matriculation, concedes the college this right.

Tuition and Fees

Tuition is \$475 per credit hour. Students who concurrently pursue another degree in the Health Professions Division of NSU are charged a tuition of \$375 per credit hour. Tuition and fees are subject to change without notice. A Health Professions Division general access fee of \$145 is required each year. An NSU student services fee of \$750 is also required annually.

Financial Aid

The purpose of the Student Financial Assistance Program at Nova Southeastern University is to help as many qualified students as possible to complete their educational pursuit. Various loans, scholarships, and grants are available to qualified students to help ease the high cost of their education. These financial assistance programs are described in a separate university publication: *A Guide to Student Financial Assistance*.

Transfer of Credits

Applicants to or enrollees of the NSU-COM M.P.H. Program may petition for transfer of a maximum of 12 credit hours of elective or core courses from a regionally accredited graduate program toward their M.P.H. degree. The core courses must have been taken at a program, school, or college accredited by the Council on Education for Public Health (CEPH).

Any courses taken at another academic program or institution that the student wants to transfer to meet the requirements of this M.P.H. degree program must have the prior approval of the program director. All courses considered for transfer into the program must have been successfully completed with a grade of B (80) or better and must not

have been applied to another awarded degree. Transfer course grades are not calculated toward the student's grade point average.

The course transfer applicant must submit a written request to the program director, along with the appropriate verification documents (i.e., official transcripts, syllabi, and catalogs). The curriculum committee will review all applications for transfer of credit, including the documents provided on the petitioned courses. The committee will submit its recommendations to the program director who makes the final decision. The program does not give course credit for prior work experience.

Graduation Requirements

To be eligible for the M.P.H. degree, the student must

- satisfactorily complete, with a grade point average of 3.0 or higher and within five years of matriculation, the course of study required for the M.P.H. degree—a minimum of 42 semester hours of courses (27 hours of required core courses, including the Public Health Field Experience, and 15 hours of electives)
- successfully pass the comprehensive examination
- complete an exit survey
- satisfactorily meet all financial and library obligations

Upon satisfactory completion of degree requirements, the student is expected to attend the rehearsal and commencement program, at which time the degree is conferred. Students who do not plan to attend the commencement ceremonies must notify the program office before the established deadline for the commencement application.

Curriculum Outline

Core Courses (required)		Lecture	Practice	Semester Hours
PUH 5220	Environmental and Occupational Health	45	0	3
PUH 5301	Biostatistics	45	0	3
PUH 5430	Epidemiology	45	0	3
PUH 5512	Health Policy, Planning, and Management	45	0	3
PUH 5520	Legal and Ethical Issues in Public Health	45	0	3
PUH 6001	Social and Behavioral Sciences Applied to Health	45	0	3
PUH 6002	Public Health Field Experience	0	200	6
PUH 6604	Research Methods in Public Health	30	30	3

Elective Courses		Lecture	Practice	Semester Hours
PUH 5002	Health Promotion and Disease Prevention	45	0	3
PUH 5003	Public Health Seminar	30	15	3
PUH 5004	Public Health Grant Writing	15	60	3
PUH 5101	Introduction to Public Health	45	0	3
PUH 5110	Culture, Ethnicity, and Health	45	0	3
PUH 5111	Public Health Issues of the Elderly	45	0	3
PUH 5112	Bioterrorism and All-Hazards Preparedness	45	0	3
PUH 5115	Principles of Health Education	45	0	3
PUH 5210	Public Health Communications	15	60	3
PUH 5312	Genetics in Public Health	45	0	3
PUH 5313	Vaccines and Vaccine-Preventable Diseases	45	0	3
PUH 5314	Global Health	45	0	3
PUH 5420	Epidemiology of Diseases of Major Public Health Importance	45	0	3

PUH 5500	School Health	45	0	3
PUH 5502	Children's Health	45	0	3
PUH 5503	Women's Health	45	0	3
PUH 5504	Public Health Issues in Child Protection	45	0	3
PUH 5510	Maternal and Child Health	45	0	3
PUH 5513	Public Health Nutrition	45	0	3
PUH 5516	Public Health Informatics	45	0	3
PUH 5802	Epidemiologic Surveillance and Outbreak Investigation	30	30	3
PUH 6008	Public Health Advocacy	45	0	3
PUH 6016	Survey Methods in Public Health	30	30	3
PUH 6017	Special Studies in Public Health	0	90	3
PUH 6022	Community Health Project	0	90	3
PUH 6024	Applied Biostatistics in Health/Clinical Research	15	60	3
PUH 6101	Health Care Organization and Administration	45	0	3
PUH 6104	Health Services Planning and Evaluation	45	0	3
PUH 6201	Tropical Diseases	45	0	3
PUH 6521	Budgeting and Accounting for Health Care Organizations	45	0	3
PUH 6522	Strategic Marketing for Health Care Organizations	45	0	3
PUH 6523	Strategic Leadership in Management of Human Resources	45	0	3
PUH 6608	Public Health Research	0	180	6
PUH 6610	Comprehensive Examination	30	0	0

Master of Public Health Program Courses

Note: Listed at the end of each entry is lecture hours, laboratory hours, and semester hours, also note prerequisites.

PUH 5002—Health Promotion and Disease Prevention

Students learn health education strategies that can be incorporated into multiple settings, focusing on wellness and preventive interventions. This course addresses individual and social factors as well as behavioral issues, health detriments, and community resources. (45-0-3)

PUH 5003—Public Health Seminar

The course requires attendance at a minimum of 45 hours of public health special lectures arranged or preapproved by the course director. A written report is required for each lecture. The student may fulfill the total required hours of lectures over three semesters, starting from the semester of enrollment. (30-15-3)

PUH 5004—Public Health Grant Writing

Introduction to the skills of grant writing in public health. Each student will submit a grant as a culminating experience. (15-60-3)

PUH 5101—Introduction to Public Health

An introduction to the history, concepts, values, principles, and practice of public health. It provides an overview of the essential areas of public health including biostatistics; epidemiology; social and behavioral sciences; environmental and occu-

pational health; and health policy, planning, and management. (45-0-3)

PUH 5110—Culture, Ethnicity, and Health

Introduces students to skills and insights necessary in promoting health in diverse populations. Issues discussed include the need for effective communication, with an understanding of cultural factors and how they impact on preventive efforts, health care status, access to health care, and use and cost of health care services. The course also explores traditional modalities of health maintenance among various populations. (45-0-3)

PUH 5111—Public Health Issues of the Elderly

Examines important determinants of morbidity and mortality among the aged population. Emphasizes social, cultural, economic, behavioral, and physical characteristics of importance in the design and development of appropriate prevention efforts directed at the elderly. (45-0-3)

PUH 5112—Bioterrorism and All-Hazards Preparedness

An overview is provided regarding disasters that may result due to bioterrorism, other weapons of mass destruction, nonintentional man-made disasters, natural disasters (e.g., hurricanes, floods, tornadoes, wildfires, earthquakes), and pandemics. Major consideration is given to disaster prevention, response, mitigation, and recovery. The importance of a personal plan is stressed. (45-0-3)

PUH 5115—Principles of Health Education

Historical and philosophical foundations of health education, focusing on the principles of the discipline and preparation for service as a professional. Theoretical models will be discussed. (45-0-3)

PUH 5220—Environmental and Occupational Health

Investigates environmental and occupational factors that contribute to the development of health problems in industrialized and developing countries. Includes such topics as toxic substances, pests and pesticides, food quality, air and water pollution, solid and hazardous waste disposal, occupational hazards, and injury prevention. (45-0-3)

PUH 5301—Biostatistics

This course focuses on the principles and reasoning underlying modern biostatistics and on specific inferential techniques commonly used in public health research. At course completion, students will be able to apply basic inferential methods in research endeavors, and improve their abilities to understand the data analysis of health-related research articles. (45-0-3)

PUH 5312—Genetics in Public Health

This course will address the principles and practice of genetics as well as the ethical, legal, and social issues of genetics in public health practice. (45-0-3)

PUH 5313—Vaccines and Vaccine-Preventable Diseases

This course addresses the spectrum of vaccine-preventable diseases and

vaccines administered routinely to children, adults, and travelers. The benefits and problems associated with vaccinations will be addressed. (45-0-3)

PUH 5314—Global Health

This course addresses global health problems and trends translated to the needs and demands of populations, as well as the socioeconomic and political impact on health delivery. The role of international health agencies will also be addressed. (45-0-3)

PUH 5420—Epidemiology of Diseases of Major Public Health Importance

In-depth study of the distribution and determinants of specific infectious, non-infectious, and chronic diseases of public health importance. **Prerequisites:** PUH 5430, PUH 5301 (45-0-3)

PUH 5430—Epidemiology

Examines basic principles and methods of modern epidemiology used to assess disease causation and distribution. Students develop conceptual and analytical skills to measure association and risk, conduct epidemiological surveillance, evaluate screening and diagnostic tests, and investigate disease outbreaks and epidemics. (45-0-3)

PUH 5500—School Health

Study of the development and enhancement of school level health education and health service programs that support student health and academic achievement. (45-0-3)

PUH 5502—Children's Health

This course addresses disease and disorders of children of public health

significance as well as public health issues in children such as child safety, child abuse, and newborn screening. (45-0-3)

PUH 5503—Women’s Health

This course addresses disease and disorders of women of public health significance as well as public health issues of women such as domestic violence and breast cancer. (45-0-3)

PUH 5510—Maternal and Child Health

This course addresses public health issues pertaining to mothers and children. It also addresses programs for prevention, both in the United States and globally, and resources for the programs. (45-0-3)

PUH 5512—Health Policy, Planning, and Management

Discusses principles and logic involved in health policy, planning, and management. Addresses history, political, and environmental contexts, and their incorporation into population research. (45-0-3)

PUH 5513— Public Health Nutrition

This course will provide students with methods and skills to identify nutrition-related health problems and to plan community-based prevention programs for diverse populations. (45-0-3)

PUH 5516— Public Health Informatics

This course focuses on developing the knowledge and skills of systemic application of information, computer science, and technology to public health practice. Students will acquire a basic understanding of informatics in public health practice, and be able to apply the skills of use of some informatics tools in practice

(e.g., evidence based practice, GIS). **Prerequisites:** PUH 5301, PUH 5430 (45-0-3)

PUH 5520—Legal and Ethical Issues in Public Health

Introduces nonlawyers to the important roles law and ethics play in determining the public’s health. Students develop skills in analyzing political, legislative, and ethical aspects of public health issues. (45-0-3)

PUH 5802—Epidemiologic Surveillance and Outbreak Investigation

This course provides a descriptive analysis of basic components and strategies required for the surveillance and investigation of disease outbreaks. Surveillance data collection, analysis, and reporting are emphasized as well as indicators for assessing the effectiveness of such programs. **Prerequisites:** PUH 5430, PUH 5301 (30-30-3)

PUH 6001—Social and Behavioral Sciences Applied to Health

Introduces students to the social, cultural, and behavioral foundations of modern public health practice as applied to interventions for disease prevention and health enhancement. Reviews the linkage between public health and other social sciences. Students gain knowledge and awareness of today’s most pressing public health problems and the social and behavioral factors determining them. (45-0-3)

PUH 6002—Public Health Field Experience

The field experience is a culminating experience for all M.P.H. students. This required course (200 hours of

structured activities) takes place at a public health agency or public health-related institution. The student will work under the supervision of a site-based preceptor and a faculty adviser, who identify the appropriate educational objectives for the experience. The student is expected to acquire skills and experiences in the application of basic public health concepts and specialty knowledge to the solution of community health problems. A comprehensive written report and an oral presentation will be required upon completion of the field experience. **Prerequisites:** PUH 5430, PUH 5301, PUH 5512, PUH 5220, PUH 6001 (0-200-6)

PUH 6008— Public Health Advocacy

This course will enable students to develop tools and skills to influence the political processes at the national, state, and community levels to enhance the public's health and welfare. A number of faculty and guest lecturers will share their insights and strategies. Speakers will include elected officials, public health leaders, and community advocates. Students will analyze their own attitudes and insights and enhance their political advocacy skills. Case study methods will be used with emphasis on communication, marketing, and education. (45-0-3)

PUH 6016—Survey Methods in Public Health

This course addresses the theory and practice of designing and conducting surveys in public health research and practice. Topics will include survey designs, sampling strategies, data collection methods, interview-

ing skills, coding, and data analysis. **Prerequisites:** PUH 5430, PUH 5301 (30-30-3)

PUH 6017—Special Studies in Public Health

This elective is a guided study course designed to address a specific area of public health interest to the student, which is not specifically or significantly addressed in other courses. The course director and faculty adviser will guide the student to define the objectives of the course and to fulfill the desired expectations. This course is didactic, not original research, or field experience. (0-90-3)

PUH 6022— Community Health Project

This course is designed to give the student the opportunity to plan, implement, or evaluate a specific community health initiative. It is an applied experience in collaboration with a field-based site. The project is approved and monitored by the course director. (0-90-3)

PUH 6024—Applied Biostatistics in Health/Clinical Research

The purpose of this course is to provide public health students with advanced statistical skills that can be used in health or clinical research. The general linear approach will be used that will encompass multiple linear regression, logistical regression, and generalized estimating equation for repeated measures. **Prerequisites:** PUH 5301, PUH 5430 (15-60-3)

PUH 6101—Health Care Organization and Administration

This course provides students with an overview of health care management. Organizational behavior, marketing, operations, organization strategy, quality assurance, information systems, and financial management are addressed. The importance of the integration of these components is emphasized.

Prerequisite: PUH 5512 (45-0-3)

PUH 6104—Health Services Planning and Evaluation

An in-depth study of basic planning and evaluation techniques for the implementation of a community health care program. It addresses policy analysis techniques as well as the conceptual framework for the planning and management of health care programs. The course also reviews essential methods for effective planning and evaluation considering the economic, political, epidemiological, demographic, and other components that contribute to the assessment of health needs and resource allocation. **Prerequisites:** PUH 5430, PUH 5512 (45-0-3)

PUH 6201—Tropical Diseases

This course will address tropical diseases in the world today and their public health significance. Malaria, yellow fever, trypanosomiasis, leishmaniasis, filariasis, dengue fever, malnutrition, diarrheal diseases, and other tropical diseases will be discussed in relation to epidemiology, clinical presentation, and management. The impact of these diseases on global health and economic issues will be discussed. (45-0-3)

PUH 6521—Budgeting and Accounting for Health Care Organizations

This course will provide knowledge and skills in various aspects of budgeting and accounting as it applies to health care organizations. (45-0-3)

PUH 6522—Strategic Marketing for Health Care Organizations

This course will provide students with knowledge and strategies in marketing as it applies to health care. (45-0-3)

PUH 6523—Strategic Leadership in Management of Human Resources

Focuses on the concepts and dynamics of leadership in health care organizations. Emphasizes the interactions and influence processes of leadership to effectively use problem-solving mechanisms in the management of human resources. The student will develop competencies through application of the case study approach in public health practice. (45-0-3)

PUH 6604—Research Methods in Public Health

Provides an intermediate level review of basic research methodology, concepts, and principles common in public health and epidemiological studies. Issues related to the design, development, and realization of public health studies, including sampling, surveying, data collection, and management as well as the interpretation and reporting of findings are discussed. **Prerequisites:** PUH 5430, PUH 5301 (30-30-3)

PUH 6608—Public Health Research

Students conduct supervised research in any of the major areas of public health. The student and faculty adviser define the project and its objectives. **Prerequisites:** PUH 5301, PUH 5430 (0-180-6)

PUH 6610—Comprehensive Examination

Each M.P.H. student must take, and pass, the comprehensive examination at the end of his or her course of study. The purpose of the exam is to assess the individual student's competency to begin work in public health. This short-answer written examination requires critical thinking to integrate learning and apply it to public health scenarios. The student writes the examination with appropriate references during a scheduled, one-week period at the end of the registered semester (30-0-0)

Master of Science in Biomedical Informatics

Nova Southeastern University College of Osteopathic Medicine in collaboration with the NSU Graduate School of Computer and Information Sciences (GSCIS) has developed a course of study leading to the degree of master of science in biomedical informatics. It is designed to train future leaders in the development, dissemination, and evaluation of information technology as it relates to health care environments, such as hospitals, health systems, health information technology system vendors, eHealth companies, insurers, pharmaceutical companies, and academic institutions. This innovative distance program uses a completely **online format** to enable working professionals to earn a master's degree in biomedical informatics without career disruption.

There has been an emergence of biomedical informatics as a discipline due to advances in computer and communications technology and an increasing awareness of the exponen-

tial growth of biomedical knowledge. This has been accompanied by clinical information that has become unmanageable by traditional, paper-based methods and the growing realization that the process involved in knowledge retrieval and decision making are important to modern biomedicine and clinical decision making.

Biomedical informatics is an interdisciplinary field that incorporates computer and information sciences, cognitive and decision sciences, epidemiology, telecommunications, and other fields. Researchers in this evolving field discover new methods and techniques to enhance health care, biomedical research, and education through information technology. Those in this discipline study and encourage the use of appropriate information to support clinical care, research, teaching, and health services information.

Biomedical informatics allows physicians and other health professionals to integrate advanced information system capabilities and highly trained individuals with a clinical outlook and approach. The methods, tools, and resources developed through biomedical informatics often help physicians and other health professionals accomplish tasks that they were already doing, but in a more efficient, perhaps more accurate, or even entirely new manner. It also allows for the performance of tasks that were not previously possible. Informational technology now provides physicians and other health professionals with the potential to access large databases. As a result, they can now begin to think like epidemiologists, in addition to being providers of patient care.

Specific areas of added value provided by biomedical informatics include

- analyzing information to develop new knowledge and information
- developing action plans to use the new knowledge and to maintain a continuous quality-improvement cycle
- using information and feedback to create an impact on organizational performance
- improving the quality of an academic health center's computing and information technology environment to profoundly influence its ability to compete in education and research
- improving the ability to collaborate with other health organizations including hospitals, health departments, medical societies, and clinicians in rural and remote areas

Those who are part of the biomedical informatics community have the potential to seriously confront many issues that need to be addressed in health care. These issues include

- predicting who will become sick
- preventing health complications or problems in individuals
- making effective interventions in large populations
- reducing adverse complications in health care
- overcoming physician resistance to intricate systems and information technology
- maximizing constrained resources

Course of Study

The M.S.B.I. Program is designed to prepare students for careers in information management, teaching, and research in academic health centers, other health care institutions and organizations, and the health care computing industry. It has become almost axiomatic that the organization and retrieval of information is essential for the development of new knowledge. The quality of a medical school's computing and information technology environment will profoundly affect its ability to compete in both education and research. In addition, the quality of the biomedical informatics program will influence a school's opportunities to collaborate with health organizations such as hospitals, health departments, medical societies, and physicians in remote areas. The major areas included in the M.S.B.I. education program are computer science and its clinical application in medical informatics, management, and program evaluations of health information technology.

The program provides a course of study leading to a master's degree that will lead to the

- use of information science to enhance clinical performance
- use of information science to improve patient safety (e.g., reduce medical errors)
- acquisition of a position in medical informatics in a health care environment

At the end of the course of study leading to the degree of master of science in biomedical informatics, the graduate will be able to

- layout and design an information system
- understand the fundamentals of a telecommunication network design and the Internet
- have in-depth knowledge of database systems and structures
- evaluate medical information technology to determine what should be integrated into clinical medicine
- employ the knowledge, skills, and concepts of biomedical informatics in evidence-based medicine
- understand documentation requirements for medical records, including risk management and patient safety
- have knowledge in information security and policy formation
- be current about existing and emerging technology in biomedical informatics and related areas
- have a basic understanding of biostatistics and epidemiology and their application to biomedical informatics
- use and apply interface design principles to biomedical informatics systems

Admission to the Master of Science in Biomedical Informatics

The M.S.B.I. Program evaluates the overall quality of its applicants, looking at academic achievement, personal motivation, knowledge of health care, life experience, and recommendations. Priority will be given to those individuals already holding clinical degrees in the health professions.

All applicants for admission must

- hold a bachelor's, master's, or doctoral degree from an accredited institution of higher education
- demonstrate a background in the language of the biomedical sciences by credentials or work experience
- possess a cumulative grade point average of 3.0 or above on a 4.0 scale
- demonstrate competency in the use of computers by credentials or work experience
- demonstrate the ability to clearly communicate in a written manner

A health professions degree is desirable, but not required. Students without prior degrees or work experience in health care and/or information technology may have to take prerequisite courses. All application material must be received in a timely manner to enable the Office of Admissions and the admissions committee to process the application promptly.

Application Procedures

The Office of Admissions processes applications on a year-round basis. Applicants may apply for matriculation into any one of the three semesters (fall, winter, summer).

To be considered by the admissions committee, all applicants must

- complete the online application
- send the nonrefundable application fee of \$50
- provide one letter of recommendation
- submit official transcripts

Please mail all supplemental admissions material to

Nova Southeastern University
Enrollment Processing Services (EPS)
College of Osteopathic Medicine
M.S.B.I. Admissions
3301 College Avenue
P.O. Box 299000

Fort Lauderdale, Florida 33329-9905

Upon receipt of the completed application and required material, the Committee on Admissions will review the application and the applicant's file and make recommendations to the program director. The director submits his or her recommendation on admission to the dean. The final decision on admission is made by the dean of the College of Osteopathic Medicine.

Should you have any questions, please email msmi@nova.edu or call 800-356-0026, ext. 21032.

Nondegree-Seeking Students

A nondegree-seeking student is one who wishes to take courses in the M.S.B.I. program, but does not intend to pursue the master's degree at the time of application. The nondegree-seeking student must provide the following admission requirements in order to take classes in the M.S.B.I. program:

- completed online application form
- official transcripts
- nonrefundable application fee of \$50

Nondegree-seeking students are not guaranteed future acceptance into the Master of Science in Biomedical Informatics Program. If after taking classes in the program as a nondegree-seeking student, the student wishes to become degree seeking, they must apply to the

M.S.B.I. program as a new student and meet all the requirements for admission.

Nondegree-seeking students may request credit transfer towards the degree once they are admitted to the degree program. All credit transfer requests should be submitted to the program director.

Tuition and Fees

Tuition is \$535 per credit hour at the College of Osteopathic Medicine. Students are subject to tuition based on whether a course is being offered at NSU-COM or other colleges. An NSU student services fee of \$750 and a Health Professions Division student access fee of \$145 are required annually. Tuition and fees are subject to change without notice.

Transfer of Credits

Applicants or enrollees of the NSU-COM Master of Science in Biomedical Informatics Program may petition for a transfer of credit hours toward their degree from an accredited institution. To be considered for transfer of credit, courses must have been completed prior to admission to the M.S.B.I. program and less than five years prior to the beginning of the student's first semester in the M.S.B.I. program. All courses to be transferred must be substantially equivalent to courses offered in the program, as determined by the program director and appropriate faculty members.

All courses considered for transfer into the program must have been successfully completed with a grade of *B* (80 percent) or better. Transfer course grades are not calculated toward the student's grade point average.

An accepted applicant to the program who wishes to receive transfer credit must submit a written request and the

appropriate verification documents (e.g., official transcripts, syllabi, and catalogs) to the program director.

Graduation Requirements

To be eligible for the M.S.B.I. degree, students must fulfill the following requirements:

- satisfactorily complete, with a grade point average of *B* (3.0) or higher, within five years of matriculation, the course of study required for the M.S.B.I. degree—minimum of 43 semester hours of courses and any required prerequisite courses, if applicable
- satisfactorily meet all NSU financial and library obligations

Upon satisfactory completion of degree requirements, the student is expected to attend the rehearsal and commencement program, at which time the degree is conferred. Students who do not plan to attend the commencement ceremony must notify the program office before the established deadline.

Curriculum Requirements

To develop a comprehensive biomedical informatics program at NSU-COM, a curriculum has been developed that includes teaching, clinical care, research, and development.

The didactic courses will be offered online, using WebCT or some similar format. Students will be required to complete a practicum within the environment in which it is being conducted. Each practicum will require the submission of a completed project or report.

Biomedical Informatics Program Curriculum Outline

Required Courses		Credits
MI 5120	Management Information Systems in Health Care	3
MI 5121	Information Systems Project Management in Health Care	3
MI 5130	Database Systems in Health Care	3
MI 5152	Information Security in Health Care	3
MI 5153	Telecommunications and Computer Networking in Health Care	3
MI 5160	System Analysis and Design in Health Care	3
MI 5180	Human-Computer Interaction in Health Care Settings	3
MI 5200	Survey of Medical Informatics	3
MI 5203	Medical Informatics Applications to Health Services	3
MI 5204	Clinical Decision Support Systems	3
MI 5205	Program Evaluations in Health Information Technology	3
MI 5401	Managing Organizational Behavior for Medical Informatics	3
MI 7000	Medical Informatics Project/Practicum	4
Subtotal		40

Elective Courses (3 credits required)		Credits
MI 6400	Outcome Research	3
MI 6401	Biostatistics	3
MI 6403	Epidemiology	3
MI 6404	Special Topics in Health Informatics	3
MI 6405	Public Health Informatics	3
MI 6406	Information Technology Applications in Management Decisions	3
MI 6407	Grant Writing	3
MI 6408	Health Policy, Planning, and Management	3
MI 6409	Health Services Planning and Evaluation	3
Total Credits		43

Master of Science in Biomedical Informatics Program Core Courses

MI 5120—Management Information Systems in Health Care

This online, interactive course covers major concepts, systems, and methodology in managing health care information systems. Topics will include concepts in system implementation and support, information architecture, IT governance in health care, information systems standards, organizing IT services, strategic planning, IT alignment with the health care facilities, and management's role in major IT initiatives. (3 credits)

MI 5121—Information Systems Project Management in Health Care

This course introduces the fundamental principles of project management from an information technology perspective, but with an emphasis on health care industry applications. Fundamental aspects of project management are covered, including project integration and the management of scope, time, cost, quality, human resources, communications, and risks. Discussion also includes project management software as well as organizational management aspects, such as project planning, team building, organizational structure, and control mechanisms. (3 credits)

MI 5130—Database Systems in Health Care

This course covers basic to intermediate knowledge of the concept, design, and implementation of database applications in health care. Students will study tools and data models for designing databases such as E-R Model and SQL. The course

also covers Relational DBMS systems such as Access, SQL Server, Oracle, and mySQL. Besides, database connectivity design (essential in data-driven Web development), database administration, XML, and data warehouse (support for decision-making) will also be introduced. Students will practice designing, developing, and implementing a test relational online medical informatics database application (part of a recent federal research grant) through a comprehensive project that contains the above topics. (3 credits)

MI 5152—Information Security in Health Care

The course will cover concepts and applications of health care system and data security. Topics include risks and vulnerabilities, policy formation, controls and protection methods, database security, encryption, authentication technologies, host-based and network-based security issues, personnel and physical security issues, and issues of law and privacy. Areas of particular focus include secure health care system and network design, implementation and transition issues, and techniques for responding to security breaches. (3 credits)

MI 5153—Telecommunications and Computer Networking in Health Care

The understanding of telecommunications and networking is imperative for adequate functioning of health care organizations. This is due to the convergence of computing, data management, telecommunications, and the growing applications of information technology in the health care arena and medical facilities.

The knowledge of these key areas of information systems also becomes essential for competitive advantage. This course combines the basic technical concepts of data communications, telecommunications, and networking with the health care IT management aspects and practical applications. **(3 credits)**

MI 5160—Systems Analysis and Design for Health Care

The need to create effective, new solutions and innovative interventions to deliver quality patient care outside of the traditional medical setting is at the forefront of society today. The basis of this course will be providing a solid educational foundation for systems design and analysis, as it relates to current and future health care systems. In addition, this course will build upon the fundamental systems design and analysis principles to explore current and future health care systems that will include integration of disparate clinical health care systems and mobile technologies, as well as a combination of remote-monitoring technology, sensors, and online communications and intelligence to improve patient adherence, engagement, and clinical outcomes. **(3 credits)**

MI 5180—Human-Computer Interaction in Health Care Settings

The dynamics of human-computer interaction (HCI) directly impacts health care. This course will introduce the student to usable interfaces and the study of social consequences associated with the changing environment due to technology innovation. **(3 credits)**

MI 5200—Survey of Medical Informatics

This online, interactive course is an introductory survey of the discipline of biomedical informatics. This course will introduce the student to the use of computers for processing, organizing, retrieving, and using biomedical information at the molecular, biological system, clinical, and health care organization levels. The course is targeted at individuals with varied backgrounds including medical, nursing, pharmacy, administration, and computer science. The course will describe essential concepts in biomedical informatics that are derived from medicine, computer science, and the social sciences. **(3 credits)**

MI 5203—Medical Informatics Applications to Health Services

This online course builds on the knowledge acquired through MI 5200 Survey of Medical Informatics. This course explores the practical aspects of health information technology and seeks to apply the information learned in previous courses to the health care arena. Students will learn to integrate the needs of health care institutions and providers with the use of information technology applications through practical task assignments. Topics will include the role of IT in patient safety, computer security, use, health outcomes, and HIPAA; public health informatics; telemedicine; budget consideration in HIT; economic impact; and access to care, as well as the current state of patient-focused HIT, federal governmental HIT involvement, DOQ-IT initiative, provider needs, and EMR system evaluation for providers. Topics will

be discussed from a practical standpoint, from the health care provider's perspective. (3 credits)

MI 5204—Clinical Decision Support Systems

With the increasing complexity of clinical medicine, clinical decision support systems (CDSS) have evolved to become important cognitive prostheses for diagnostic and treatment purposes. Clinical decision support systems have been utilized in many areas of clinical medicine, nursing, pharmacy, health care administration, and research. This course introduces students to statistical and theoretical concepts underlying modern medical decision making, including Bayesian analysis. It then proceeds to review the multiple methods for knowledge generation for CDSS systems. The course provides hands-on experience to students in performing Bayesian analysis of clinical problems and building and annotating computer-interpretable guidelines. Current implementations of stand-alone and integrated CDSS will be evaluated. Techniques for planning and evaluation of CDSS implementation will be reviewed. Human factors, including work-flow integration, and the ethical, legal, and regulatory aspects of CDSS use will be explored. (3 credits)

MI 5205—Program Evaluations in Health Information Technology

This online, interactive course will introduce students to various evaluation methods for health care informatics systems, projects, and proposals. Students will consider both quantitative and qualitative methods of evaluation as they examine the

design and implementation processes. Topics will include: why to evaluate health care informatics projects, deciding what to evaluate, deciding when evaluation should occur, quantitative and qualitative evaluation methods, overview of some descriptive and inferential statistical methods, barriers and facilitators to project implementation, and both internal and external stakeholders of an organization. (3 credits)

MI 5401—Managing Organizational Behavior for Medical Informatics

This online course is an introduction to the management of employees in health care organizations. Students will gain a working knowledge of how to manage personal, interpersonal, and group processes by having the interpersonal skills to assume responsibility for leading and promoting teamwork among diverse stakeholders. Students will learn to manage individual and group behaviors in improving organizational productivity and performance. Through experiential learning, students will learn to integrate home, work, and educational observations and experiences and to convert them into proactive practical applications for growth and renewal. (3 credits)

MI 7000—Biomedical Informatics Project/Practicum

This is a required course for all M.S.B.I. students. The project/practicum allows the student to select an area of interest in which to apply the theories, concepts, knowledge, and skills gained during the didactic courses in a real-world setting. The student will work under the supervision of a site-based preceptor and an NSU-based faculty adviser.

The student is expected to acquire skills and experiences in the application of basic biomedical informatics concepts and specialty knowledge to the solution of health information technology (HIT) problems. Students will be actively involved in the development, implementation, or evaluation of an informatics-based application or project. A specific set of goals and measurable learning outcomes will be determined by the student, the site preceptor, and the NSU-based faculty adviser. These goals must be approved by the course director. The student's area of interest would be determined at an earlier point in the program or by the needs of the precepting organization. A comprehensive written report and an oral presentation will be required upon completion of the project/practicum. (4 credits)

Please refer to www.scis.nova.edu/Masters/Director/course_descriptions/mmis.html for additional listings of courses offered by the Graduate School of Computer and Information Sciences in the M.S. in Management Information Systems Program.

Elective Courses

MI 6400—Outcome Research

This course provides an intermediate-level review of basic research methodology, concepts, and principles common in public health and epidemiological studies. Issues related to the design, development, and realization of public health studies—including sampling, surveying data collection, and management—as well as the interpretation and reporting of findings are discussed. (3 credits)

MI 6401—Biostatistics

This course focuses on the principles and reasoning underlying modern biostatistics and on inferential techniques commonly used in public health research. At course completion, students will be able to apply basic inferential methods in research endeavors and improve their abilities to understand the data analysis of health-related research articles. (3 credits)

MI 6403—Epidemiology

Examines basic principles and methods of modern epidemiology used to assess disease causation and distribution. Students develop conceptual and analytical skills to measure association and risk, conduct epidemiological surveillance, evaluate screening and diagnostic tests, and investigate disease outbreaks and epidemics. (3 credits)

MI 6404—Special Topics in Health Informatics

MI 6404 is an elective course designed to be student/self-directed. In consultation with the chosen adviser/mentor and the course director, the student will determine a focused topic of quasi-independent study, research, or other appropriate learning activity. A final paper or other appropriate document(s) will serve as documentation of having met the mutually agreed upon objectives. (3 credits)

MI 6405—Public Health Informatics

Public Health Informatics is the systematic application of information, computer science, and technology to public health practice, research, and learning. This course focuses on

developing the knowledge and skills of systemic application of information, computer science, and technology to public health practice. Students will acquire a basic understanding of informatics in public health practice, and be able to apply the skills of some informatics tools in public health practices. (3 credits)

MI 6406—Information Technology Applications in Management Decisions

Students enter MIS courses with varied levels of knowledge and understanding. Effective managers know what information systems are, how they affect the organization and its employees, and how IT can make businesses more competitive. This course will help students learn to design and develop computer applications that use common end-user software packages to solve problems facing managers today. (3 credits)

MI 6407—Grant Writing

The purpose of this course is to introduce students to grant development and preparation so that they can participate in the process of obtaining public or private funds to support research, education, and/or service projects. (3 credits)

MI 6408—Health Policy, Planning, and Management

This course discusses principles and logic involved in health policy, planning, and management; addresses historical, political, and environmental contexts; and incorporates them into population research. (3 credits)

MI 6409—Health Service Planning and Evaluation

This course is an in-depth review of basic planning and evaluation techniques for the implementation of community health care programs. The course is designed, and will be taught, employing comparative methodology. The material will be taught using multiple international examples and experiences. The course covers the interdependence of policy, planning, and management. It will consist of policy analysis techniques as well as the conceptual framework for the planning and management of health care programs. The course also reviews essential methods for effective planning and evaluation, considering the economic, political, epidemiological, demographic, and other components that contribute to the assessment of health needs and resource allocation. **Prerequisites:** PUH 5430, PUH 5512 (3 credits)

Please refer to other college/school catalogs for descriptions of other offered elective courses.

College of Osteopathic Medicine Departments

ANATOMY

Chair and Professor: **G. R. Conover**
| Professors: **L. Dribin, A. Mariassy,
R. K. Yip** | Associate Professors: **N.
Lufti, S. Purvis, K. Tu** | Assistant
Professor: **P. Greenman** | Instructor:
D. McNally

BIOCHEMISTRY

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