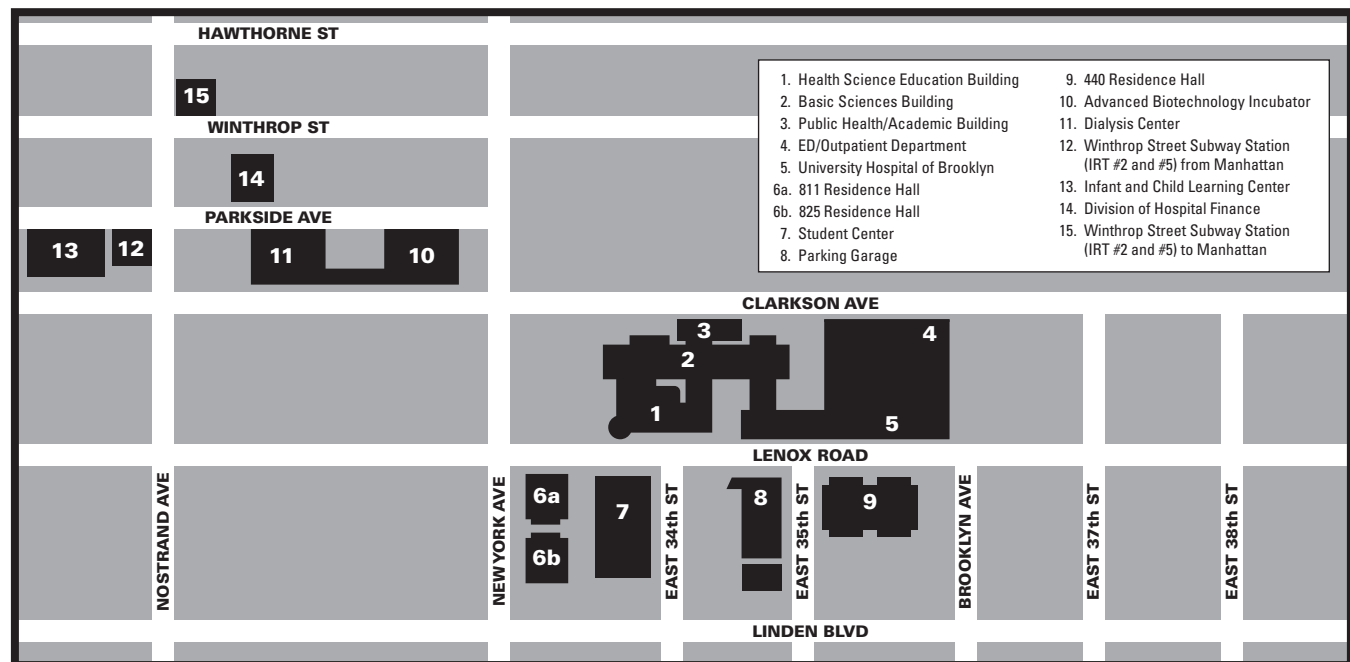


**BULLETIN 2013-2017**

# **SUNY Downstate Medical Center**

College of Health Related Professions



## Transportation to SUNY Downstate

The SUNY Downstate Admissions Office is located at 450 Clarkson Avenue, just off New York Avenue (Building 2).

### BY AUTOMOBILE

#### From Manhattan:

**Manhattan Bridge:** exit onto Flatbush Avenue. Continue approximately three and one-half miles to Parkside Avenue. Turn left onto Parkside Avenue and travel four blocks to New York Avenue. Turn right at New York Avenue and continue one block to Clarkson Avenue.

**Brooklyn Bridge:** stay to the left at the end of the bridge, following the ramp to Boerum Place, which becomes Adams Street. Continue along Adams Street to Atlantic Avenue. Turn left onto Atlantic Avenue and continue to Flatbush Avenue. Turn right onto Flatbush Avenue and continue approximately two and one-half miles to Parkside Avenue. Turn left onto Parkside Avenue and travel four blocks to New York Avenue. Turn right at New York Avenue and continue one block to Clarkson Avenue.

**Brooklyn-Battery Tunnel (toll):** exit onto the Brooklyn-Queens Expressway. Continue approximately one mile, staying to the left, and exit onto Prospect Expressway. Travel three exits to the Fort Hamilton Parkway exit. Continue through two traffic lights to Caton Avenue. Turn left onto Caton Avenue, and continue sixteen blocks to Flatbush Avenue. Turn left onto Flatbush Avenue and continue two blocks to Parkside Avenue. Turn right onto Parkside Avenue and travel four blocks to New York Avenue. Turn right at New York Avenue and continue one block to Clarkson Avenue.

#### From Staten Island and Newark International Airport:

Verrazano Narrows Bridge (toll): follow bridge to Route 278, the Gowanus Expressway. Travel approximately five miles to the Prospect Expressway exit. Continue on the Prospect Expressway three exits to the Fort Hamilton Parkway exit. Travel along East 5 Street through two traffic lights to Caton Avenue. Turn left onto Caton Avenue, and continue sixteen blocks to Flatbush Avenue. Turn left onto Flatbush and continue two blocks to Parkside Avenue. Turn right onto Parkside Avenue and travel four blocks to New York Avenue. Turn right at New York Avenue and continue one block to Clarkson Avenue.

#### From Long Island and Airports:

**Southern Long Island and JFK:** West on Belt Parkway to North Conduit Boulevard exit (Exit 17W). Continue on North Conduit Boulevard for about 3/4 mile. Fork left onto Linden Boulevard, and take Linden Boulevard to New York Avenue. Right two blocks on New York Avenue to Clarkson Avenue.

**Northern Long Island and LaGuardia:** Take Grand Central Parkway to Jackie Robinson Pkwy (formerly Interboro Pkwy). Continue to Pennsylvania Avenue exit. Follow Pennsylvania to Linden Boulevard, turn right onto Linden. Take Linden Boulevard to New York Avenue. Right two blocks on New York Avenue to Clarkson Avenue.

### PARKING

Valet Parking is available Mondays through Fridays from 6:00 a.m. to 6:00 p.m., located in front of the 445 Lenox Road hospital entrance at the valet parking booth. The fee is \$10.00 (this service is not available on weekends or holidays). When the valet parking service is not available, a limited number of spaces for visitors are available at a nominal cost at the Center's Parking Garage on East 34th Street, between Linden Boulevard and Lenox Road. There are also several private parking lots in the area.

### BY RAILROAD

#### Long Island Railroad

Take any train to the Jamaica station. Change to Brooklyn-bound train (track 3). Take to the Flatbush Avenue terminal. Follow subway directions from there.

#### Metro-North Railroad

Take any train to Grand Central Terminal. Change to Brooklyn-bound 4 or 5 trains. Follow subway directions from there.

### BY SUBWAY

*During rush hour,* take the IRT Flatbush Avenue Line (#2 Seventh Avenue or #5 Lexington Avenue) trains to the Winthrop Street station. [Take any IRT Brooklyn-bound train (#2, 3, 4, or 5) to Nevins Street in Brooklyn, changing there for a #2 or #5 marked "Flatbush Avenue." Note that the # 5 runs only during rush hours.] Exit at Nostrand and Parkside avenues. Cross Nostrand Avenue and walk one block on Parkside Avenue until it ends at New York Avenue. Turn right onto New York Avenue. Cross New York Avenue and walk east on Clarkson Avenue until the entrance at 450 Clarkson Avenue. The Admissions Office is located at 450 Clarkson Avenue.

*Nights and outside of rush hours,* take the subway to Church Street. Walk three short blocks east on Church Avenue to New York Avenue, left three blocks to Clarkson Avenue, right to 450 Clarkson Avenue. Or transfer to an eastbound B-35 bus to the northbound B-44 at Church and New York avenues. (Downstate students and employees can call 718-270-2626 to arrange for transportation from Church Avenue.)

### BY BUS

The B-12 and northbound B-44 buses stop at the corner of Clarkson and New York Avenues. The following lines connect with the B-12 along Clarkson Avenue: B-41, B-44, B- 46, and B-49.

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## FOR THE FOLLOWING INFORMATION, PLEASE REFER TO THE DOWNSTATE WEBSITE AND THE STUDENT HANDBOOK:

Academic Policies
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Student Financial Aid
Support Services for Students
Tuition and Fees
University Resources
Facilities for Instruction
Student Life
University Services
Bookstore
Bursar's Office
Chaplain Services
Children's Center
Food Services
Faculty Student Association
Office of Diversity
Parking
University Police
Office of the Registrar
Residential Life
Office of Student Affairs

# Administration

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# SUNY Downstate Medical Center

## EDUCATIONAL FOCUS STATEMENT

SUNY Downstate's Colleges of Nursing, Medicine, and Health Related Professions and its Schools of Graduate Studies and Public Health offer students a broad professional education that prepares them for practice or careers in any location and community. This education provides exceptional opportunities for those students with a commitment to promoting health in urban communities and addressing the complex challenges of investigating and preventing diseases that confront clinicians, educators, and researchers in such an environment.

This special aspect of Downstate's unique mission is reflected in the students it attracts and selects, the vast majority of whom are drawn from the New York City metropolitan area. Many of these students are members of minority and cultural groups underrepresented in the health professions, and/or come from families of first-generation immigrants or from economically disadvantaged backgrounds.

The differences in the background and outlook that students bring with them can enhance the quality of the educational experience of all students at SUNY Downstate. The belief that diversity adds an essential ingredient to the educational process is one of Downstate's primary tenets. Many factors, such as race, ethnic or cultural background, academic achievement, geographic location, diversity of experiences, leadership roles, and socioeconomic background, are taken into consideration in the admissions process. A diverse healthcare workforce will be better equipped to provide culturally competent care to an increasingly diverse population.

SUNY Downstate Medical Center, formally known as the State University of New York Health Science Center at Brooklyn, is one of four academic health centers within the 64-unit State University of New York. Located on an urban campus in the East Flatbush section of Brooklyn, SUNY Downstate includes the College of Nursing, College of Health Related Professions, College of Medicine, School of Graduate Studies, School of Public Health, and University Hospital of Brooklyn.

Downstate is a major provider of medical education, health care, and research. BS, MS, MPH, MD, DPT, and PhD degrees are granted.

The oldest and largest component of the campus is the College of Medicine, founded in 1860 as the Long Island College Hospital, this country's first

teaching hospital and the prototype for all subsequent medical centers. In 1931, the school was rechartered as the Long Island College of Medicine, with affiliated hospitals throughout Brooklyn. The 'Downstate' era began on October 5, 1950, when a merger contract was signed with the newly constituted State University of New York. The College of Nursing and College of Health Related Professions were founded in 1966 in recognition of the critical need for multidisciplinary health-care professionals.

Today, SUNY Downstate is the focal point of a health education network that encompasses a broad network of hospitals, clinics, and community centers. In 1998, one of its researchers, Dr. Robert F. Furchgott, received the Nobel Prize in Medicine.

## SUNY DOWNSTATE MISSION, VISION, AND VALUES STATEMENT

### MISSION:

- To provide outstanding education of physicians, scientists, nurses and other healthcare professionals.
- To advance knowledge through cutting edge research and translate it into practice.
- To care for and improve the lives of our globally diverse communities.
- To foster an environment that embraces cultural diversity.

### VISION:

SUNY Downstate will be nationally recognized for improving people's lives by providing excellent education for healthcare professionals, advancing research in biomedical science, health care and public health, and delivering the highest quality, patient-centered care.

### VALUES:

**PRIDE** — To take satisfaction in the work we do every day, and to value our collective contributions to the Downstate community.

**Professionalism** — We commit to the highest standards of ethical behavior and exemplary performance in education, research, and patient care.

**Respect** — We value the contributions, ideas and opinions of our students, coworkers, colleagues, patients and partnering organizations.

**Innovation** — We research and develop new and creative approaches and services for the anticipated changes in healthcare.

**Diversity** — We embrace our rich diversity and commit to an inclusive and nurturing environment.

**Excellence** — We commit to providing the highest quality of education and service to our students, patients and community by holding ourselves, our coworkers and our leaders to high standards of performance.

List as of July 15, 2015

# The Founding of Downstate Medical Center

SUNY Downstate Medical Center had its beginnings as a small charitable medical service set up in 1856 by a group of German physicians. This free dispensary, organized to treat indigent German-Americans living in Brooklyn, was staffed by five physicians. The original intention was to build a large hospital to care for the German population of Brooklyn. But changing population trends, which brought a largely Irish patient load to the dispensary, necessitated a revision of this plan.

In 1857, physicians from the German General Dispensary, then located on Court Street, resolved to organize a charitable institution in the City of Brooklyn, to be called St. John's Hospital. From November 7 until December 23 of that year, the dispensary was called The St. John's Hospital; on December 23, the name of the hospital was changed to The Long Island Hospital and Medical College. It was on this date that a medical college with a hospital was first projected.

Dr. Louis Bauer and Dr. John Bryne, the prime movers in the establishment of the medical college, were trained in Europe, where it was customary for medical schools to be associated with hospitals. The two physicians naturally wanted to adopt this system to prepare the future physicians of Brooklyn. A bill to incorporate the Long Island College Hospital of the City of Brooklyn was introduced in the State Legislature on January 20, 1858, and passed on March 6. The hospital's charter empowered 25 regents to operate a hospital and to confer degrees on candidates 21 years of age or older, who had passed three years of preceptorship under a practicing physician and completed two courses of lectures at the hospital.

Almost immediately after the charter was signed, the Perry Mansion, located in Brooklyn Heights, was purchased to house the new medical complex. The official inauguration of the Long Island College Hospital took place June 3. Financial difficulties beset the new institution almost immediately, slowing down efforts to open the medical school. The hospital itself was forced to close in late September 1859. Meanwhile, several outstanding physicians were secured to fill the professorships at the college, and on March 29, 1860, the institution reopened, following financial arrangements underwriting the expense of the collegiate department and settling various liens.

The following day, the instruction of students began. The first teaching faculty was a distinguished one. Most eminent of all was Dr. Austin Flint, Sr., professor of practical medicine and pathology, who had been a professor of medicine at Rush Medical College in Chicago.

A medical student's training in 1860 consisted of his three-year preceptorship under the direction of a practicing physician and attendance at two courses of lectures of at least sixteen weeks each. The lectures that were given one year were repeated the next, sometimes verbatim, so many students took their first course of lectures at one school and their second at another. The first class had 57 students, as well as a number of graduates of other institutions. The first commencement took place July 24, 1860, with 21 students graduating.

In 1861, in anticipation of the medical needs of the Civil War, the curriculum included a one-month course on military surgery, dissection, and clinical instruction on the wards. By 1869,

major changes were introduced into the teaching curriculum. Daily class examinations were instituted to ensure more exact knowledge, especially in the demonstrative and elementary branches. Another change, made in 1872, was the establishment of a reading and recitation term that began early in October and extended to the beginning of the regular term in March. This term included dissection and clinical instruction as well as reading and quizzes.

By 1879, the faculty of the Long Island College Hospital concluded that the system of teaching medicine in the United States was radically wrong. They debated the possibility of instituting a compulsory, full-graded, three-year course of instruction, but abandoned the idea because of their fears that such a plan would result in the loss of many students, when the college was entirely dependent for its existence on students' fees. Certain changes were made, however, to improve the curriculum. The regular term was lengthened from sixteen weeks to five months, but the four-month reading and recitation term remained optional. Thus, a total of eighteen months' instruction was available to any student electing two regular and two reading and recitation terms.

Between 1888 and 1897, the Long Island College Hospital grew rapidly. The Hoagland Laboratory building, built primarily for research in bacteriology, was constructed. At its opening, it was considered one of the best-equipped buildings for research and medical training in the country. In December 1897, the Polhemus Memorial Clinic Building was completed. The new building, eight stories high, was erected on the southwest corner of Henry and Amity streets.

By this time, New York State law required that a student take three courses of lectures in three different years. The system of having a regular term of five months and an optional reading term was retained. The entering class of 1897-1898 began the first four-year graded course of instruction. The reading term was abolished, and the school year lasted seven months. In 1897, the student fees were raised to \$185 and \$190. In the period from 1889 to 1909, the average number of students in the school was 310, and the average number in the graduating class was 62.

During the years immediately before and after World War I, many additional changes occurred at Long Island College Hospital. Admission was opened to women; postgraduate teaching was instituted; a new wing increased the number of beds to 500; and affiliations were established with other Brooklyn hospitals.

In 1930, the college and hospital were separated from one another so that each would be under its own governing board. The college was conducting much of its clinical teaching in other hospitals throughout the borough, and it seemed preferable that it not be governed by the board of only one hospi-

tal. The college became the Long Island College of Medicine.

Other changes occurring during the 1930s included the construction of the Polak Memorial Laboratory, housing laboratories in bacteriology, histology, physiology, pathology, gynecology, and surgery. In 1935, 500 beds at Kings County Hospital were set aside in a college division for the clinical instruction of students.

In the 1940s, full-time chiefs were appointed in all the clinical departments, training in psychiatry was offered within a separate department, and Maimonides Hospital and the Veterans Administration Hospital in Fort Hamilton became affiliates, along with a number of other local hospitals. In 1946, the third-year curriculum was changed so that nearly two-thirds of the work consisted of clinical clerkships.

In 1945, the college purchased a six-and-a-half-acre tract of land that eventually became the site of Downstate Medical Center. After approval by a faculty committee and the board of trustees of the Long Island College of Medicine, the board of managers of the Alumni Association, the trustees of the State University of New York,

and the State Board of Regents, the State Legislature in 1950 passed a bill legalizing the merger of the Long Island College of Medicine and the State University to form Downstate Medical Center.

The establishment in 1966 of the School of Graduate Studies, the College of Health Related Professions, and the College of Nursing; the construction of the Basic Sciences Building in 1956; student residence halls in 1965; State University Hospital in 1966; the Student Center in 1967; the nurses' residence in 1968; and the Health Science Education Building in 1992 completed the transition of the medical school as it is now known from its early days as the German General Dispensary on Court Street.

*Excerpted with permission from the New York State Journal of Medicine, July 1976. It was reprinted in Alumni Today, Spring 1996, with the permission of the Medical Society of the State of New York.*



The year 2010 marked the 150th anniversary of SUNY Downstate Medical Center's emergence as a leader in American medicine education. Since 1860, when the first class graduated from what was then the Long Island College Hospital Collegiate Division, both Downstate and the practice of medicine and healthcare have changed dramatically.

Today, SUNY Downstate is a major medical university with five professional schools, a teaching hospital, and a center for biotechnology development that is the first of its kind in Brooklyn. We are proud of our history of achievement and look forward to an even brighter future.

In 2016, the College of Health Related Professions, the College of Nursing, the School of Graduate Studies, and University Hospital of Brooklyn will celebrate the 50th anniversary of their founding.

# Mission and Educational Environment

The College of Health Related Professions (CHRP), established in 1966, serves as an engine of educational opportunity for diverse students from Brooklyn, New York City and the tri-state area, providing education in Diagnostic Medical Imaging (BS), Medical Informatics (MS), Midwifery (MS and Advanced Certificate), Occupational Therapy (MS), Physician Assistant (BS), and Physical Therapy (BS/DPT). Students who hold an RN also have the option to obtain a master's degree in Nursing with a specialization in Midwifery.

Each undergraduate educational program requires that students complete at least two years of undergraduate course work prior to enrollment in CHRP.

## MISSION

The mission of the College of Health Related Professions is to educate health professionals in the delivery of excellent health-care service by developing their scientific competence and fostering their humane spirit. The College seeks to accomplish this by providing a challenging and supportive atmosphere for learning that offers opportunities for structured experiences as well as independent inquiry. Faculty contribute to knowledge in allied health through advancements in clinical practice, scholarly activities, and basic and applied research.

Collaboration is emphasized among students, faculty, clinicians, and professionals in health care and related disciplines. Students are prepared for professional leadership roles through course work and professional and campus activities. The College fosters ongoing professional growth by sponsoring continuing education opportunities in several disciplines. The College strives to serve the urban community in which it is located by providing health services and education to the population.

## EDUCATIONAL ENVIRONMENT

The College's highly qualified and dedicated faculty is committed to helping students realize their highest potential. It provides students with personal attention and guidance as they acquire the principles of their profession and develop proficiency in its essential skills. Themselves committed to scholarship, research, and ongoing professional education, faculty members serve as excellent role models for students.

As part of a large, academic health science center, students in the College of Health Related Professions have the opportunity to exchange ideas with professionals in every area of health care through participation in interdisciplinary conferences, seminars, and presentations. They have the use of one of the most prestigious medical libraries in the country and enjoy the benefits of close ties among each of the professional colleges, the research center, and University Hospital of Brooklyn. Students are encouraged to become active and lifelong participants in the SUNY Downstate community.

The College, which has graduated close to 5,000 health professionals to date, has a nationwide reputation for its education of first-rate health-care professionals. Many of the College's graduates hold academic appointments and department directorships in their specialties throughout the United States. Some are employed in key positions at the hospitals affiliated with SUNY Downstate, and make ongoing contributions as teachers of their alma mater's current students. The high regard in which graduates of the College of Health Related Professions are held is evidenced by the strong recruiting efforts made by the many health-care organizations that seek to employ them.

# Admissions

Requirements for admission and prerequisites for each educational program can be found within this section.

Since admissions requirements, procedures, and policies are subject to change, it is important to check for any new requirements and application materials at <http://sls.downstate.edu/admissions/chrp/index.html>.

## OPEN HOUSE AND CAMPUS INFORMATION SESSIONS

Each fall, the College of Health Related Professions sponsors an Open House for prospective applicants. During the Open House, participants obtain general information about each professional program of study offered in the college as well as general information about the campus and student services. The Open House is designed to help potential applicants learn more about the campus and the health professions programs offered.

The College also offers frequent, small-group Information Sessions, designed to provide the following services: (1) specific information about the educational programs offered; (2) an opportunity to meet the faculty; and (3) advisement about prerequisite course requirements and admissions criteria. Students who wish to receive course advisement at the Information Sessions are encouraged to bring unofficial copies of their college transcripts and the program advisement worksheet for their program of interest. Program advisement worksheets can be downloaded from [http://sls.downstate.edu/admissions/info\\_sessions/worksheets.html](http://sls.downstate.edu/admissions/info_sessions/worksheets.html).

To register for an Information Session, students may submit the required information online at [http://sls.downstate.edu/admissions/info\\_sessions](http://sls.downstate.edu/admissions/info_sessions) or send an e-mail message to [admissions@downstate.edu](mailto:admissions@downstate.edu). Potential applicants must include their name, the name of the program of interest, and the date of the Information Session they plan to attend.

## ADMISSIONS CRITERIA

Listed below are the specific admissions criteria for each CHRP program.

### DIAGNOSTIC MEDICAL IMAGING PROGRAM

1. A minimum of 60 semester credits from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA) such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A minimum undergraduate cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale

3. A minimum of 20 hours of patient related clinical healthcare experience in a medical setting is required. This may be paid or volunteer work hours, but must involve patient contact. In addition, this experience must have been completed within the last five (5) years.

4. The DMI program accepts online courses for prerequisites, but we prefer a college laboratory setting (wet lab) for science courses that require labs.

5. A grade of "C" or better in the following prerequisite courses:

SUBJECT	CREDITS
Anatomy & Physiology 1 with lab and	
Anatomy & Physiology 2 with lab*	8
General Chemistry 1 with lab*	4
General Physics 1 with lab*	4
Mathematics (not Remedial Math or Statistics)	3
Psychology	3
English	6

\* All science courses must have labs  
CPR certification is required by August 15, if you are accepted for admission.

### MEDICAL INFORMATICS PROGRAM

1. A baccalaureate degree in any discipline from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A minimum, cumulative undergraduate Grade Point Average (GPA) of 3.0 on a 4.0 scale.

3. Basic computer programming and statistics courses are highly recommended but not required for admissions.

### MIDWIFERY PROGRAM

The Midwifery Program offers three options for prospective students: for those with backgrounds other than nursing (direct entry), for those who are registered nurses, and for those who are midwives.

### OPTIONS FOR APPLICANTS WITH BACKGROUNDS OTHER THAN NURSING (DIRECT ENTRY)

#### Advanced Certificate, Midwifery

1. A master's degree in a related field (as determined by the Midwifery faculty) from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A minimum cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale.

3. A grade of "C" or better in the following prerequisite courses:

**SUBJECT**

Anatomy & Physiology with labs	2 semesters
General Biology	1 course
Microbiology	1 course
General Chemistry	1 course
Pathophysiology	1 course
Nutrition	1 course
Sociology	1 course
General Psychology	1 course
Life Span* or Developmental Psychology	1 course
Statistics	1 course

\*More than one course may be required to fulfill this requirement.

**Master of Science, Midwifery**

1. A baccalaureate degree in any discipline from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A minimum cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale.

3. A grade of “C” or better in the following prerequisite courses:

**SUBJECT**

Anatomy & Physiology with labs	2 semesters
General Biology	1 course
Microbiology	1 course
General Chemistry	1 course
Pathophysiology	1 course
Nutrition	1 course
Sociology	1 course
General Psychology	1 course
Life Span* or Developmental Psychology	1 course
Statistics	1 course

\*More than one course may be required to fulfill this requirement.

**OPTIONS FOR REGISTERED NURSES****Advanced Certificate, Midwifery**

1. A master’s degree in a related field (as determined by the Midwifery faculty) from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle

States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A grade of “C” or better in a statistics course.

3. A minimum cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale.

**Master of Science, Midwifery**

1. A baccalaureate degree in any discipline from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges..

2. A grade of “C” or better in a statistics course.

3. A minimum cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale.

**Advanced Certificate in Midwifery & Master of Science, Nurse Midwifery**

1. A baccalaureate degree in nursing from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A valid, current registered nurse license.

3. A minimum cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale.

Additionally, for information on the collaborative program which offers both an Advanced Certificate in Midwifery from the College of Health Related Professions and a Master of Science in Nurse Midwifery from the College of Nursing, go to [http://sls.downstate.edu/admissions/nursing/nurse\\_midwifery/index.html](http://sls.downstate.edu/admissions/nursing/nurse_midwifery/index.html)

**OPTIONS FOR MIDWIVES****Master of Science Completion, Midwifery**

1. A baccalaureate degree in any discipline from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education

Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. Graduate of an accredited Midwifery Program (certification as a CNM or CM).

3. A minimum cumulative Grade Point Average (GPA) of 3.0 on a 4.0 scale.

**OCCUPATIONAL THERAPY PROGRAM**

1. A baccalaureate degree in any discipline from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A letter grade of “C” or better in the following prerequisite courses:

<b>SUBJECT</b>	<b>CREDITS</b>
Anatomy & Physiology 1 with lab and	
Anatomy & Physiology 2 with lab	8
General Biology 1 with lab	4
General Chemistry 1 with lab or Physiological Psychology or Behavioral Neuroscience	3–4
Statistics 3	
Sociology or Anthropology	3
General Psychology	3
Abnormal Psychology	3
Developmental/Life Span Psychology (from Birth to Aging)*	
OR	
Child Psychology and Adult Development	
OR	
Child Psychology and Psychology of Aging	3–6

\* More than one course may be required to fulfill this requirement.

3. Admissions preference will be given to applicants who have volunteer experience in a clinical setting related to Occupational Therapy. No specific number of hours is mandatory, but knowledge of the profession is required.

4. Admissions preference will be given to applicants who have engaged in interactive classroom and extracurricular activities during their undergraduate college experience.

5. Online courses are accepted for prerequisites, but we prefer a college laboratory setting (wet lab) for science courses that require labs.

**PHYSICIAN ASSISTANT PROGRAM**

1. A minimum of 60 semester credits from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. A minimum, cumulative Grade Point Average (GPA) of 2.95 on a 4.0 scale.

3. A minimum of 225 hours of health-related experience. This work experience can be as a nurse, nurse’s aide, corpsman, medical laboratory technologist, respiratory therapist, emergency medical technician, counselor in health-care setting or direct patient care experience obtained as a result of clinical training in the health professions. Volunteer direct patient care experiences and shadowing may also be used towards meeting this requirement. However, non-clinical experiences completed in a hospital setting, such as candy strippers or any other such experiences, cannot be applied towards meeting this requirement.

4. A minimum of 150 hours non-clinical volunteer work (i.e., community service). Acceptable experiences must be socially responsive and lean highly towards meeting human needs. Please visit these and other applicable sites to complete your volunteer/community service hours, if needed:

- New York Cares ([www.newyorkcares.org](http://www.newyorkcares.org))
- VolunteerNYC.org ([www.volunteernyc.org](http://www.volunteernyc.org))
- NYC.gov-Volunteer Opportunities ([www1.nyc.gov.nyc-resources/categories/social-services.page](http://www1.nyc.gov.nyc-resources/categories/social-services.page))
- VolunteerMatch.org ([www.volunteer-match.org/](http://www.volunteer-match.org/))

5. Two letters of recommendation, including at least one from a clinician (e.g., physician assistant, MD, or nurse practitioner). There is no added benefit to sending more than two letters.

6. Online courses are accepted for prerequisites, but we prefer a college laboratory setting (wet lab) for science courses that require labs.

7. A grade of “C+” is the acceptable minimum in the following prerequisite courses. Competitive applicants are those who have earned a “B+” or higher grade in their prerequisite science courses:

<b>SUBJECT</b>	<b>CREDITS</b>
Anatomy & Physiology 1 with labs and	
Anatomy & Physiology 2 with labs	8
General Biology 1 with labs and	
General Biology 2 with labs	8
General Chemistry 1 with labs and	
General Chemistry 2 with labs	8
Microbiology (not Bacteriology) with labs	3
Mathematics (not Statistics)	3
General Psychology	3
Abnormal Psychology or Life Span Psychology *	3
English	6
Humanities or Social Science courses **	6
One upper-division science course ***	3–4

Please note: All prerequisite science courses should have been completed within the past eight years of the expected date of entry into the program. Any exceptions will be reviewed on a case-by-case basis by the Physician Assistant Program faculty

\* More than one course may be required to fulfill this requirement

\*\* Preferably writing intensive courses. Applicants may be required to submit a course description.

\*\*\* Upper-division science courses are generally physical/life science courses numbered 300 level or higher. They require prerequisite course work or are designated as such by the institution. They are generally completed at 4-year colleges/universities (at a junior or senior level). Applicants will need to consult with the Registrar’s Office at their home institution to be sure the course is at an upper-division level. Applicants may be required to submit proof of the upper-division status of the course.

**Recommended Additional Courses**

Competitive applicants have completed more than two of the following recommended courses:

- Organic Chemistry
- Genetics
- Biochemistry
- Embryology
- Histology
- Pathophysiology
- Pharmacology
- Other upper-division biology courses at the 300–400 level
- Statistics

**PHYSICAL THERAPY PROGRAM**

1. A minimum of 80 semester credits from a college or university accredited by a regional accrediting organization recognized by the Council for Higher Education Accreditation (CHEA), such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges.

2. At least 9 semester credits must be completed at a 4-year college at the junior or senior level.\*\*\*

3. A minimum, cumulative undergraduate Grade Point Average (GPA) of 3.0 on a 4.0 scale.

4. Graduate Records Examination (General G.R.E.) score report. (Use Institutional Code 2534.)

5. A minimum of 50 hours of clinical experience in a physical therapy setting. At least 25 hours of the volunteer/paid work in physical therapy must be in a Physical Therapy Department in an in-patient setting.

6. Two letters of recommendation: one from a college science professor, the other from a physical therapist.

7. Online courses are accepted for prerequisites, but we prefer a college laboratory setting (wet lab) for science courses that require labs.

8. A letter grade of “C” or better in each of the following prerequisite courses:

SUBJECT	CREDITS
Anatomy & Physiology 1 with labs or Anatomy & Physiology 2 with labs*	4
Anatomy & Physiology 2 with labs** or General Biology 1 with labs or General Biology 2 with labs	4
General Chemistry 1 with labs and General Chemistry 2 with labs	8
General Physics 1 with labs and General Physics 2 with labs	8
General Psychology	3
Psychology Elective	3
Statistics	3
English	3
Three (3), Upper Division (junior/senior) courses ***	9

Please note: A minimum grade of “B” is preferred in all science prerequisite courses. Only science courses designed for science majors are acceptable. All required sciences must be less than 10 years old for all applicants.

\* You must complete at least 1 semester of Anatomy & Physiology

\*\* The same Anatomy & Physiology course can only be counted once, either above or here

\*\*\* These courses must all be from the same area of study or the same discipline (e.g., nine upper-division credits in biology or history).

### ADMISSIONS PROCEDURES

Applicants are reminded to read the SUNY Downstate Application Instructions before applying online to their program of interest.

A self-administered application package is required for admission to all programs. A complete application includes all of the items listed on the Application Cover Sheet. The entire application must be submitted in one envelope at one time, and it should include the web application summary, application fee, cover sheet, sealed transcripts, sealed letters of recommendation, and any other documents mentioned on the Application Cover Sheet. Applicants are reminded to adhere to the admission deadlines.

Application questions may be forwarded by e-mail to: admissions@downstate.edu.

Specific questions regarding admissions requirements or course equivalencies may be sent to the program office. Since the admission process relies on e-mail as the primary means of communication with applicants, it is essential for all applicants to provide a valid e-mail account on the application form as well as timely updates as necessary.

### GENERAL ADMISSIONS POLICIES AND INFORMATION

The Admissions Committee considers the individual qualifications of each applicant. Decisions regarding admission are based on a number of factors, including, but not limited to, the following:

- prior academic performance;
- completion of prerequisite courses and the grades received in those courses;
- results of standardized tests, when required;
- letters of recommendation, communication skills, and motivation to pursue the profession; and
- volunteer or observational experience in the career field.

Entrance requirements vary by individual program. Competitive applicants have completed all prerequisite courses at the time of application. All prerequisites must be completed with a grade of “C” or better (a grade of “C minus” is not acceptable). In some programs, higher grades may be required to be competitive for admission.

Prerequisite science courses taken more than 10 years ago may be accepted at the discretion of the Admissions Committee.

Once completed applications are reviewed, the Admissions Committee will notify applicants by letter, email, or telephone about a personal interview. Please do not telephone the Admissions Office to inquire about your status, as this will only delay processing.

The following programs require a personal interview as part of the application process:

- Diagnostic Medical Imaging
- Medical Informatics
- Midwifery
- Advanced Certificate in Midwifery/ Master’s in Nurse-Midwifery
- Occupational Therapy
- Physician Assistant
- Physical Therapy

We recommend that you have volunteer or observational experience in a setting appropriate to your career choice, preferably before you apply. In some programs, direct patient care or specific health-care experience is required for admission.

Educational programs at SUNY Downstate Medical Center are open to all qualified prospective students regardless of race, religion, sex, color, creed, age, national origin, disability, sexual orientation, marital status, or status as a disabled veteran or veteran of the Vietnam era. Admissions preference is given to New York State residents.

Official transcripts from all U.S. colleges/universities you have attended must be submitted in your application package, regardless of how long ago you attended and whether or not courses from those colleges/universities are being used for prerequisite courses. Please indicate on the application any courses in progress, or the processing of your application will be delayed.

We only accept credits from the Council of Higher Education (CHEA) regional accrediting organizations such as Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and Western Association of Schools and Colleges.

### STUDIES COMPLETED OUTSIDE OF THE UNITED STATES

Applicants who have completed all or part of their post-secondary, college/university education in a country other than the United States are required to have a course-by-course, detailed educational credential evaluation. The evaluation must be completed by a member of the National Association of Credential Evaluation Services (NACES). For a list of approved evaluation agencies, please review the NACES website at [www.naces.org](http://www.naces.org).

If your courses taken outside the U.S. have already been evaluated by an accredited U.S. college or university, and the courses are listed on the college transcript individually with credit hours and grades, you may submit the transcript without a separate credential evaluation. However, if you are using any of the credits toward prerequisite courses for admission, you must still submit a complete course-by-course evaluation from a NACES member agency, even if the courses are listed on a transcript from a U.S. college or university.

### CREDIT BY EXAMINATION PROGRAMS

If you are fulfilling admissions requirements through the College-Level Examination Program (CLEP) examination, Regents College examinations, or Excelsior College examinations, you must have an official copy of your score report forwarded by the testing agency directly to the Office of Admissions (SUNY Downstate Medical Center, 450 Clarkson Avenue, Box 60, Brooklyn, New York 11203), *unless these credits already appear on the official transcripts of an accredited U.S. college or university.*

The College Board (CLEP)  
(609) 771-7865  
[www.collegebound.com/clep](http://www.collegebound.com/clep)

Dantes Subject Standardized Tests  
(877) 471-9860  
[www.getcollegecredit.com](http://www.getcollegecredit.com)

Excelsior College  
(888) 647-2388  
[www.excelsior.edu/exams](http://www.excelsior.edu/exams)

NOTE: Applicants to programs in the College of Health Related Professions are limited to a maximum of 12 credit hours of prerequisite coursework credit by exam.

Credit by exam cannot be used for prerequisite courses that require a laboratory component.

### HEALTH-CARE EXPERIENCE

All applicants are urged to seek professional observational or volunteer experience in an appropriate setting prior to applying for admission. In most programs, it is assumed that you will have made at least one visit to a health-care facility or other appropriate health-related organization and have familiarity with your chosen career field at the time of your application. Please review admissions requirements for specific health-care experience as listed by each program.

### REQUIRED EXAMINATIONS

Graduate Record Examination (GRE) is only required for Physical Therapy applicants. For information about the exam, contact:

GRE  
Box 6000  
Princeton, NJ 08541  
[www.gre.org](http://www.gre.org)  
(609) 771-7670

Use the SUNY Downstate Institutional Code: 0619

Test of English as a Foreign Language (TOEFL) is required for all applicants for whom English is a second language and who have not completed at least one year of full-time study in a regionally accredited college or university in the United States (at least 24 semester credits, including two courses in English composition).

TOEFL  
Box 6151  
Princeton, NJ 08541  
(609) 771-7100  
[www.toefl.org](http://www.toefl.org)

Use the Downstate Institutional Code: 2534

Please note: Your application is not considered complete without the required standardized test score(s).

### NOTIFICATION OF ADMISSION STATUS

Notification of admissions decisions is made in writing. We cannot communicate an admissions decision over the telephone. Once you are sent notification that your application has been sent to the Admissions Committee, please be patient and wait for written notification of your admissions status.

Applicants to programs starting in June must submit their completed applications by mid-November to receive full consideration. Early applications are encouraged. Late applications will be reviewed on a space-available basis.

In general, programs with a June entry date will reach their final admissions decisions by mid-May, although admissions decisions may be reached earlier. Applicants to programs starting in the fall should submit their completed applications by March 1 to receive full consideration. Early application is encouraged. Late applications will be reviewed on a space-available basis.

In general, programs with a fall entry date reach their final admissions decisions by August 1, although admissions decisions may be reached earlier.

Applications are reviewed on a modified rolling admissions basis. For specific information regarding application processing fees and admissions deposits, go to: <http://sls.downstate.edu/admissions/chrp/ProcessingFee.html>

*Admissions decisions are final and may not be appealed.*

Applicants who are not accepted for admission may reapply with enhanced credentials. You may register on-line to attend an Information Session and receive re-applicant advisement.

## CERTIFICATION/LICENSURE DOCUMENTATION

### Midwifery:

- a. *Registered nurse applicants:* RN license to practice as a professional nurse in any of the 50 states.
- b. *Master of Science Completion Program applicants:* by the American College of Nurse-Midwives (ACNM) Certification Council or its successor since 2008, the American Midwifery Certification Board (AMCB). You must submit photocopies of your certification and bachelor's degree (or its equivalent);  
**or**  
Evidence of alternative eligibility to practice (such as New York State licensure).

## PART-TIME STUDY

Part-time study is available in the following programs:

- Medical Informatics
- Midwifery
- Occupational Therapy (after first semester)

## SECOND DEGREE APPLICANTS

If you already hold a bachelor's, master's, or doctoral degree, you must still fulfill the same admission requirements, including prerequisite courses, and follow the same procedures as other applicants.

## EDUCATIONAL OPPORTUNITY PROGRAM (EOP)

If you were previously enrolled in a SUNY EOP, a CUNY SEEK, or College Discovery program, or an HEOP at an independent college or university in New York State, you may be eligible to continue in this program. If you believe you meet this criterion, go to: [http://sls.downstate.edu/financial\\_aid/documents/eopform.pdf](http://sls.downstate.edu/financial_aid/documents/eopform.pdf)

Complete the required form, which is independent of the application process (and does not have to be included in your self-administered application).

## INTERNATIONAL APPLICANTS

Our entering classes are small and admissions priority is given to U.S. citizens and permanent residents, who are New York State residents. Applicants to highly competitive programs may have difficulty being accepted due to the large number of qualified applicants.

International students may apply but must document their ability to finance their education as part of the admissions process (see Department of State requirements for an F-1 visa). Federal financial aid or private grants for international students are not available. All international applicants must document their ability to finance their entire education (total length of the program) as part of the admissions process. Student budgets are posted on the SUNY Downstate Financial Aid website. The costs of attendance will be based on a 12-month budget for an out-of-state student, including tuition, fees, educational, and living expenses.

## TRANSFER CREDIT

There are two types of transfer credit: transfer credit to meet admission requirements, and Program of Study transfer credit.

### Transfer Credit to Meet Admission Requirements

Courses taken in the United States must be from a college or university accredited by a Council for Higher Education Accreditation (CHEA) regional organization, such as the Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Schools and Colleges. All courses must be presented on original official transcripts from the educational institution where the courses were completed. For courses taken at institutions outside the United States, a course-by-course, detailed educational credential evaluation must be submitted from a NACES-affiliated agency.

### Program of Study Transfer Credit

This type of transfer credit is considered on an individual basis for select programs. (Note: The Physician Assistant Program does not grant Program of Study transfer credit.) The credits are applied to your program of study at SUNY Downstate.

Transfer credit may be offered whenever: 1) the nature, content, and level of the course are comparable to the course offered by SUNY Downstate; 2) the credit earned is appropriate and applicable to the programs offered by SUNY Downstate; and 3) a minimum letter grade of "C" or better has been earned in an undergraduate course; a grade of "B" or better is needed for a graduate course. Students should initiate a request for Program of Study transfer credit through their faculty advisor/program office during the first semester after matriculation in their program.

The Occupational Therapy program may award graduate transfer credits for courses comparable to those offered by the college. When necessary to meet the content requirements of the Accreditation Council for Occupational Therapy Education, students will be required to complete specified course components or assignments before transfer credit is awarded.

Certified nurse-midwives and certified midwives who graduated from a midwifery program accredited by the Accreditation Commission for Midwifery Education (ACME) applying to a master's degree should meet all the admissions requirements for the master's degree program. The Midwifery program faculty will evaluate the number of transfer credits the applicant is eligible to receive.

For more information on Program of Study transfer credit, please speak to a representative of the program to which you are seeking admission.

## APPLICATION DEADLINES AND TIMELINES

### Programs starting in June

The deadline for submitting a completed application for the Occupational Therapy, Physician Assistant and Physical Therapy programs is mid-November. The specific deadline is posted on the Admissions page on the Downstate website. An early submission of application is encouraged. Applications received after the deadline will be considered on a space-available basis. Prepare your application package in advance, and mail it to insure receipt by the posted deadline.

- a. If you are currently enrolled in college or taking prerequisite courses, download a photocopy of your fall semester course registration and most recent grade report (the one you receive in the mail or printout from your college's student information system) in your application. Also download a printout or photocopy of your spring semester course registration. This information will give us the most up-to-date information about your academic background.
- b. If you will be taking prerequisite courses for admission during the fall and spring semesters in the year of application, include a photocopy of your course registration confirmation form, if available. If it is not available, please forward

your spring registration and fall transcripts to the Office of Admissions by January 15th. This will give us the most up-to-date information about your academic background.

### Programs starting in August

The Diagnostic Medical Imaging, Medical Informatics, and Midwifery programs begin in August of the academic year.

Early March: Deadline for Diagnostic Medical Imaging

Mid-April: Deadline for Medical Informatics

Mid-April: Deadline for Midwifery

Early submission of application is highly recommended.

If you are currently enrolled in college or taking prerequisite courses, include a photocopy of your fall semester course registration and most recent grade report (the one you receive in the mail or printout from your college's student information system) in your application package. Also enclose a print-out or photocopy of your spring semester course registration. This information will give us the most up-to-date information.

## RE-APPLICANTS TO DEGREE PROGRAMS

Within one year of the initial application, reapplicants must submit the supplemental application and fee, one new letter of recommendation, and updated official college transcripts. Additional information may be required. Only those reapplicants who have enhanced their applications are encouraged to reapply.

Reapplicants who applied more than one year ago must submit the same information and follow the same instructions as first-time applicants.

## DEFERRALS

If you are accepted for admission and wish to request a deferral, you must submit a written request to the Admissions Office by fax or e-mail at least two weeks prior to the registration date for your program. The letter must include the reason you are requesting a deferral, your name, and the name of your program. All requests for deferrals must be approved by the College Admissions Committee. Approval will be sent to you in writing. In general, deferrals are only granted for one year.

The following programs offer deferral: Medical Informatics and Midwifery.

## ALTERNATE LIST

Students accepted to the Alternate List may be invited for admission, often within days of the start of the entering class. Alternates are strongly encouraged to complete and submit all required pre-admission documents if they wish to be considered for space-available admission. Candidates on the Alternate List who are not called for admission must reapply to the program if they wish to be considered for admission during a subsequent admission cycle.

## APPLICATION INSTRUCTIONS

Follow all instructions found on our Admissions website at <http://sls.downstate.edu/admissions/chrp/index.html> for the program of your choice. This is an online application, and you will be downloading transcripts and other information.

## College of Health Related Professions – Program E-Mail Addresses

Diagnostic Medical Imaging:  
DMI.CHRP@downstate.edu

Medical Informatics:  
Informatics.CHRP@downstate.edu

Midwifery:  
Midwifery.CHRP@downstate.edu

Occupational Therapy:  
OT.CHRP@downstate.edu

Physical Therapy:  
PT.CHRP@downstate.edu

Physician Assistant:  
PA.CHRP@downstate.edu  
downstate.edu

PLEASE NOTE: Admissions requirements, procedures, and policies are subject to change. Check the website for any new requirements and application materials.



# Academic Programs

## Diagnostic Medical Imaging

Bachelor of Science

## Medical Informatics

Master of Science

## Midwifery Program

Master of Science

Advanced Certificate

## Occupational Therapy Program

Master of Science

## Physical Therapy Program

Combined Bachelor of Science/

Doctor of Physical Therapy

## Physician Assistant Program

Bachelor of Science

CHRP offers courses of study in Diagnostic Medical Imaging and Physician Assistant leading to a bachelor of science degree. These programs are open to upper-division transfer students.

Master's degree programs are available in Medical Informatics, Occupational Therapy, and Midwifery. A combined BS/DPT degree program in Health Sciences/Physical Therapy.

CHRP offers a master's degree and an advanced certificate in Midwifery to registered nurses as well as non-RNs. Nurses who have an RN and a bachelor's degree can obtain a master's degree with a specialization in Midwifery through the College of Nursing.

### ACCREDITATION

SUNY Downstate Medical Center is accredited by the Middle States Commission on Higher Education. The academic programs of the College of Health Related Professions are registered with the New York State Department of Education and accredited by their respective national professional organizations.

### STUDENT RETENTION

The College's student retention rate is excellent. Over 80 percent graduate within 150 percent of the normal program time.

## PROGRAMS AND HEGIS CODES

### Bachelor of Science Programs

Diagnostic Medical Imaging ..... 1225

Physician Assistant ..... 1299.10

### Combined BS/DPT Program

BS Health Sciences..... 1201

DPT Physical Therapy..... 1212

### Master of Science Programs

Medical Informatics ..... 1299

Midwifery ..... 1203.10

Occupational Therapy ..... 1208

### Advanced Certificate Programs

Midwifery ..... 1203.10

## DIAGNOSTIC MEDICAL IMAGING

### Bachelor of Science

Chairperson and Assistant Professor

*Yosefa Pessins*

Medical Director

*Harris L. Cohen*

Program Administrator

*Kamekah Falconer*

Assistant Professor

*Rivka Hellmann*

Clinical Assistant Professors

*Douglas Dunstatter, Melissa Paraison,*

*Iryna Struk, Jason Tang-Simmons*

Adjunct Faculty

*Artur Babayan, Robert Curran, Chani*

*Daniels, Tom Hoffman, Mike Kalogiannis,*

*Jason Lazar, Kenneth Martinucci, Joyce Miller,*

*Chaya Sura Neuhaus, Sybill Patan, Dimitre*

*Stefanov, Daniel Zinn*

Clinical Faculty

*Susanna Aburakhmanova, Mohamed Abu-*

*Sabe, Sadqua Ahmed, Evelyn Alejo, Ann*

*Alvero, Nora Ambrosia, Kevin Barakat,*

*Irina Belyayeva, Gretta Benin, Danielle*

*Berne, Tonya Braithwaite, Debbie Cantales,*

*Justine Carneglia, Margaret Challenger,*

*Elena Chattalova, Sarah Contreras, Glea*

*Crawford, Marianne Cullen, Aida Davydova,*

*Varsba Dharia, William Elliott, Jennifer*

*Feldman, Lilya Frayman, David Gainza,*

*Rachael Greenbaum, Vera Gurgova, Eris*

*Halevy, Thomas Hoffman, Susanna Izrailova,*

*Christina Kapsalis, Sarah Kaye, Suneetha*

*Kota, Arsen Kotrri, Jolanta Madden, Harry*

*Mauze, Lisa Morris, Ambika Nair, Robert*

*Nicolosi, Fay Perry, Amalia Pose, Hosanagara*

*Prabaaakar, Beverly Prentice, Elena*

*Prokopenko, Danny Pudpud, Vascenio Rhoden,*

*June Robbins, Eleonora Rozman, Ella Rudyak,*

*Charlene Salvaggio, Judith Schwartz, Fernando*

*Seone, Margarita Sokolovski, Jane Streltsoff,*

*Blanca Torres-Santiago, Dina Traub, German*

*Valdez, Patricia Villa, Lancelot Walker,*

*Jacqueline Williams, Yongming Xian, Jen Yau,*

*Boris Yusim*

Diagnostic medical sonography is one of the fastest growing diagnostic fields. It is used in nearly every medical specialty and in every type of medical care setting. The technology uses a noninvasive, painless, and acceptably safe energy source—high frequency sound—to obtain detailed and dynamic images of the organs within the body. Medical sonographers must have extensive knowledge of anatomy, pathophysiology, physics, and the medical and biological sciences.

The Diagnostic Medical (DMI) Program of SUNY Downstate was established in 1972 and was the first program of its kind in the United States to offer a Bachelor of Science degree with a major in sonography.

Accredited in General and Cardiac Concentrations, our curriculum integrates the basic and medical sciences with sonography courses, and provides coursework and clinical training in all major disciplines and specialties of ultrasound (abdomen, obstetrics and gynecology, cardiac, vascular). With this strength, our graduates are prepared to enter the workforce with multiple skill sets, and are highly sought by clinical affiliates and other clinical institutions. Our state-of-the-art student laboratory incorporates technology, innovation, and the latest teaching techniques including simulation and hands-on activity. Our graduates are all registry-eligible and qualify to take the National ARDMS examinations, with very successful results

### ACCREDITATION

The Diagnostic Medical Sonography Program is evaluated by the Joint Review Committee on Education in Diagnostic Medical Sonography, and is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Graduates of the program are qualified to take the registry examinations given by the American Registry of Diagnostic Medical Sonographers.

### ADMISSION REQUIREMENTS

Please refer to pp. 9-15 of this Bulletin. Check for the latest requirements and apply online through the Admissions section of Downstate's website: <http://sls.downstate.edu/admissions/chrp/dmi/index.html>.

### GRADUATION HONORS

*Overall Excellence Award* – presented to a graduating student with a cumulative grade point average (GPA) of 3.3 or higher, who has consistently received good evaluations from clinical instructors and who contributes significantly to either the Diagnostic Medical Imaging program, student life, or the community.

*Academic Excellence Award* – presented to a graduate with a GPA of 3.5 or higher with a minimum of “good” evaluations for clinical performance. This award will be given to the individual with the highest GPA meeting these criteria.

*Outstanding Student Contribution Award* – presented to a graduating student for outstanding contributions to the program, the profession, and the SUNY Downstate community. The student must have a minimum GPA of 2.5.

*Certificate of Achievement Award* – presented to a graduating student who passed the American Registry of Diagnostic Medical Sonography while in the program.

*Research Award* – presented to a graduating student or group who have conducted the best research project.

### CAREER OPPORTUNITIES

Students who graduate from the Diagnostic Medical Imaging program are qualified for careers as clinicians, educators, and administrators in private or academic practice. Most graduates find employment in hospitals and health-related settings. Others are educators and administrators in universities and colleges, while some work for equipment manufacturers as clinical education and or application specialists.

Because of the rapidly changing technological developments in sonography, job opportunities and new roles continue to emerge, offering graduates excellent opportunities for employment and career growth. According to the Bureau of Labor and Statistics employment for sonographers is expected to grow 46 percent by the year 2022.

## COURSE DESCRIPTIONS

The curriculum is reviewed periodically. Please consult the program webpage <http://www.downstate.edu/CHRP/dmi/curriculum.html>

### ANAT 3105 Introduction to Human Gross Anatomy

Anatomy is the study of the structure and shape of the body, body parts, and their relationships to each other. This course is designed to provide the student with a systematic description of the anatomical structures, their functions and their topographical relationships, while enabling them to accurately identify and differentiate normal versus abnormal tissue. The student will also learn to describe the gross anatomy of all organ systems with special emphasis on those systems relevant to the ultrasonic profession. *Lecture and presentations. 3 credits.*

### DIMI 3101 Sonography I (Abdomen/Ob-Gyn)

This course provides a comprehensive study of the sonography of the abdomen and female pelvis (obstetrics and gynecology). The course includes sonographic terminology, indications for testing, sonographic techniques, and appearances. The student will also learn the criteria for developing diagnostic and interpretative skills based on sonographic findings. *Course co-requisites: DIMI 3110, DIMI 3235. Lecture. 3 credits.*

### DIMI 3102 Sonographic Physics I

This course provides an overview of the basic concepts of ultrasound physics, including the theory of sound waves, ultrasonic energy, medium interaction, and echo production. Also included will be transducer construction and

operation, Doppler principles, and color and spectral Doppler instrumentation. *Lecture. 3 credits.*

### DIMI 3106 Human Physiology

This course provides an understanding of physiological mechanisms with a focus on the human body. Basic concepts of cellular physiology, including cellular metabolism, membrane transport, action potential, and cellular communication are covered. A comprehensive study of the functions and interrelationships of the nervous, endocrine, muscular, circulatory, respiratory, digestive, endocrine, and reproductive systems are studied with an emphasis on the homeostatic nature of these systems with reference to human disease states. *Lecture. 3 credits.*

### DIMI 3107 Medical and Surgical Diseases of the Abdomen

This course covers the study of diseases affecting the abdominal organ systems. Pathophysiology is described as well as clinical symptoms, applicable diagnostic techniques, treatment procedures, and prognoses. This course provides the background for understanding manifestations of disease as seen on sonograms. *Lecture. 2 credits.*

### DIMI 3108 Scanning Skills Lab

This course will introduce sonography students to the basics of ultrasound scanning, including transducer orientation, machine knobology, and basic scanning techniques. Real-time scanning and simulation activities will be utilized to enable the first semester student to develop the skills needed in the clinical setting. *Course co-requisites: DIMI 3101, DIMI 3110. 1 credit.*

### DIMI 3110 Clinical Internship I

This course is an introductory lab for abdominal and obstetrics and gynecological ultrasound training. The student attends one day per week for 13 weeks acquiring basic skills in area of specialization. Instructional settings and assignments include college lab (the first three weeks of the semester are spent in our DMI Lab being introduced to

ultrasound equipment and basic imaging technique), hospitals, and healthcare facilities or educational sites. Clinical project required. *Laboratory. Course co-requisite DIMI 3101. 2 credits.*

### DIMI 3200 Sonography II (Ob-Gyn and Abdomen)

Advanced study in obstetric, gynecologic, and abdominal ultrasound with emphasis on differential diagnoses, clinical correlation, and familiarization with state-of-the-art applications of sonography. Small parts ultrasound included as well as introduction to pediatric screening. *Lecture. Prerequisites: DIMI 3101, ANAT 3105, DIMI 3102, DIMI 3106 DIMI 3110, DIMI 3235, and co-requisites DIMI 3210, DIMI 3202. 4 credits.*

### DIMI 3202 Sonographic Physics II

This course provides for the advanced study in wave theory with special emphasis on spectral, power, and color Doppler as they pertain to all sonographic applications. Also, special emphasis on quality assurance and quality control, as well as innovations in sonography, e.g., 3D and 4D imaging, the use of contrast mediums to improve image quality and enhance diagnosis, harmonic imaging, picture archiving and communication systems, mechanical and thermal indices, and M-Mode imaging are covered. *Lecture-laboratory. Prerequisite: DIMI 3102; co-requisite: DIMI 3200. 3 credits.*

### DIMI 3208 Obstetrics and Gynecology

The normal anatomy and physiology of the reproductive system are taught. Normal and abnormal fetal development are explained, including etiology, treatment procedures, and diagnostic techniques for abnormalities. Students also learn basic concepts of birth control, family planning, and infertility treatment. Diseases affecting the reproductive tract are studied in terms of clinical symptoms, applicable diagnostic techniques, treatment procedures and prognosis. This course provides the background for understanding manifestations of disease on sonograms. *Lecture. 2 credits.*

### DIMI 3210 Clinical Internship II

This course is a continuation of Clinical Internship I. The student will spend two days a week at a clinical site. The student will learn to properly manipulate ultrasound machine controls and operate equipment in the lab, demonstrate the ability to use proper scanning technique in performing abdominal and obstetric and gynecologic examinations. They will continue to demonstrate increased ability to interpret sonographic findings and formulate differential diagnoses of common pathologies. Instructional settings include hospitals, and healthcare facilities or educational sites. Clinical project required. *Laboratory. DIMI 3101, DIMI 3102, DIMI 3105, DIMI 3106, and DIMI 3110. 4 credits.*

### DIMI 3217 Cross-Sectional Anatomy of the Abdomen and Pelvis

This course involves extensive study of the abdominopelvic regions. These are studied primarily in axial, sagittal and coronal tomographic planes. Emphasis is placed on the anatomic relationships among organs. *Prerequisite: ANAT 3105. Lecture-laboratory. 3 credits.*

### DIMI 3235 Monitoring and Assistance of the Patient

This course teaches the student sonographer techniques for assisting and monitoring the patient who is being examined. Lectures and practical demonstrations are given on cultural competency in the medical setting, the role of the sonographer in the medical setting, how to scan ergonomically, move patients into or out of bed or wheelchair and to recognize and respond appropriately to emergency situations. The student will also learn about appropriate patient-sonographer interaction, communication barriers, safety, and infection control. *Lecture, presentations, and demonstrations. 1 credit.*

### DIMI 4009 Cardiology

Normal anatomy, physiology and hemodynamics of the heart, is taught. Diseases affecting the heart are described, including pathophysiology, clinical symptoms, diagnostic

techniques, treatment procedures and prognosis. This course provides the background for understanding manifestations of disease on echocardiograms. *Lecture. 2 credits.*

### DIMI 4010 Clinical Internship III

This internship is a six-week, five-days-a-week clinical rotation. Students hone their scanning skills in the clinical setting and learn to demonstrate affirmative judgment in determining which abdominal and obstetrics and gynecological scans, as well as vascular and small parts, are of diagnostic quality. The student is able to determine preliminary impressions, and differential diagnoses with minimal supervision, and becomes confident in presenting cases. Instructional settings include the student scan lab, hospitals, and other healthcare facilities. Students are required to pass an abdominal scanning competency examination on campus in order to complete this course. *Clinical project required. Prerequisites: DIMI 3110, DIMI 3200, and DIMI 3210. 3 credits*

### DIMI 4013 Vascular Principles and Instrumentation

This course reviews the anatomy and physiology of the cerebrovascular, peripheral arterial and venous systems. The carotid system, circle of willis, and upper and lower extremity arterial and venous vessels that are evaluated by ultrasound are identified and correlation to their sonographic appearance is taught. Also covered are concepts in vascular hemodynamics as related to current sonographic applications. Description of other imaging modalities that correlate with sonographic findings are covered in this course as well. This course also requires students to achieve scanning competence in carotid scanning. *Lecture, laboratory. 1 credit.*

### DIMI 4015 Introduction to Medical Statistics

The fundamental principles of statistics are taught, including descriptive statistics, measures of central tendency, correlations, and measures of significance. This course is intended to provide a foundation for MSCI 4100 Research

Methods and DIMI 4214 Research and Independent Study. *Lecture, laboratory. 1 credit.*

### DIMI 4035 Case Presentations

Presentation of cases scanned or identified by students in their clinical lab experiences. Objectives include increasing skill in the following areas; correlation of didactic knowledge with actual pathology, critique of sonographic images for technique, experience researching topics in ultrasound journals, as well as broadening student exposure to unusual pathologies. *Lecture, presentations. 1 credit*

### DIMI 4104 Sonography III (Echocardiography)

Echocardiography is an imaging technique that uses ultrasound to examine the heart, its chambers, walls, and valves. Cardiac ultrasound is a unique way to evaluate the heart's anatomy, structure, and function and is used to aid in diagnosis of cardiovascular disease. This course focuses on the adult heart. Scanning techniques, protocol, image acquisition, and instrumentation including 2D, M-Mode spectral, and color-flow Doppler are taught, as well as hemodynamics. Tissue Doppler, strain, and 3D/4D are introduced. Topics such as normal and abnormal systolic/diastolic function, valvular disease, cardiomyopathies, coronary artery disease, aortic disease, pericardial disease, tumors, and infection are covered, as well as congenital heart disease as seen in the adult. Stress echo and TEE are also introduced. Correlation with cardiac pathophysiology is stressed. *Lecture, laboratory. Prerequisites: DIMI 3101, DIMI 3200, and DIMI 4009; course co-requisite: DIMI 4110. 4 credits.*

### DIMI 4106 Cross-Sectional Anatomy of Thorax and Head

Extensive study of thorax, neck, and head regions. These are studied in axial, sagittal, and coronal planes. Emphasis is placed on anatomical relationships between organs. *Lecture, laboratory. Prerequisite: Anat 3105. 3 credits.*

### **DIMI 4110 Clinical Internship IV**

The student will spend two days a week at a cardiac clinical site. The student will practice proper cardiac scanning technique using M-mode, 2D and Doppler modalities to produce diagnostic echocardiograms. The student will integrate didactic coursework with clinical practice to arrive at diagnostic interpretations. Instructional settings include hospitals, other healthcare facilities, or educational sites. Clinical project required. *Prerequisites:* DIMI 3110, DIMI 3210, DIMI 4009 and DIMI 4010. *Co-requisite:* DIMI 4104. *3 credits.*

### **DIMI 4111 Fundamental Principles of Imaging Modalities**

This course provides an overview of diagnostic imaging modalities that are complementary to diagnostic ultrasound. These include nuclear medicine, radiography, digital subtraction angiography, cardiac catheterization, positron emission tomography, CT, and MRI. The fundamental physical principles, technique, technology, and interpretive criteria of each modality are taught. *Lecture. 2 credits.*

### **DIMI 4202 Sonography IV (Pediatric Echocardiography)**

An overview of normal and abnormal pediatric echocardiography with a focus on understanding the segmental approach to the anatomic and physiologic concepts of congenital heart disease. This course will include cardiac embryology with study of congenital anomalies and its imaging as seen on echocardiograms. Surgical and palliative repairs are introduced as well. *Lecture. Prerequisites:* DIMI 4009, DIMI 4104. *1.5 credits.*

### **DIMI 4210 Clinical Internship V**

This clinical rotation is the final clinical experience prior to graduation. It is a full-time, six-week experience. In this final rotation, the student learns to demonstrate competent entry-level sonographer skills. They should be able to deliver diagnostic quality examinations in Ob/Gyn, abdominal, small parts, vascular, and/or cardiac sono-

graphic examinations by evaluating patient history, signs, and symptoms, using proper scanning technique, and appropriate equipment manipulation. The student will demonstrate the ability to interpret sonographic findings and provide a preliminary diagnostic impressions, including differential diagnosis, and explain, appropriately, the sonographic examination procedure and findings to patients and health professionals. Instructional settings and assignments include hospitals, other healthcare facilities, or educational sites. Clinical project required. *Prerequisite:* DIMI 4110. *3 credits.*

### **DIMI 4212 Professional Seminar and Administrative Techniques**

Topic presentation and discussion of relevant issues in the allied health field, including ethical considerations, cultural competence, ergonomics, resume writing, professional development, and preparation for employment and challenges that may arise. Review for national registry exams included. *Seminar. 1 credits.*

### **DIMI 4213 Introduction to Teaching Methods**

An introduction to the latest learning theories and instruction in organizing content, identifying and creating learning objectives, lesson planning, course syllabi, motivational techniques, teaching tools, and styles of presentation. *Lecture, research, presentations. 2 credits.*

### **DIMI 4214 Research and Independent Study**

In consultation with faculty, students design and conduct original research projects in their area of interest. A written report of the project is submitted and an oral presentation is made at the annual Research Colloquium. The presentations will be made to the senior and junior classes, faculty, and invited clinicians from all clinical affiliations. *Prerequisite:* DIMI 4015 and MSCI 4100. *Lecture, research, presentations. 3 credits.*

### **DIMI 4301 Sonography V (Vascular Ultrasound)**

This course is an in depth study of cerebrovascular and peripheral arterial and venous Duplex ultrasound. Cerebrovascular, venous, and peripheral arterial disease is studied, as well as identification of what imaging techniques are appropriate. Students learn advanced scanning techniques and complete scanning assignments as applied to abdominal vasculature, and peripheral arterial and venous protocols. Course also includes lectures, advanced topics, and emerging trends in ultrasound. *Lecture, laboratory. Prerequisite:* DIMI 4013. *2.5 credits.*

### **DIMI 4500 Independent Study**

This course provides students who are on a modified course of study with an opportunity to bolster their skills in a specific area of interest/need. A faculty member is assigned as the course director to identify their specific goals and objectives to be achieved, select and describe methodology, and designate a final product. Students and faculty preceptors confer at mutually agreed upon intervals regarding the progress of the study. *Elective offered on an as-needed basis. 1-3 credits.*

### **Interdisciplinary Courses**

See p. 46 for course descriptions.

### **ADMN 3100 Health Care Delivery in the United States**

### **INDI 5012 Brooklyn Free Clinic Experience**

### **MSCI 4100 Research Methods**

## **MEDICAL INFORMATICS**

### **Master of Science Degree**

Chairperson and Associate Professor  
*Isaac Topor*

Assistant Professor

*Yalini Senathirajah,  
Mohammad Faysel*

Adjunct and Clinical Faculty  
*Artur Babayan, Michael Bales, Lorraine Blake-Reid, Chani Daniels, Michelle Daniels-DeVore, David Dinhofer, Frank Luo Dilip Nath, Peter (“Rusty”) Peacock, Ernest Provo Fasika Tedla, Chifumnyanya Umejei, Thomas Walker, Summoo Yoo*

Medical informatics professionals implement and manage a wide range of applications and systems that process health-generated information with the support of information technology. Informaticians integrate computerized health-information databases that store clinical information, radiographic images, and laboratory data that are critical for quality patient care.

Several external developments have influenced the need for educational programs in informatics: expanding information technology, enhanced attention to quality assurance and patient safety, HIPPA regulations, and disease surveillance. The curriculum in medical informatics reflects the knowledge and skills necessary to organize, store, and retrieve complex health-information systems.

Students are taught to work as members of the health-care team and to interact with health providers, technologists, and administrators to maximize medical data management. Students also learn the use of new technologies in communication and information management, including telecommunication, medical imaging systems, and digital libraries.

### **THE PROGRAM**

The Medical Informatics Master’s Degree Program is a 39-credit full-time or part-time course of study. The curriculum is designed to meet the needs of students from a wide range of backgrounds. The courses are sequenced to encompass an overview of the discipline

of medical informatics and to develop competencies and skills required by the discipline.

The courses include database systems, network architecture, medical imaging systems, Internet integration, and medical-decision support systems. Students are required to conduct an independent research study in medical informatics.

### **ACCREDITATION**

SUNY Downstate Medical Center is accredited by the Middle States Commission on Higher Education. The academic programs of the College of Health Related Professions are registered with the New York State Department of Education.

### **ADMISSION REQUIREMENTS**

A bachelor’s degree or equivalent from an accredited academic institution is required for admission.

Please refer to pp. 9-15 of this Bulletin. Check for the latest requirements and apply online through the Admissions section of Downstate’s website: <http://sls.downstate.edu/admissions/chrp/mi/index.html>.

### **GRADUATION HONORS**

*Award for Excellence in Research*—presented to a graduating student in recognition of excellence in student research work.

*Award for Outstanding Service*—presented to a graduating student for outstanding contributions to the Medical Informatics Program, profession, and the Downstate community.

*Award for Outstanding Leadership*—presented to a graduating student for demonstrating outstanding leadership qualities.

*Award for Academic Excellence*—presented to a graduating student for outstanding academic performance.

*Award for Clinical Excellence*—presented to a graduating student for outstanding clinical performance and professionalism.

### **CAREER OPPORTUNITIES**

An increasing number of health-care employers are looking for graduates who possess knowledge and skills in the multifaceted field of medical informatics. Employers are looking for people with technical understanding of computers and networks, problem-solving skills, communication skills, and experiences in health information systems.

Job titles include Systems Administrator, Health Informaticist, Network Manager, Health Information Administrator, Clinical Services Manager, Application Analyst, Healthcare IT Software Trainer, Clinical Analyst, Clinical Information Specialist, EMR Application Analyst, Decision Support Administrator, Clinical Systems Integration Support Analyst, Clinical Systems Trainer, Informatics Nurse Specialist, Epic Support Analyst, and Physician Office Field Coordinator.

### **JOINT DEGREE/MS/MPH**

A joint degree program is offered with the School of Public Health leading to an MS/MPH degree. Please consult the Medical Informatics chairperson for further information.

### **COURSE DESCRIPTIONS**

#### **MIMS 5001 Computer Science for Medical Informatics**

This course provides an overview of computer science as a science of abstraction. The course introduces computer programming as the way of thinking. Students create models and implement abstractions using data structures and algorithms. This course is intended for students with limited computer background. *Lecture and computer lab experience. 3 credits.*

#### **MIMS 5002 Internet Integration in Health Care**

This course provides an overview of the Internet and web integration into health care. The course addresses legal, social, and ethical issues as well as various techniques for creating attractive and functional web-based applications. *Lecture and computer lab. 3 credits.*

### **MIMS 5100 Introduction to Medical Informatics**

This course provides an overview of the medical informatics field, combining perspectives from medicine, computer science, and social science. The course covers the organization of medical information, the effective management of information using computer technology, and the impact of such technology on medical research, education, and patient care. *Lecture and computer lab. 3 credits.*

### **MIMS 5101 Database System Applications in Biomedicine**

This course provides an introduction to the fundamentals of database system. Current database structures such as hierarchical, network, relational, and object-oriented are described and compared in terms of their applications in the health field. Emphasis is placed on relational database systems in health care. *Lecture and computer lab. 3 credits.*

### **MIMS 5102 Health Care Across the Lifespan**

This course is designed to examine the health care from infancy to old age. These models will be drawn from disease states as they evolve across the lifespan. This course also includes a review of anatomy, physiology, and pathology of selected organ systems and their associated diseases. *3 credits.*

### **MIMS 5110 Health-care Computer Network Architecture**

This course provides an introduction to computer networks and their use in medicine. An overview of topologies of computer networks are covered. Network security as it applies to HIPPA regulations is also explored. *Lecture and computer lab. 4 credits.*

### **MIMS 5111 Research Methods**

This course introduces students to the basics for participating in the development, implementation, and evaluation of research studies in medical informatics. *Lecture and computer lab. 3 credits.*

### **MIMS 5112 Medical Decision Support System**

This course provides an introduction to methods of medical decision making in the face of uncertainty, as well as the implementation of electronic health

record systems. The course includes training in methods of implementation, including project management, use of appropriate tools, and workflow analysis and redesign. It also covers the design and implementation of decision support and related topics, such as security, working remotely and in multidisciplinary teams, interoperability and HL7, healthcare terminologies, mobile devices, and meaningful use. *Lecture and computer lab. 3 credits.*

### **MIMS 5121 Master's Essay in Medical Informatics**

Students are required to develop a proposal for a research project in medical informatics to be carried out under the supervision of a faculty advisor, and to conduct the research. A written report on the results of a research project in medical informatics must be presented. *Lecture. 3 credits.*

### **MIMS 5201 Topics in Medical Informatics**

This course provides a forum for analysis and discussion of various topics in the medical informatics literature under the direction of a faculty advisor. *Lecture. 2 credits.*

### **MIMS 5202 User Interface in Medical Informatics**

This course provides an overview of theoretical, development, design, and assessment models and techniques in the field of intelligent user interfaces under an interdisciplinary approach (computer science, psychology, cognitive science, and artificial intelligence). *Lecture. 3 credits.*

### **MIMS 5203 Information Retrieval and Digital Libraries**

This course provides an overview of information-retrieval methods with an emphasis on biomedical information retrieval. *Lecture and computer lab. 3 credits.*

### **MIMS 5204 Medical Imaging Systems**

This course provides an introduction to computer graphics and medical imaging techniques. Methods of digital image processing are explored; 2-D and 3-D imaging modalities are reviewed and demonstrated through on-site medical equipment. *Lecture and computer lab. 3 credits.*

### **MIMS 5205 Evaluation of Health-care Information Systems**

This course provides an overview of methods to evaluate the use of information and information systems in health care. Issues specific to information systems in health care—usability, checklist effect, difficulty blinding, knowledge-base evaluation, etc.—are highlighted. Case studies will be used to illustrate concepts. Elective. *Lecture. 3 credits.*

### **MIMS 5206 Independent Study**

Students are provided an opportunity to independently explore current issues affecting Medical Informatics through evaluation and critical analysis of the current literature and practices. This course will meet the needs of students who would like to study a specific issue under the guidance of a faculty member or as a hands-on experience with a clinical professor. *Elective. 1–3 credits.*

### **MIMS 5207 Clinical Internship in Medical Informatics**

This course is designed to prepare students to meet the challenges of integrating computer systems into the framework of hospital administration, patient care, medical practice, and other aspects of the practice of informatics. Students may evaluate health-care information systems and their integration in clinical facilities and participate in use, integration, and observing clinical contexts of health-care information systems. Students may also participate in research and observation of those in various informatics roles, depending on their interests. Student activities depend on the needs of the clinical sites and can include devising evaluation criteria and tools, interviewing stakeholders, evaluating system interfaces, and analyzing the integration of the systems in the overall patient care effort of the clinical facility. *3 credits.*

### **Interdisciplinary Courses**

See p. 46 for course descriptions.

### **INDI 5014 Brooklyn Free Clinic Experience**

## **MIDWIFERY**

### **Master of Science Advanced Certificate**

Chairperson and Professor  
*Ronnie Lichtman*

Clinical Associate Professor  
*Aleida Llanes-Oberstein*

Clinical Assistant Professors  
*MaryAnne Laffin, Suzanne Schechter*

Clinical Preceptors (CNMs/CMs)  
*Simone Abbott, Lauren Abrams, Susan Altman, Tina Becker, Lavone Beckwith, Robin Bradley, Sonia Braham, Veda Browne, Carol Bues, Catherine Cano, Jamie Celestin-Edwards, Lynn Chapman-Stern, Gladys Christophe, Jean Clarke-Brown, Eileen Conde, Winifred C. Connerton, Faith Cornwall, Rhonda DeGannes, Carol Dixon-Hugh, Heather Findletar, Paula Freedman, Maria Freytsis, Odessa Fynn, Linda Gaglioti-Venezia, Elizabeth Gallego, Theresa Gay, Ikbal Ghanim, Anne M. Gibeau, Elyse Gilbert, Marilyn Gold, Helena Grant, Jacqueline Greenfield, Michele Handelman, Amy Hanowitz-Britt, Linda Harrell, Racquel Haynes, Jessica Hilsenroth, Shelley Hong, Maryellen Hughes, Ivie Ideben, Katherine Irizarry, Linda Jaworowski, Martine Jean-Baptiste, Karen Jefferson, Sharon Johnson, Denise Keppel, Lashauna King, Pamela Koch, Christina Kocis, Nancy Kraus, Cherida Lally, Shar La Porte, Maura C. Larkin, Michele Lehmer Chiafulio, Lauren Lese, Marilyn Lestage-Laforest, Jessica Lynn, Phyllis Lynn, Sukdai Mangru, Goldieann McBride, Judith McCarthy-Dalton, Hazel McDonnough, Sharon McDowall, Laura McKenna, Harriet W. McKinley, Ana Mejia, Carol Mendoza, Callie Mikell, Yuliya Milshteyn, Lisa Modell, Elicia Monaghan, Eugenia Montesinos, Elizabeth Newton, Susan Kiremberg, Mini Paulomi Niles, Christine Obremski, Julie O'Brien, Theresa Okolo, Rosemarie Olivera, Martha Olszewski, Robyn Ozovek, Deborah Paley, Susan Papera, Asya Portnaya, Carole Powell, Roberto Rauda, Margaret Re, Katherine Roeltgen, Mary Susan E. Sampino, Nicole Schneider, Dawn Schwartz, Rani Shankar, Jennifer Shark, Emory Ship, Laurie Silberstein, Carolyn Slattery, Emily Slocum, Deborah Smith, Shannon Tam, Susan Tanke, Diana Torres, Ann Marie Visser, Annette Walton, Emily Wenzel, Denise Wharton, Janet Williams, Neysa Williams, Trinisha Williams*

## **THE MIDWIFERY PROFESSION**

Midwives who are certified by the American Midwifery Certification Board (AMCB) are prepared to provide prenatal care, labor and delivery management, postpartum care, well-woman gynecologic care, and primary health care to essentially normal, healthy women and to care for normal newborns. The increasing demand for midwifery services throughout the United States has created practice opportunities within a variety of clinical settings. Midwives work in private or group practices, birth centers, health maintenance organizations, hospitals, and ambulatory care centers. Although certified midwives are independent practitioners, they consult and collaborate with physicians when women in their care develop complications. They also initiate referrals as appropriate.

## **PROGRAMS OF STUDY**

The Midwifery Program is a graduate-level program that prepares students to become competent beginning practitioners in accordance with the standards established by the American College of Nurse-Midwives and the American Midwifery Certification Board. The program accepts registered nurses and other individuals who meet admissions requirements. Students wishing to become midwives may select one of three tracks: Advanced Certificate in Midwifery (38 credits); Master of Science–Midwifery (50 credits); or Master of Science–Nurse-Midwifery (57 credits).

The last track is available only to RNs with a bachelor's degree in nursing; see the College of Nursing Bulletin for additional information on this choice. Graduates of any of the three tracks are eligible to take the national certifying examination administered by the American Midwifery Certification Board (AMCB). All tracks can be completed in two or three years. This will depend on availability in a given admissions year.

The Advanced Certificate track is available only to students who enter the program with a master's degree in

a related field at the discretion of the Midwifery Program.

At the discretion of the midwifery faculty, students with an MS in a health-related field may choose the Advanced Certificate or MS degree in midwifery or nurse-midwifery, if qualified for nurse-midwifery. Nurses can choose either an MS degree in midwifery or nurse-midwifery. The nurse-midwifery option requires a bachelor's degree in nursing.

## **REQUIREMENTS FOR ADMISSION**

Please refer to pp. 9-15 of this Bulletin. Check for the latest requirements and apply online through the Admissions section of Downstate's website: <http://sls.downstate.edu/admissions/chrp/midwifery/index.html>.

## **PROGRAM OBJECTIVE**

The objective of the program is to prepare midwives who are able to provide competent, appropriate, compassionate, and comprehensive primary health care to women from adolescence through their postmenopausal years; assume responsibility for the management of essentially normal neonates; and manage collaboratively the care of women with selected obstetrical, gynecologic, and medical problems.

The faculty has developed a curriculum that recognizes the special needs of adult learners and builds upon previous education and experience related to women's health. Clinical practice is provided at a variety of facilities within the New York metropolitan area. Special provisions are also possible for clinical placements outside of New York City and New York State. A 2:1 student/faculty ratio is maintained within the clinical and laboratory settings. The faculty works collaboratively with the College of Medicine's Department of Obstetrics and Gynecology and shares teaching/learning resources with other programs within the College of Health Related Professions and the College of Nursing.

## PROGRAM HISTORY

This program evolved from the first nurse-midwifery school in the United States. Initially founded in 1932 at the Maternity Center Association (MCA) in New York City, the program moved to Kings County Hospital in 1958 and in 1974 became an integral part of Downstate Medical Center. The Midwifery Program was one of the first academic units of the College of Health Related Professions.

## DIRECT ENTRY

In 1996, an innovative direct-entry option was created for qualified individuals from a variety of backgrounds who desire to become certified midwives. Prerequisite science and social science courses are required for this track. Once accepted, students may be required to successfully complete between one and three courses that have been specifically designed for them; in all other ways they will be fully integrated into the Midwifery Program along with their nurse peers. At the completion of their program of study, all students will have achieved the same program competencies at comparable levels of performance and may apply for licensure to practice midwifery in New York State. Certified midwives (as compared to certified nurse-midwives), may not receive automatic reciprocity from other states: thus, once licensed, their professional practice may be limited to those states with specific statutes recognizing this certification.

## ACCREDITATION

The program is fully accredited by the Accreditation Commission for Midwifery Education (ACME) and is registered and approved by the New York State Education Department. For more information on midwifery accreditation, contact the ACME, 8403 Colesville Road, Suite 1550, Silver Spring, MD 20910-6374; (204) 485-1802; <http://www.midwife.org/accreditation>.

## CAREER OPPORTUNITIES

Midwives work in private or group practices, alternative birth centers, health maintenance organizations, hospitals, and

ambulatory-care centers. Although midwives are independent practitioners, they consult and collaborate with physicians and other health-care providers and initiate referrals as appropriate.

## AWARDS FOR ACADEMIC AND CLINICAL EXCELLENCE IN MIDWIFERY

*Academic Excellence Award*

*Clinical Excellence Award*

*Excellence in Research Award*

*Joan B. Ditchik Memorial Award*

*Laurie Ourlicht Faculty Recognition Award*

*Lily Hsia Midwifery Student Scholarship Award*

*The Suzanne Louis Reddick Spirit of Midwifery Award*

*The Nancy Moley Positivity Award*

*The Gigi Robin Joyful Midwifery Award*

*The Marilyn Cottrell Award for Family Planning*

In addition, the following awards are given to members of the midwifery graduating class by their peers:

*Joan Zavitz Memorial Award for Perseverance*

*Outstanding Student Leadership Award*

## THE CHALLENGE MECHANISM

The Midwifery Program allows selected students to take certain courses via a challenge mechanism. Eligibility for the challenge mechanism as well as appropriate courses to challenge are determined after acceptance in consultation with the faculty. Eligible students include those who have graduated from an accredited nurse practitioner or physician assistant program, hold national certification or licensure in any state in an accepted health profession, or who have graduated from a regionally accredited midwifery or medical program in another country as verified by a member of the National Association of Credential Evaluation Services (NACES).

Challenge courses may be didactic or clinical courses or both. Once the student is accepted to the Midwifery Program, faculty will review whether or

not he or she is eligible to take any of the midwifery courses via a challenge mechanism and will determine with the student which courses they may challenge. The faculty and student will then develop a time frame for challenging courses. All challenged courses must be registered and paid for. There is no penalty for failing the challenge. The student who fails a challenge will then complete the course in the usual manner. Detailed policies regarding the challenge mechanism will be made available to qualified students.

## COURSE DESCRIPTIONS

Note: MIDW courses must be taken by direct-entry students who do not hold RN credentials, unless exempted by the midwifery faculty. Course descriptions and requirements are subject to change and updated course descriptions are found on the program's website.

### MIDW 4001 Basic Health Skills

This course is designed to provide the student with the opportunity to learn or reinforce basic health skills in a classroom/laboratory setting. Upon completion of the course, students will be able to demonstrate 1) basic competence; 2) concern for human and environmental safety; and 3) sensitivity and respect for patients. Skills covered in this course include an introduction to: assessment of the patient—physical and psychosocial; medical ethics; principles of primary, secondary, and tertiary prevention, as well as crisis intervention; documentation and standard medical terminology; quality assurance, risk management, and health-care policy; understanding and obtaining basic laboratory and diagnostic tests, cultures, and specimens; intervention skills such as bed-making, bed bath, transferring to chair/wheelchair/stretchers; feeding techniques; emergency and life-support care; as well as a variety of other basic health skills used in practicing midwifery. *3 undergraduate credits.*

### MIDW 4002 Integrated Medical Sciences I

Utilizing a systems approach, this course is designed to provide the student with an introduction to common health problems encountered among adult populations and their appropriate medical and/or surgical interventions. Emphasis is placed on general health-status assessment and on

the identification of deviations from the expected norms. The clinical component will enable the student to observe a variety of female clients who are experiencing major biophysical health problems, to evaluate the effectiveness of therapeutic regimens already in place for them, and to formulate plans of care for their ongoing management. *3 undergraduate credits.*

### MIDW 4003 Integrated Medical Sciences II

The first segment of this course is designed to provide the student with an introduction to common health problems encountered among children and their appropriate therapeutic modalities. Emphasis is placed on general health status assessment and on the identification of deviations from the expected norms. The clinical component will enable the student to observe a variety of infants and children who are experiencing biophysical health problems to evaluate the effectiveness of therapeutic regimens already in place for them, and to formulate plans of care for ongoing management. The second segment of this course focuses upon mental health and psychopathology across all age groups. Emphasis is placed upon acute and long-term management of emotional problems. *3 undergraduate credits.*

### NRMW 5009 Obstetric Pharmacotherapeutics

This course provides basic concepts and underlying principles of pharmacologic management during pregnancy. Emphasis is given to pharmacokinetics during pregnancy, teratology, vitamins and minerals, immunizations, and hypertensive disorders of pregnancy, as well as obstetric analgesia and anesthesia. *1 graduate credit.*

### NRMW 5010 Professional Issues and Leadership in Midwifery

The purpose of this course is to prepare the student to assume the role and responsibilities associated with professional midwifery practice. This course introduces the student to the development of the profession of midwifery as well as the history, structure, and functions of the American College of Nurse-Midwives (ACNM), midwifery's professional organization. Seminars will cover issues and politics of health-care delivery and midwifery practice on the local, national and international level. Students will participate in field trips and professional activities, including attending professional meetings and meeting with local legisla-

tors. The goal is to promote the development of the professional midwifery leader. *3 graduate credits.*

### NRMW 5104 Neonatology

This course focuses on the care and management of the normal newborn from birth through the neonatal period. Knowledge and skills of resuscitation, immediate delivery-room management, and comprehensive physical examination, including neurological and gestational age assessment, are presented and practiced. Problems, normal variations in the neonate, pathophysiology, common congenital anomalies, growth and development, and anticipatory guidance are integrated with the midwifery management process. Emphasis is also placed on the midwife's role as an advocate and liaison for families with the health-care delivery system. *3 graduate credits.*

### NRMW 5105 Postpartum Care

This course emphasizes the care and management of women from delivery of the infant to four to six weeks postpartum. Topics covered include physiology of involution, comprehensive postpartum assessment skills, needs of the postpartum mother and family, counseling regarding self-care, initiation and support for lactation, care of the infant, and restorative exercises. Management of postpartum discomforts and complications are also included. Students will provide assessment and follow-up of women during the early postpartum period with faculty supervision. *1 graduate credit.*

### NRMW 5108 Primary Health Care of Women

This course focuses on the primary and preventive ambulatory health-care needs of women. It stresses the role of midwives in health promotion and disease prevention as educators and promoters of women's wellness. Primary preventive health-care guidelines are included. Assessment and evaluation of undiagnosed symptoms and physical signs; management of common acute and chronic medical conditions; and identification, consultation, and appropriate referral for other needed health-care services are discussed. Implications for early diagnosis of diseases, appropriate screening and prevention strategies based on genetic, environmental, and behavioral risk factors during various phases of women's lives are covered. *3 graduate credits.*

### NRMW 5112 Physical Assessment of Women Didactic

This course is designed to provide basic knowledge and skills needed for the practice of primary women's health care. Emphasis is placed on history-taking and physical examination, exclusive of the reproductive system. Relevant anatomy and physiology and normal and abnormal findings are included. Students may take this course as part of the Midwifery Program challenge option. Students will register for the course in the Summer Semester. All materials and requirements will be given to students. If the student passes the course requirements, the student may then register for Physical Assessment of Women, Clinical (1 grad credit) for the Fall Semester. If the student fails to pass the course requirements, the student will complete this course in the fall semester, along with Physical Assessment of Women, Clinical. *1 graduate credit.*

### NRMW 5113 Physical Assessment of Women, Clinical

This course is designed to provide basic skills needed for the practice of primary women's health care. Physical Assessment of Women, Didactic, is a pre-or co-requisite to this course. Emphasis is placed on history-taking and physical examination, exclusive of the reproductive system. Emphasis is on the sequence and techniques of physical examination. Students may take this course as part of the Midwifery Program challenge option. Students will register for the course in the Fall Semester. All materials and requirements will be given to students, including the Competency Performance Examination. The student will take the Competency Performance Examination within the first week of the semester. If the student passes the Competency Performance Evaluation, the student may move onto other didactic and clinical courses in the Midwifery Program. If the student fails to pass the Competency Performance Examination, the student will have the rest of the semester to complete this course by attending the usual classes. *1 graduate credit.*

**NRMW 5114  
Pelvic Assessment of Women  
Didactic**

This course is designed to provide basic knowledge needed for the assessment of women's reproductive system. Emphasis is placed on history-taking and pelvic examination techniques. Relevant anatomy and physiology, and normal and abnormal findings are included.

Students will register for the course in the Summer or Fall semesters. Physical Assessment of Women, Didactic, is a pre- or co-requisite. Students may take this course as part of the Midwifery Program challenge options. These students will register in the Summer Semester. All materials and requirements will be given to the students. If the student passes the course requirements, the student may then register for Pelvic Assessment of Women, Clinical (0.5 grad credit) for the Fall Semester. If the student fails to pass the course requirements, the student will complete this course in the Fall Semester, along with Pelvic Assessment of Women, Clinical. *0.5 graduate credit.*

**NRMW 5115  
Pelvic Assessment of Women,  
Clinical**

This course is designed to provide basic skills needed for the assessment of women's reproductive system. Emphasis is placed on sequence and techniques of pelvic examination. Pelvic Assessment of Women, Didactic and Physical Assessment of Women, didactic and clinical are pre- or co-requisite courses.

Students may take this course as part of the Midwifery Program challenge option. Students will register for the course in the Fall Semester. All materials and requirements will be given to students, including the Competency Performance Examination. The student will take the Competency Performance Examination within the first week of the semester. If the student passes the Competency Performance Examination, the student may move onto other didactic and clinical courses in the Midwifery Program. If the student fails to pass the Competency Performance Examination, the student will have the rest of the semester to complete this course by attending the usual classes. *0.5 graduate credit.*

**NRMW 5117  
Continuity of Care in Midwifery  
in Midwifery Practice 1**

This course is an elective that, with Continuity of Care 2 and 3, is designed to allow the student midwife to experience the entire childbearing cycle—ante-partum, intrapartum, and postpartum and newborn care—with one woman and family in a home birth setting. The student will be mentored by a home birth midwife. Students will work closely with this midwife, as well as with a faculty clinical liaison, throughout the course. This course is the first part of a three-course didactic and observational sequence. Students will begin the three-course sequence in their first or second year in the program. They will follow women throughout their pregnancy. *0.5 credits*

**NRMW 5205  
Pharmacology**

This course will begin with the basic concepts of pharmacology and the principles of pharmacokinetics and pharmacodynamics. Students will be introduced to the mechanisms by which commonly used pharmacotherapeutics alter normal physiology as well as the pathophysiology of selected disease states. Emphasis will be placed upon the students' knowledge of classifications of drugs rather than individual drug therapies. Students will be encouraged to consider the indication for use, mechanism of action, routes of administration, contraindications, precautions, adverse reactions, and interactions of commonly prescribed pharmacotherapeutics. The legal basis of prescriptive authority is also addressed. *3 graduate credits.*

**NRMW 5208  
Clinical Practicum in  
Primary Care**

Clinical Practicum in Primary Care is designed to augment the midwifery class Primary Health Care of Women (NRMW 5108), given in the students' first semester. This clinical practicum will take place after the students have already had clinical practice in ambulatory care in the midwifery specialties of well-woman gynecology and antepartum. This will allow the students to be precepted by midwives and thus socialized into the midwifery role before they have primary care clinical experience, which is more general and will include supervision by either adult or family nurse practitioners,

primary care physicians, or physician assistants. In addition, students have some introduction to common health problems in their well-woman gynecology and antepartum clinical rotation, and Clinical Practicum in Primary Care will build upon that introduction.

In Clinical Practicum in Primary Care, students will spend 42-48 hours in the clinical area, in adult health clinics or practices. They will see only female patients who present with common health problems for initial or follow-up care. They are not expected to achieve independence in management skills, but, rather to be exposed to the variety of health problems with which women present for care, and to begin to develop management skills in these areas. *1 graduate credit.*

**NRMW 5209  
Medical and Obstetric  
Complications of Pregnancy**

This course focuses on the identification, diagnosis, evaluation, and follow-up of women with selected obstetric and medical complications during pregnancy. Emphasis is on the midwife's role in collaborating with physician(s) in the care and management of the high-risk woman during the antepartum, intrapartum, and the immediate postpartum periods. Seminars and lectures utilize a case management approach to foster understanding of the pathophysiology, screening methods, diagnosis, treatment, and follow up of selected complications. Faculty and experienced midwives who have had hands-on experience co-managing patients with complications serve as lecturers and seminar leaders. *1.5 graduate credits.*

**NRMW 5212  
Well-Woman Gynecology,  
Didactic**

This course provides the knowledge base for gynecologic care from adolescence through post-menopause. Included are health promotion and illness prevention, preconception care and counseling, human sexuality, and family planning, as well as common gynecological problems that may be encountered during various stages of women's lives. Students may take this course as part of the Midwifery Program challenge option. Challenging students will register in the Fall Semester. (All other students will register in the Spring.) All materials and requirements will be given to the challenging students

at the time of registration. If the student passes the course requirements, the student may then register for Well-Woman Gynecology, Clinical for the Spring Semester. If the student fails to pass the course requirements, the student will complete this course in the Spring Semester, along with Well-Woman Gynecology, Clinical. *1.5 graduate credits.*

**NRMW 5213  
Well-Woman Gynecology, Clinical**

This course provides the basic skills needed for gynecologic care from adolescence through post-menopause. It gives students the opportunity to implement the knowledge attained in Well-Woman Gynecology, Didactic, in the clinical setting. Students may take this course as part of the Midwifery Program challenge option. All materials and requirements will be given to the students at the time of registration, including the Competency Performance Examination (CPE). The student will take the CPE within the first week of the semester. If the student passes the CPE the student may move onto other didactic and clinical courses in the Midwifery Program. If the student fails to pass the CPE, the student will have the rest of the semester to complete this course by attending the usual classes. *1.5 graduate credits.*

**NRMW 5214  
Antepartum Care, Didactic**

This course provides the knowledge base for the management of care of essentially healthy women throughout the antepartum period. Maternal-fetal physiology and assessment, embryology, nutrition, childbirth education, breastfeeding, and needs of the pregnant woman are presented and integrated with the midwifery management process. Students may take this course as part of the Midwifery Program challenge option. Students in the challenge option will register in the Fall Semester. (All other students will register in the spring.) All materials and requirements will be given to the students in the challenge option at the time of registration. If the student passes the course requirements, the student may then register for Antepartum Care, Clinical for the Spring Semester. If the student fails to pass the course requirements, the student will complete this course in the Spring Semester, along with Antepartum Care, Clinical. *1.5 graduate credits.*

**NRMW 5215  
Antepartum Care, Clinical**

This course provides the basic skills needed for the management of care of essentially healthy women throughout the antepartum period. Maternal-fetal physiology and assessment, embryology, nutrition, childbirth education, breastfeeding, and needs of the pregnant woman are presented and integrated with the midwifery management process. Students will provide care to pregnant women with faculty supervision. Students may take this course as part of the Midwifery Program challenge option. All materials and requirements will be given to the students at the time of registration, including the Competency Performance Examination (CPE). The student will take the CPE within the first week of the semester. If the student passes the CPE the student may move onto other didactic and clinical courses in the Midwifery Program. If the student fails to pass the CPE, the student will have the rest of the semester to complete this course by attending the usual classes. *1.5 graduate credits.*

**NRMW 5216  
Continuity of Care in Midwifery  
Practice 2**

This course is an elective that, with continuity of care 1 and 3, is designed to allow the student midwife to experience the entire childbearing cycle—antepartum, intrapartum, and postpartum and newborn care—with one woman and family in a home birth setting. The student will be mentored by a home birth midwife. Students will work closely with this midwife, as well as with a faculty clinical liaison, throughout the course. This course is the second part of a three-course didactic and observational sequence. Students will register for this course after completing continuity of care in midwifery practice 1. *0.5 credits.*

**NRMW 5302  
International Women's Health  
Care Policy**

This two-week course in a host country provides the student with an overview of the health-care delivery system of a host country. Students will have an opportunity to compare women's health-care policy in the host country with that of the United States. Other areas covered are midwifery laws, education, and practice in the host country. Elective. *3 graduate credits.*

**NRMW 5309  
Medical Complications of  
Pregnancy**

This course focuses on the identification, diagnosis, evaluation, and follow-up of women with selected medical complications during pregnancy. Emphasis is on the midwife's role in collaborating with physician(s) in the care and management of the high-risk woman during the antepartum, intrapartum, and the immediate postpartum periods. Seminars and lectures utilize a case management approach to foster understanding of the pathophysiology, screening methods, diagnosis, treatment, and follow-up of selected complications. Faculty and experienced midwives who have had hands-on experience co-managing patients with complications serve as lecturers and seminar leaders. *1.5 graduate credits.*

**NRMW 5310  
Continuity of Care in Midwifery  
Practice 3**

This course is an elective designed to allow the student midwife to experience the entire childbearing cycle—antepartum, intrapartum, postpartum, and newborn care—with one woman and family in a home birth setting. The student will be mentored by a home birth midwife. Students will work closely with this midwife, as well as with a faculty clinical liaison, throughout the course. This course is the third part of a three-course didactic and observational sequence. Students will register for this course after completing continuity of care in midwifery practice 1 and continuity of care in midwifery practice 2. *0.5 credits.*

**NRMW 5401  
Research I—online course**

This course provides the student with the knowledge and skills necessary to conduct and evaluate research studies. Emphasis is on the application of the research process. The student is expected to identify a research topic with appropriate conceptual framework, research questions, criteria for measurement, and methodology for data collection and analysis. An undergraduate course in statistics is a prerequisite for this course. *3 graduate credits.*

### **NRMW 5402 Research II—online course**

This course provides the student with the opportunity to further develop a research project initiated in Research I through the collection and analysis of data. The application of statistical methods and standardized computer analysis techniques and programming is an integral part of the course. The student will interpret the results of the study and make recommendations for future research. A research paper is required. *3 graduate credits.*

### **NRMW 5403 Health-Care Policy and Community Assessment—online course**

This course provides the student with an overview of the health-care delivery system in the U.S. Students will have an opportunity to participate in health-care policy analysis from socioeconomic, ideologic, political, and technological perspectives as well as development of strategic planning for improving health-care policy within the community. Other areas covered are issues related to health-care organizations, mechanisms of financing, the role of the provider and consumer, as well as the influences of the local, state, and federal government in participation of health-care delivery. *Elective. 3 graduate credits.*

### **NRMW 5404 Intrapartum Care**

This course emphasizes management of care of normal women during labor, delivery, and the immediate postpartum period. Topics covered include anatomy of the pelvis, physiology and mechanisms of labor, care of the laboring woman, maternal and fetal assessment, delivery techniques and procedures, and early maternal/family and newborn bonding. Students will provide complete care and management of the intrapartum woman, including delivery and immediate postpartum with faculty supervision. *Lecture. 5.5 graduate credits.*

### **NRMW 5405 Integration of Clinical Studies**

In this course, the student acquires increased responsibility for clinical management of patients from adolescence through the post-menopausal period, including antepartum, intrapartum, postpartum, and well-woman gynecologic care. The clinical study allows the student

to integrate previously learned knowledge, skills, and judgment essential for safe practice of midwifery. The student is required to pass a written comprehensive examination in addition to clinical field practice. *4 graduate credits.*

### **NRMW 5407 Introduction to Teaching— online course**

This course provides the student with the theories and methodology of curriculum planning, implementation and evaluation. Students will learn the principles of teaching/learning, instructional objectives, methods of teaching, testing, and evaluation. Students will have hands on experience in designing a micro-curriculum based on theories learned in the classroom. Knowledge of administration and theories of management and change will also be discussed in detail. *3 graduate credits.*

### **NRMW 5409 Obstetric Complications of Pregnancy**

This course focuses on the identification, diagnosis, evaluation, and follow-up of women with selected obstetric complications during pregnancy. Emphasis is on the midwife's role in collaborating with physician(s) in the care and management of the high-risk woman during the antepartum, intrapartum, and the immediate postpartum periods. Seminars and lectures utilize a case management approach to foster understanding of the pathophysiology, screening methods, diagnosis, treatment, and follow-up of selected complications. Faculty and experienced midwives who have had hands-on experience co-managing patients with complications serve as lecturers and seminar leaders. *1.5 graduate credits.*

### **NRMW 5700 Independent Study**

This course provides the student with an opportunity to explore, in-depth and in a self-directed manner, a topic of special interest. Students, either individually or in groups, select a faculty member with whom they: 1) identify their specific focus; 2) define goals to be achieved; 3) select and describe methodology; and 4) designate a final product. Students and faculty preceptors confer at mutually agreed upon intervals regarding the progress of the study. Elective offered on an as-needed basis. *1-3 graduate credits.*

*See the College of Nursing Bulletin for descriptions of the following courses:*

### **NRMS 5040 Philosophical and Theoretical Perspectives for Advanced Nursing Practice**

### **NRMS 5100 Population Health and Clinical Outcomes**

### **NRMS 5160 Organizational and Systems Leadership for Advanced Nursing Practice**

### **NRMS 5170 The Advanced Practice Nurse as Nurse Educator (elective)**

### **NRMS 5850 Research and Evidence-based Practice I I**

### **NRMS 5860 Research and Evidence-based Practice II**

### **Interdisciplinary Courses**

See p. 46 for course descriptions.

### **INDI 5014 Brooklyn Free Clinic Experience**

## **OCCUPATIONAL THERAPY**

### **Master of Science Degree**

Chairperson and Associate Professor  
*Joyce S. Sabari*

Associate Professor Emeritus  
*Patricia Trossman*

Associate Professor  
*Margaret Kaplan*

Clinical Associate Professor  
*Suzanne White*

Assistant Professors  
*Brigitte Desport, Beth Elenko, Nancy Kline,  
Joan Murray, Alisha Ohl (voluntary)*

Clinical Assistant Professors  
*Richard Sabel, Jasmin Thomas, Dawn Tribble*

Academic Fieldwork Coordinator  
*Jasmin Thomas*

Occupational therapy is the therapeutic use of self-care, work/productive activities, and play/leisure activities designed to achieve functional outcomes that increase independent function, enhance development, promote health, and prevent injury or disability. It includes adapting tasks and the environment to maximize independence and quality of life. The term “occupation” refers to activities that are meaningful to the individual within the environments in which he or she lives and functions. Occupational therapists work with individuals whose abilities to cope with the tasks of daily living are threatened or impaired by developmental deficits, injury, illness, or disability.

### **THE MS PROGRAM**

This two-and-one-half-year graduate curriculum is designed to prepare students for professional practice as occupational therapists. Entering students must have completed a baccalaureate degree program in any field of study, as well as specific course requirements.

The curriculum comprises integrated course sequences in the health sciences, occupational therapy foundations, occupational therapy practice, and research theory and application. Fieldwork placements are integrated with related academic courses. Students are required to maintain a 3.0 GPA for retention and graduation from the program. The degree requirement includes six to nine months of full-time fieldwork experience (Fieldwork II Affiliations). A student may extend his/her course work over a three-year period and change to a part-time program after completing the first semester full-time. The full-time program starts at the beginning of June.

### **ACCREDITATION, CREDENTIALING, AND LICENSURE**

The program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Bethesda, Maryland, 20814-3400; phone: (310) 652-2682. The program is registered by the New York State Education Department. Graduates are eligible to sit for the national certification examination for occupational therapists administered by the National Board for Certification in Occupational Therapy (NBCOT);(301) 990-7979. After successful completion of this examination, the individual is entitled to use the designation, “Occupational Therapist, Registered” (OTR). A passing score on this examination fulfills the examination requirement for professional licensure in the State of New York. All states require licensure in order to practice; state licenses are based on the results of the NBCOT examination. (Applicants for the NBCOT examination will be asked to answer questions related to the topic of felony convictions.)

### **ADMISSION REQUIREMENTS**

Please refer to pp. 9-15 of this Bulletin. Check for the latest requirements and apply online through the Admissions section of Downstate's website: <http://sls.downstate.edu/admissions/chrp/ot/index.html>.

### **CAREER OPPORTUNITIES**

Graduates of an accredited occupational therapy program can expect excellent career opportunities in a variety of settings including hospitals, rehabilitation centers, ambulatory care centers, home health agencies, nursing homes, schools, psychiatric facilities, community agencies, and private practice. Graduates of the SUNY Downstate program are well prepared to work as clinicians, supervisors, administrators, consultants and educators in a wide variety of settings with diverse populations.

### **GRADUATION HONORS**

*Sigrid A. Hansen Award*—presented to the graduating student who best exemplifies exceptional levels of academic excellence, service, and professionalism

*Patricia B. Trossman Award*—presented to the graduating student who best exemplifies commitment to innovation and advancement of the occupational therapy profession.

*Pi Theta Epsilon (Alpha Kappa Chapter)*—national honor society for occupational therapy students.

## COURSE DESCRIPTIONS

### OTMS 5000 Foundations of Occupational Therapy I

Introduction to the foundations of the occupational therapy profession. Includes history and philosophy of the profession; professional ethics and issues influencing the consumer of health-care services; effects of disability and hospitalization on occupational performance; professional roles and functions; the interdisciplinary team; and the therapeutic use of activities and self. *Lecture-seminar. Summer. 2 credits.*

### OTMS 5002 Kinesiology Laboratory

Laboratory experiences in assessment of muscle and joint function including goniometry, manual muscle testing, kinematics, and kinetic analysis of activity. *Laboratory. Fall. 1 credit.*

### OTMS 5003 Assistive Technology

Principles of assistive technology in occupational therapy practice. Opportunities to practice basic setup and application of computer software and other technological systems used in occupational therapy practice. *Lecture-laboratory. Fall. 2 credits.*

### OTMS 5005 Group Process

Principles and theories of group dynamics and use of groups in occupational therapy. Skill development in planning, leading, and evaluating theory-based activity groups. Participation in and observation of group process will occur during the class. *Lecture-laboratory. Fall. 2 credits*

### OTMS 5008 Introduction to Therapeutic Occupations

Principles of occupation, activity, and occupational performance, including performance areas, contexts, and components. Exploration of sociocultural variables as they influence adaptive behavior and the health-illness continuum. Skill development in administering assessments of occupational performance. Skill development in activity analysis to facilitate engagement in meaningful occupation. *Lecture-laboratory. Fall. 2 credits.*

### OTMS 5100 Foundations of Occupational Therapy II

Analysis of principles, ethical guidelines, and theories which provide the foundations of occupational therapy practice. Analysis of theoretical, social, political, and cultural influences upon contemporary occupational therapy practice. *Lecture-Seminar. Fall. 1 credit.*

### OTMS 5102 Neurophysiology

Neurophysiology of motor function and posture, spatial skills, sensory systems, emotions, cognition and perception, and language. Mechanisms of neural plasticity in learning, memory, and recovery after brain injury. *Lecture. Spring. 1.5 credits.*

### OTMS 5105 Theory and Practice I: Psychosocial Intervention

Introduction to the practice of occupational therapy in psychosocial dysfunction with a focus on issues in the mental health practice arena. Application of frames of reference to evaluation, treatment planning, and implementation. Skill development in case study method; group process techniques; and clinical reasoning. (“OTMS 5111 Fieldwork I: Psychosocial Intervention” must be taken concurrently). *Lecture-Laboratory-Seminar. 4 credits.*

### OTMS 5107 Occupational Therapy in Early Intervention

This elective course provides an overview of Early Intervention, a specialized area of practice for children under 3 years of age and their families. Students analyze common issues in working with young children and families. Course material is discussed in class and in online discussion groups. *Elective seminar. Spring (when available). 0.5 credit.*

### OTMS 5108 Activities of Daily Living

Activity analysis, assessment, and treatment to improve performance of basic self-care skills and instrumental daily activities. Development of skill in treatment planning and environmental adaptation to enhance independent function in activities of daily living. *Lecture-Laboratory. Spring. 2 credits.*

### OTMS 5111 Fieldwork I: Psychosocial Intervention

Clinical fieldwork in a mental-health setting. Supervised exploration of the practice of occupational therapy for a variety of psychiatric conditions. Emphasis on the development of clinical reasoning. Co-requisite: “OTMS 5105 Theory and Practice I: Psychosocial Intervention” must be taken concurrently. *Fieldwork-seminar. Spring. 2 credits.*

### OTMS 5112 Master’s Project I

Students select from a choice of faculty-generated research projects and develop an initial draft for a formal research proposal. Seminar introduces students to the components of a research proposal and provides tips for preparing effective proposals. Students begin preparation of abstract and materials for presentation to the Institutional Review Board. *Independent study and seminar. Spring. 0.5 credits.*

### OTMS 5205 Cognition and Perception

Theories of information processing applied to occupational therapy intervention for children and adults who demonstrate dysfunction in cognitive or perceptual function. Lab sessions allow for skill development in evaluation and treatment of clients with cognitive or perceptual impairments that impact upon functional performance. *Lecture-laboratory. Summer. 1.5 credits.*

### OTMS 5206 Community Practice I: Relationship and Assessment

Occupational therapy practice in community settings. Students identify and participate in a field practicum to learn to develop interdisciplinary relationships and assess community needs for occupational therapy services. *Community experience and seminar. Summer. 1 credit.*

### OTMS 5208 Designing Therapeutic Environments

Knowledge and skill development related to assessing and adapting the environmental context to enhance posture, mobility, physical access, and participation in occupations. This includes accessible design, modification of home and work environments, seating and positioning, and wheelchair prescription and maintenance. *Lecture-Laboratory. Summer. 2.5 credits.*

### OTMS 5213 Master’s Project II

Students revise and complete Master’s Project proposal, complete materials for presentation to the Institutional Review Board, and make necessary preparations to begin the project in the Fall Semester. Applied statistics lab component prepares students to use computer programs to analyze quantitative and qualitative data. *Independent Study, Lab, and Seminar. Summer. 2 credits*

### OTMS 5301 Orthotics and Prosthetics

Principles and objectives of the orthotic and prosthetic process in rehabilitation with a focus on the upper limb. Includes static and dynamic splinting, and commercial orthotic devices and general overview of lower limb orthotics and prosthetics. Laboratory experience develops skills in design and fabrication of splints using various materials. *Lecture-laboratory. Fall. 2 credits.*

### OTMS 5303 Theory and Practice II: Neurorehabilitation

Theory and practice of occupational theory in the assessment, formulation, and implementation of treatment plans for adult clients who have sustained stroke and head injury, as well as those with progressive neurological disorders. Lab sessions allow for skill development in treatment approaches and clinical reasoning. OTMS 5305 Theory and Practice III: Physical Rehabilitation and Geriatrics and OTMS 5311 Fieldwork I: Adult and Geriatric Rehabilitation must be taken concurrently. *Lecture-Lab. Fall. 2 credits.*

### OTMS 5305 Theory and Practice III: Physical Rehabilitation and Geriatrics

Theory and practice of occupational therapy for adult clients who participate in therapy at hospitals, rehabilitation programs, geriatric, and home care settings. Includes special problems of the geriatric client. Principles and methods of screening, assessment, clinical reasoning, and formulation and implementation of treatment plans. OTMS 5311 Fieldwork I: Adult and Geriatric Rehabilitation and OTMS 5303 Theory and Practice II: Neurorehabilitation must be taken concurrently. *Lecture-laboratory-seminar. Fall. 5 credits.*

### OTMS 5306 Community Practice II: Marketing and Resources

Occupational therapy practice in community settings. Students participate in the field practicum selected for Community Practice I to develop skill in marketing occupational therapy services and developing resources for community programs. *Community experience and seminar. Fall. 0.5 credits.*

### OTMS 5311 Fieldwork I: Adult and Geriatric Rehabilitation

Clinical fieldwork in a setting serving adult and/or geriatric clients. Supervised exploration of the practice of occupational therapy for adults of all ages with a variety of orthopedic, neurological, medical, and surgical conditions. Emphasis on the development of clinical reasoning. OTMS 5303 Theory and Practice II: Neurorehabilitation and OTMS 5305 Theory and Practice III: Physical Rehabilitation and Geriatrics must be taken concurrently. *Fieldwork-seminar. Fall. 2 credits.*

### OTMS 5312 Master’s Project III

Students work independently on data collection and analysis for Master’s Project, meeting regularly with advisor. A group seminar format provides an opportunity to discuss implementation of project and meaning of results with faculty and peers and to discuss the work of other student researchers. *Independent study and seminar. Fall. 2 credits.*

### OTMS 5401 Administration and Professional Issues

Theories, concepts, and principles of management, supervision, professional ethics, and other issues relevant to practice in occupational therapy. The relationship of health-care systems, organizational structure, financing, and quality assurance to occupational therapy practice. Managerial, supervisory, and consultant roles for OTRs and certified occupational therapy assistants (COTAs) in facility-based, private practice, and school-based occupational therapy practice. *Lecture. Spring. 2.5 credits.*

### OTMS 5406 Community Practice III: Service

Occupational therapy practice in community settings. Based on previous work in Community Practice I and II, students provide goal-directed interventions at their assigned practicum sites and share their experiences in a course seminar. *Community experience, lecture, and seminar. Spring. 1 credit.*

### OTMS-5407 Theory and Practice IV: Developmental Assessment

Occupational therapy observation, assessment, measures, and collaboration in evaluation processes from infancy to adolescence. This course presents developmental milestones for children aged birth to adolescence in the context of occupational performance. Course material will emphasize principles and methods of evaluation to include clinical reasoning and critical thinking skills. OTMS-5410 Theory & Practice V: Intervention with Children and OTMS-5411 Fieldwork I: Pediatrics must be taken concurrently. *Lecture –laboratory. Spring. 3 credits.*

### OTMS-5410 Theory and Practice V: Intervention with Children

Theory and practice of occupational therapy intervention with children, infancy through adolescence: intervention approaches, clinical reasoning, formulation, and implementation of intervention plans. OTMS-5407 Theory & Practice IV: Developmental Assessment and OTMS-5411 and Fieldwork I: Pediatrics must be taken concurrently. *Lecture –laboratory. Spring. 3 credits.*

### OTMS 5411 Fieldwork I: Pediatrics

Clinical fieldwork in a pediatric setting. Supervised exploration of the practice of occupational therapy for a variety of pediatric conditions. Emphasis on the development of clinical reasoning. OTMS 5407 Theory and Practice IV: Developmental Assessment and OTMS 5410 Theory and Practice V: Intervention with Children must be taken concurrently. *Fieldwork-Seminar. Spring. 2 credits.*



**OTMS 5412  
Master's Project IV**

Students work independently on writing research reports in a format suitable for publication and preparing a poster session for presentation to peers and faculty. Seminar presents basic principles of professional writing and presentation. *Independent study and seminar. Spring. 1 credit.*

**OTMS 5612  
Independent Study in Occupational Therapy**

This elective course is designed to provide a learning opportunity for a student to expand knowledge within a specific area of OT practice. The student and assigned instructor work collaboratively to design the course objectives and experiences. Requires permission from the Program Chair. *Elective. Any semester. 1-2.5 credits (Pass/Fail).*

**OTMS 6011  
Fieldwork II: Affiliation I**

Full-time clinical fieldwork of three months' duration. Implementation of knowledge, skills, values, and ethics within an occupational therapy practice setting. Refinement of specific practice skills as used in the assigned setting. Application of clinical reasoning skills to individualized client assessment, treatment planning, and treatment. Utilization of the clinical supervision process for professional growth. Collaboration with clinical educators on research and clinical projects of mutual interest. Development of professional leadership skills. *Fieldwork-seminar. Summer. 5 credits.*

**OTMS 6111  
Fieldwork II: Affiliation II**

Full-time clinical fieldwork of three months' duration. Implementation of knowledge, skills, values, and ethics within an occupational therapy practice setting. Refinement of specific practice skills as used in the assigned setting. Application of clinical reasoning skills to individualized client assessment, treatment planning, and treatment. Utilization of the clinical supervision process for professional growth. Collaboration with clinical educators on research and clinical projects of mutual interest. Development of professional leadership skills. *Fieldwork-seminar. Fall. 5 credits.*

**OTMS 6211  
Fieldwork II: Specialty Elective**

Full-time clinical fieldwork of six- to twelve-weeks' duration in a setting that differs from the student's prior Fieldwork II experiences. *Fieldwork-seminar. Spring. 2-5 credits.*

**Interdisciplinary Courses**

See p. 46 for course descriptions.

**ANAT 5001  
Human Gross Anatomy**

**ANAT 5101  
Human Neuroanatomy**

**INDI 5002  
Kinesiology**

**INDI 5100  
Research Methods**

**MSCI 5211  
Medical Sciences**

**PHYSICAL THERAPY**

**Combined Bachelor of Science in Health Sciences/Doctorate in Physical Therapy**

Chairperson and Associate Professor  
*Joanne S. Katz*

Associate Professor  
*Teresa M. Miller*

Assistant Professor  
*Angela Griffin  
Farhad Haeri  
Laurie Seckel  
Saren Ahearn*

Clinical Assistant Professor  
*Toni A. Zuccaro*

Clinical Instructor  
*Roslyn Sofer*

Program Administrator  
*Vitasha Ali*

Adjunct and Clinical Faculty  
*Lorraine Antoine, Yael Avnon, Sharon  
Beaumont-Bowman, Alex Elegudin,  
Ray Grimm, Christie Hallisy, Rivi Harel,  
Thomas Holland, Kevin Johnson,  
Phil Koch, Lisa Leshner, Mirav Newman,  
David Nieves, Agnes Perenyi, Bobbie Rodin,  
Elan Schneider, David Sofer*

Physical therapists are involved in the restoration, maintenance, and promotion of optimal physical function. Their services prevent, minimize, or eliminate impairments of body functions and structures, activity limitations, and participation restrictions. Physical therapists work to diagnose and manage movement dysfunction; restore, maintain, and promote optimal physical function; promote wellness and fitness; and prevent the onset and progression of impairments, functional limitations, and disabilities due to various diseases, injuries, conditions, or disorders. They perform examination, evaluation, and the establishment of a diagnosis and a prognosis in order to determine the most appropriate intervention(s) for patients/clients with neuromuscular, musculoskeletal, cardiovascular/pulmonary, and integumentary disorders.\*

Physical therapist intervention includes patient/client instruction, airway clearance techniques, assistive technology, biophysical agents, functional training,

integumentary repair and protection, manual therapy techniques, motor function training, and therapeutic exercise. These interventions are chosen on the basis of patient examination and re-examination findings and the goals and expected outcomes of a particular patient/client diagnostic group.\*

\*From *Guide to Physical Therapist Practice, Version 1.1, American Physical Therapy Association.*

**CAREER OPPORTUNITIES**

There is a high demand for physical therapists in the workforce. According to the Bureau of Labor Statistics, employment of physical therapists is expected to grow by 36 percent from 2012 through 2022. Physical therapists work in a variety of primary, secondary, and tertiary care settings. Although many practice in hospitals, physical therapists also work in private practice, schools, wellness and prevention settings, home health, hospice, industry, government settings, and research centers. Physical therapists today earn the Doctor of Physical Therapy (DPT) degree and may specialize in orthopedics, neurology, pediatrics, geriatrics, cardiovascular and pulmonary physical therapy, sports physical therapy, women's health, or clinical electrophysiology.

**PHYSICAL THERAPY PROGRAM: COMBINED BS/DPT CURRICULUM**

The physical therapy program at SUNY Downstate is a long-standing accredited program, which has been in existence since 1966 and graduated its first class in 1969. In 2006, the BS/DPT program was awarded approval by the Board of Trustees of the New York State Education Department. In April 2013, it was granted a 10-year full re-accreditation status by Commission of Accreditation in Physical Therapy Education (CAPTE) to offer a post-baccalaureate entry-level physical therapy program.

**ADMISSION REQUIREMENTS**

Please refer to pp. 9-15 of this Bulletin. Check for the latest requirements and apply online through the Admissions section of Downstate's website: <http://sls.downstate.edu/admissions/chrp/pt/index.html>.

**THE BS/DPT DEGREE PROGRAM**

The combined BS/DPT curriculum requires completion of 80 credits of pre-professional (prerequisite) courses and 135.5 credits of physical therapy professional courses. Of the 135.5 credits, 43 credits are at the undergraduate level and the remaining 92.5 credits are at the doctoral level.

The program starts in June each year and is divided into nine semesters. During the first year, students concentrate on the foundational sciences, clinical sciences, research methodology, psychosocial aspects of patient care, and ethics in clinical practice. In the second year, students take Introduction to Clinical Practice, begin their first clinical internship, focus on developing their knowledge and skills in the theory and practice of physical therapy, begin to implement their group research/capstone project, and explore the basic concepts of education as they relate to the profession. Understanding of the psychosocial and cultural issues that affect patients and their families, and the role of the physical therapist in helping patients function in a variety of environments (home, work, school) is stressed in all professional courses.

In the third year, students continue with courses focused on the theory and practice of physical therapy, complete and present their group research/capstone project, and participate in more advanced topics in professional practice such as administration and differential diagnosis. They engage in extensive clinical education and grand rounds courses, which enable them to integrate theoretical and practical skills, develop self-confidence, and become aware of their responsibilities as members of the health team. Students are supervised by experienced clinicians who will meticulously evaluate their clinical performance in an effort to maximize their overall

effectiveness. This curriculum helps students develop the critical thinking and clinical decision-making skills warranted of graduates of a Doctor of Physical Therapy degree program.

In the various professional courses, students make class presentations and/or provide critical analyses of journal articles and case studies. They will learn how to engage in evidence-based practice, using the highest form of evidence, the randomized controlled clinical trial, upon which to base their clinical decisions.

Students complete a research/capstone project with a small group of 2-4 students under the guidance of a faculty mentor. They are required to present their research/capstone project in a platform presentation at a center-wide colloquium, and display their project in a poster format. They may also submit an abstract of their project for presentation at a state-wide or nationwide physical therapy conference.

## CLINICAL EDUCATION

Over 100 physical therapy centers representing a variety of practice settings are affiliated with SUNY Downstate's physical therapy program. The majority of these clinical centers are located in the New York metropolitan area. However, to accommodate the interests of students who would like to explore other settings and cultures, clinical affiliation sites outside the tri-state area and abroad are available. During Introduction to Clinical Practice in the second year, students are required to complete a placement request form indicating their preferences for clinical sites. Student needs and assignment requests are taken into account and matched with available sites whenever possible.

The clinical education program has been developed to reflect the importance of professional growth and good patient/client care. In the curriculum, clinical education is integrated with the progressively increasing levels of expected student performances in various domains of physical therapy clinical practice. The objectives of each clinical education course are derived from the knowledge and skills developed in the previously completed academic compo-

nents of the curriculum. Students complete a total of 39 credits in full-time Clinical Internship courses.

Clinical Internship I is the students' first experience under the supervision of clinical faculty, and their first full-time clinical educational experience. It is an eight-week, full-time clinical educational experience that occurs during the second year in the program. This spring semester course emphasizes appropriate professional behavior, communication skills, and the performance of essential physical therapy examination, evaluation, diagnosis, prognosis, plan of care, and intervention skills. Students are assigned to hospitals, ambulatory care centers, geriatric facilities, or outpatient practices. Following Clinical Internship I, the students learn more advanced theory and skills. Problem-solving sessions and discussions give the students an opportunity to build on experiences from Clinical Internship I.

Clinical Internship II is a 9-week, full-time clinical experience that is scheduled for the summer semester of the third year. This course will foster the development of more advanced skills in patient/client management. The goal is for students to continue to integrate their academic knowledge with clinical skills and experiences and to continue to develop as doctoral-prepared practitioners. By the time the students engage in Clinical Internship II, they have successfully completed course work in all foundational sciences, as well as physical therapy professional courses in all major areas of physical therapy practice, including musculoskeletal, neuromuscular, cardiovascular/pulmonary, and integumentary areas. The students are assigned to a wide variety of clinical settings, including acute care, adult rehabilitation, orthopedic outpatient, and cardiovascular/pulmonary settings.

Clinical Internship III is a 10-week, full-time clinical educational experience that occurs in the fall semester of the third year, following most of the academic course work. This course will foster the development of entry-level skills in patient/client management and continue the integration of academic knowledge with clinical skills and experience as students continue to develop to become

doctoral-prepared practitioners. They will be assigned to the broadest range of clinical educational experiences available, including specialty areas, such as pediatrics, geriatrics, burn rehabilitation, performing arts physical therapy, and home care.

Clinical Internship IV is a 12-week, full-time clinical educational experience that occurs in the spring semester of the third year. This course fosters the development of more advanced patient/client management skills. The ultimate goal is for the student to become a competent, doctoral-prepared, entry-level physical therapist who utilizes clinical reasoning and clinical decision-making skills.

Clinical Internship IV is the most advanced course in the clinical education sequence. Following Clinical Internship III, the student returns to the classroom to integrate all academic knowledge learned in the program with the clinical educational experiences through Differential Diagnosis. The student then returns to the clinic in Clinical Internship IV in a culminating clinical educational experience. Before entering this experience, the student has satisfactorily completed all course work in the foundational sciences, clinical sciences, and professional courses. Learning experiences are planned with the student to allow him/her to demonstrate increasing ability in the skills of examination, evaluation, diagnosis, prognosis and intervention, and flexibility in administering these skills in accordance with the patient's/client's medical, physical, and psycho-social profile; the patient's/client's environment; and objectives of the patient's/client's total program.

## ACCREDITATION, CREDENTIALING, AND LICENSURE

The Commission on Accreditation of Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA), located at 1111 North Fairfax Street, Alexandria, VA 22314-1488, accredits the program. The program is registered by the New York State Education Department. Graduates are eligible to sit for the National Physical Therapy Examination

(NPTE) administered by the Federation of State Boards of Physical Therapy (FSBPT). All 50 states and three additional jurisdictions use the NPTE as one factor in the licensure of physical therapists. To be licensed as a physical therapist in New York State, the individual must be of good moral character, at least 18 years of age, meet education and examination requirements, and file an application with the New York State Education Department Office of the Professions.

## GRADUATION HONORS

*Samuel B. Feitelberg Award for Academic and Clinical Excellence*—presented to a graduating student for outstanding achievement.

*New York Chapter, American Physical Therapy Association Student Participation Award*—presented to a graduating student for leadership qualities, initiative, involvement in professional or community activities, and demonstration of humanitarian concerns.

*Brooklyn-Statens Island District, New York Chapter, American Physical Therapy Association Student Participation Award*—presented to a graduating student for leadership qualities, initiative, and involvement in professional activities.

*Program Research Award*—presented to the graduating students with the best group research/capstone project.

*Alumnae Award*—presented to a graduating student for leadership qualities, initiative, and involvement in professional or community activities.

*Brooklyn Free Clinic Award*—presented to a graduating student or students for outstanding volunteer physical therapy service to the Brooklyn Free Clinic (BFC). The student must have been registered in the CHRP BFC elective course for at least two consecutive semesters to be considered for this award.

## COURSE DESCRIPTIONS-BS IN HEALTH SCIENCES

The BS/DPT curriculum in the physical therapy program at SUNY Downstate consists of 135.5 credits of physical therapy professional courses. The 135.5 credits consist of 43 credits at the undergraduate level and 92.5 credits at the graduate level. Interdisciplinary courses are described on pages 46-47 of this Bulletin. The following are descriptions of the Undergraduate Physical Therapy professional courses.

### PHTH 3200 Pathology

Basic disease processes and functional impairments are studied in correlation with their anatomical substrates; major emphasis is on the cardiovascular/pulmonary, neuromuscular, and musculoskeletal systems. This is a foundational science course, which builds upon previous study of anatomy and physiology and concurrent knowledge being learned in the Medical Sciences course. Pathology provides an important background for study of the clinical sciences and physical therapy professional courses. Students learn through interactive lecture, textbook readings, and visits to University Hospital of Brooklyn's morgue to observe autopsies. *Lecture/laboratory. Spring. 3 credits.*

### PHTH 3206 Musculoskeletal Physical Therapy I

This course will develop the student's clinical decision-making skills and ability to appropriately screen, examine, evaluate, develop, and implement physical therapy plans of care for people who have musculoskeletal dysfunctions. In this lecture/laboratory course, the student will critically review the theory and practice of musculoskeletal physical therapy with emphasis on methods of examination, evaluation, and manual therapy interventions for the extremities. Therapeutic exercise will also be integrated throughout the course. *Lecture/laboratory. Spring. 3 credits*

### PHTH 3207 Principles of Education in Physical Therapy

This course covers the study and application of teaching techniques as applied to the practice of physical therapy. There will be opportunities to design home programs and discuss issues of patient adherence to physical therapy programs. Students will also have the opportunity to develop skill in preparing and presenting

teaching modules to various target audiences. The clinical education of the physical therapy student will be addressed, including preparation for their future role as a clinical instructor and challenges they might face in the clinical or workplace environment. *Discussion/laboratory. Spring. 2 credits.*

### PHTH 3300 Professional Development I

This course covers the psychosocial manifestations of disability, issues related to professionalism, ethics, patient rights, and physical therapy practice. The following topics will be explored: history and development of the profession, legal and ethical aspects of physical therapy practice, The Guide to Physical Therapy Practice, professional and ethical patient care responsibilities, interpersonal communication, the Americans with Disability Act, and issues surrounding people with disabilities. In an off-campus assignment, students will measure the accessibility of a public facility in NYC and compare their findings to ADA guidelines. *Lecture/discussion/clinical experience. Summer. 2 credits.*

### PHTH 3301 Physical Therapy Examination I

This laboratory course, taught concurrently with kinesiology lecture, is designed to provide students with an opportunity to integrate the lecture's theoretical concepts with hands-on practical application of musculoskeletal and neuromuscular tests and measures that form the foundation of physical therapy examination. This course covers specific musculoskeletal and neuromuscular tests and measures including goniometry, manual muscle testing, sensory testing, deep tendon reflex testing, posture evaluation, gait analysis, and select musculoskeletal special tests. Issues of reliability, validity, sensitivity and specificity will be addressed with all examination techniques. *Laboratory. Fall. 1 credit.*

### PHTH 3302 Patient/Client Management I

This course integrates the use of complementary and alternative therapies into physical therapy practice. Through lecture and discussion, students investigate best evidence for complementary and alternative therapies and the role of the physical therapist in administering and supervising hands-on interventions. Laboratory experiences focus on the process of self-dis-

covery in learning about the influence of one's own posture and body mechanics on perceived touch and response to hands-on intervention. Students learn to design goals and plans of care and select and administer hands-on therapies based upon current evidence, the needs of the individual and the results of patient/client examination and evaluation. Conceptual frameworks for clinical decision-making models are discussed along with application of the Nagi Model of Disablement with regard to complementary and alternative therapies. *Lecture/laboratory/discussion. Fall. 2.5 credits.*

### **PHTH 3401 Physical Therapy Examination II**

This course is designed to integrate the tests and measures covered in Physical Therapy Examination I into a patient evaluation that leads to a diagnosis based on subjective and objective evidence. The elimination of biases and errors in the clinical decision-making process and the role of the examiner as an instrument in the physical therapy patient examination process will be covered, with an emphasis on performing the subjective examination. This course will also provide an introduction to the differential diagnosis of sensory complaints by integrating the "MRS" process into the objective examination. The pathophysiology underlying the onset of upper motor signs in traumatic brain injury will also be presented. This course will also cover specific tests and measures including, but not limited to, indirect blood pressure measurement, pulse oximetry, cutaneous sensory testing, Sensory Organization Testing, the Berg Balance Test, the Multidirectional Reach Test, the Timed Up and Go Test, the Dizziness Handicap Inventory, and the Glasgow Coma Scale. *Lecture/laboratory/discussion. Spring. 1 credit.*

### **PHTH 3402 Patient/Client Management II**

In this course, students discuss, identify, select, and implement basic patient care strategies and techniques related to range of motion, transfers, ambulation with assistive devices, strength, endurance, plyometric and flexibility training, basic care skills in acute care settings, and use of therapeutic exercise equipment. Students critically evaluate and practice ways to maximize the relationship between the patient/client and therapist, educate others and assure efficient posture and body mechanics/ergonomics of

both parties. Students apply the patient/client management model, preferred practice patterns, and the Nagi Model of Disablement as part of clinical decision making in this basic skills course. This course provides a foundation for the learning of therapeutic exercise, which will be further integrated in the musculoskeletal physical therapy courses. The learning format of this class is lecture, laboratory, clinical observation, role-playing, case-based learning, and discussion. *Lecture/laboratory/discussion. Fall. 3 credits.*

### **PHYS 3212 Neurophysiology of Motor Control**

This course expands upon the neurophysiology presented in Principles of Human Physiology and Biochemistry, going into greater depth in aspects of sensorimotor control of movement, especially relevant in understanding patients.

The approach to sensorimotor control will usually initially stress the importance of studying human neurological disease in providing the first clues as to the function of brain structures. Subsequent understanding of structure-function relationships has usually depended heavily on animal experimentation. Such animal experiments have led to explanations at progressively finer structural levels, especially membrane function. The intellectual challenge is to reverse the reductionist trend and deploy the membrane mechanisms that have been elucidated to explain motor behavior.

In recent years, technical advances, both non-invasive and invasive, have transformed our ability to investigate the mechanisms operating in human sensorimotor control. When appropriate, these will be discussed in lecture or demonstrated on human subjects during lectures. Thus, our understanding of human sensorimotor control now rests on the study of human disease, animal experiments and experiments on humans, which serve to test and validate the applicability of the animal research to humans. *Lecture/discussion/Lab Demonstration. Spring. 1.5 credits.*

### **COURSE DESCRIPTIONS - DOCTOR OF PHYSICAL THERAPY (DPT)**

The BS/DPT curriculum in the physical therapy program at SUNY Downstate consists of 135.5 credits of physical thera-

py professional courses. The 135.5 credits consists of 43 credits at the undergraduate level and 92.5 credits at the graduate level. Interdisciplinary courses are described on pages 46 of this Bulletin.

### **PTDP 6110 Capstone Project I: Proposal Development**

This course provides a forum for students to develop a draft introduction section of a formal proposal for their final capstone project. Students working in small groups select from a choice of faculty-generated projects. Students will identify a conceptual framework, problem statement, and purpose for their proposed project, and provide a preliminary review of relevant literature to support the structural framework for their final project. Students submit the written capstone proposal at the end of the semester. Examples of projects include, but are not limited to:

1. Research study
2. Disability awareness education module for a specified audience
3. Development of an evidence-based home exercise program for a specific diagnosis
4. Development of an exercise video for a specified audience
5. Development of an educational video for a specified audience
6. Examining different modes of learning in physical therapy education
7. Pilot testing examination and intervention equipment used in PT lab courses

*Seminar/Independent Study. Spring. 1 credit.*

### **PTDP 6101 Clinical Internship I**

This is the first course in the clinical education sequence. The clinical education experience is planned by the Academic Coordinator of Clinical Education (ACCE) and faculty to augment the individual learning needs and goals of the student. Students are placed in one clinical site for an eight-week clinical educational experience. *Clinical experience. Spring. 8 credits.*

### **PTDP 6102 Grand Rounds I**

This is the first course in the grand rounds sequence. This seminar will focus on exploring the expectations of physical therapy students in a clinical setting.

Issues related to the therapist-patient relationship and student-clinical instructor (CI) relationship will be examined. Issues regarding professional behavior, dealing with clinical problems, and the grading scheme used by the CI will be discussed. Students will learn how to effectively approach the clinical educational experience through discussion, role-play, and selected readings. Following the Clinical Internship I course, students continue with Grand Rounds I to discuss and provide feedback regarding their clinical educational experience. They will also present a 20-minute case report concerning one relevant case for physical therapy based on Clinical Internship I. Physical therapy faculty are invited to attend and participate in Grand Rounds I. Grand Rounds I will be open to members of the Downstate community and the program's clinical sites. *Seminar. Spring. 1 credit.*

### **PTDP 6105 Motor Control and Motor Learning I**

In this course, students will discuss and compare theories of motor control of movement; motor learning; and issues related to performance, memory, attention, and learning. Students will evaluate clinical and scientific evidence supporting the different theories of motor control and motor learning. Students will also critically evaluate evidence for development and control of posture; mobility; and reach, grasp, and manipulation activities. Influences of action and perception of the individual on motor control and motor learning will be discussed and the effects of constraints of the individual, task, and environment on motor outcomes will be appraised. *Lecture/discussion. Summer. 2 credits.*

### **PTDP 6106 Clinical Electrophysiology**

This course is designed to provide students with the underlying theories, scientific bases, biological effects, and clinical applications that support the use of electrotherapeutic modalities. The course includes a lecture component during which theoretical processes will be presented and a supervised laboratory component for practice in the selection, rationale for use, effects, indications, and contraindications for the application of the various electrotherapeutic modalities. Students will be given basic information on electrodiagnostic testing; however, the course will emphasize the examination, evaluation and indications for, and the

application of, electrotherapy. Students will learn the use of therapeutic electricity for muscle strengthening, pain management, and enhancement of circulation and wound and bone healing. *Lecture/laboratory. Summer. 3 credits.*

### **PTDP 6108 Patient/Client Management III: Physical Agents**

This course focuses on critically analyzing the thermal and mechanical agents that are used by physical therapists. The physical principles and physiological effects of heat, cold, water, light, traction, external compression, and high-frequency electrical currents are presented. Clinical decision-making in the selection, application and evaluation of thermal and mechanical modalities is discussed and practiced within the context of a comprehensive plan of care to address impairments and functional limitations. The safe and effective practical applications of the modalities are part of comprehensive laboratory sessions. *Lecture/laboratory. Summer. 2 credits.*

### **PTDP 6109 Introduction to Clinical Practice**

Students spend four half-days in an in-patient setting, working in pairs with a clinical instructor. This experience enables the student to observe a master clinician for the purpose of seeing and analyzing excellent clinical performance skills (cardiovascular/pulmonary and musculoskeletal) of an experienced practitioner in a specialized clinical setting. Packets of information are sent to the clinical instructors (CIs) prior to student arrival, including a brief evaluation form to be completed by the CI to document student attendance and performance. This experience also provides an opportunity for new CIs to work with students on a limited scale before they supervise a full-time student and for students to work cooperatively in small groups to enhance learning.

The classroom portion of the course prepares students to enter the clinical environment by providing them with a short review of major coursework in musculoskeletal, neuromuscular, basic examination, and interviewing skills. Students will also be introduced to Case Report Methodology, introduced to journaling with an awareness of self, and complete the training for the web Clinical Performance Instrument (CPI) with knowledge expectations of the four *Clinical Internship courses. Fall. 2 credits.*

### **PTDP 6210 Capstone Project II**

This is a continuation of Capstone Project I. It is a preparatory course that may include the beginning of the data collection phase of the students' final capstone project. While working closely with a faculty mentor, students examine ethics in research and complete an Investigator Education Program offered by Downstate's Institutional Review Board (IRB). The Investigator Education Program consists of examining Downstate's Multiple Project Assurance (MPA) of Compliance with DHHS Regulations for the Protection of Human Subjects, the Belmont Report, and the IRB's Principal Investigator's Procedures Manual for the Use of Human Subjects in Research. They will also complete the on-line Collaborative IRB Training Initiative training program, IRB conflict of interest on-line training, and submit a mock IRB application and informed consent form to their capstone project mentor. *Seminar/Independent Study. Summer. 1 credit.*

### **PTDP 6201 Clinical Internship II**

This course is a continuation of the clinical education sequence (II of I-IV). This is a 9-week, full-time clinical educational experience that is scheduled for the summer semester of the third year. This course will cultivate the development of advanced skills in patient/client management. Students will be assigned to clinical settings that are appropriate for their knowledge base at that juncture of the program. Clinical sites include, but are not limited to, adult rehabilitation, acute care, orthopedic outpatient, and cardiovascular/pulmonary settings. *Clinical experience. Summer. 9 credits.*

### **PTDP 6202 Grand Rounds II**

This is the second course in the grand rounds sequence. The ACCE will coordinate a general Grand Rounds, in which each student will be required to present a 20-minute case report concerning one relevant case for physical therapy based on Clinical Internship II. Physical therapy faculty are invited to attend and participate in Grand Rounds. Grand Rounds will be open to members of the Downstate community and the program's clinical sites. This seminar will focus on exploring the expectations of physical therapy students in a clinical setting. Issues related to the therapist-patient

relationship and student-clinical instructor relationship will be discussed. Issues regarding professional behavior, dealing with clinical problems, and the grading scheme used by the CI will be emphasized. *Seminar. Summer. 1 credit.*

#### **PTDP 6204 Musculoskeletal Physical Therapy II**

This course is a continuation of Musculoskeletal Physical Therapy I. In this lecture/laboratory course, students will critically review the theory and practice of musculoskeletal physical therapy with emphasis on methods of examination, evaluation, and manual therapy interventions for the spine as well as analyze the physical therapy management of patients with complex musculoskeletal problems. They will also examine the clinical decision making involved in differential diagnosis of musculoskeletal problems. Therapeutic exercise will also be integrated throughout the course. The course will be organized around a problem-based and case-based approach, along with learning of advanced manual therapy psychomotor skills in the laboratory. Through critical analysis of outcome-based literature related to musculoskeletal examination and intervention, students will also learn how to engage in evidence-based practice when dealing with patients/clients with musculoskeletal problems. Students will learn how to manage patients with partial and total joint arthroplasties. *Lecture/discussion/laboratory. Fall. 5 credits.*

#### **PTDP 6205 Motor Control and Motor Learning II**

This course is a continuation of Motor Control and Motor Learning I in which students compare and contrast different therapeutic models related to atypical human movement. Students design, implement, and modify therapeutic plans based upon examination, evaluation, and diagnosis of impairments and functional limitations. Evidence for the various therapeutic exercise models will be evaluated. The learning format of this class is lecture, laboratory, clinical observation, role-playing, case-based learning, and discussion. *Lecture/discussion. Fall. 4 credits.*

#### **PTDP 6206 Cardiovascular/Pulmonary Physical Therapy**

This course covers screening, examination, differential diagnosis, and therapeutic interventions specific to the cardiac, vascular, and pulmonary systems. An emphasis will be placed on impairments related to primary and secondary dysfunction of the cardiac and ventilatory pumps. Topics include cardiovascular and pulmonary rehabilitation, wellness, and preventative care for acute and chronic conditions across the lifespan. Issues of reliability, validity, sensitivity, and predictability of screening and examination techniques will be addressed. Laboratory assignments emphasize examination and designing and implementing interventions for patients/clients with cardiovascular/pulmonary impairments. *Lecture/laboratory/discussion. Summer. 5 credits.*

#### **PTDP 6208 Neuromuscular Physical Therapy**

This course is a continuation of Motor Control and Motor Learning I and II, in which students integrate screening, examination, evaluation, physical therapy diagnosis, prognosis, plan of care, intervention, reassessment, and discharge planning into the total care of patients/clients. In this course, students apply the Nagi Model of Disablement and the patient/client management model to the physical therapy management of patients/clients with neuromuscular disorders through discussion, role modeling, and case-based learning. Students are guided through problem-solving activities to design, supervise, and implement physical therapy intervention based upon the needs of the individual with complex neurological and multi-system impairments. Students integrate the needs of the patient, family, caregivers, and society into the practice of physical therapy. *Lecture/ laboratory/ discussion. Spring. 4 credits.*

#### **PTDP 6310 Capstone Project III**

This is a continuation of Capstone Project III. It is the final course in the capstone project series, which leads toward completion of the project under the guidance of a faculty mentor. Students will complete their capstone project and present it at a scientific forum to be arranged by the Physical Therapy Department. Students will submit a bounded manuscript detailing the project and make a standard poster for the presentation of the project. Students may

also submit their abstract to a professional association for presentation. Students will work closely with their faculty mentor to complete the activities required for this course. *Seminar/Independent Study. Fall. 1 credit.*

#### **PTDP 6301 Clinical Internship III**

This course is a continuation of the clinical education sequence (III of I-IV). This is a 10-week, full-time clinical educational experience that is scheduled for the fall semester of the third year. This course will cultivate the development of entry-level skills in patient/client management and continue the integration of academic knowledge with clinical decision-making and critical thinking skills as students continue to develop to become doctoral-prepared practitioners. Students will be assigned to clinical settings appropriate with their knowledge base at that juncture of the program. Clinical sites may include specialty areas such as pediatrics, geriatrics, burn rehabilitation, performing arts physical therapy, and home care settings. *Clinical experience. Fall. 10 credits.*

#### **PTDP 6302 Grand Rounds III**

This is the third course in the grand rounds sequence. The ACCE will coordinate a general Grand Rounds, in which each student will be required to present a 20-minute case report concerning one relevant case for physical therapy based on Clinical Internship III. Physical therapy faculty are invited to attend and participate in Grand Rounds III. Grand Rounds III will be open to members of the Downstate community and the program's clinical sites. This seminar will focus on exploring the expectations of physical therapy students in a clinical setting. Issues related to the therapist-patient relationship and student-clinical instructor relationship will be discussed. Issues regarding professional behavior, dealing with clinical problems, and the grading scheme used by the CI will be emphasized. *Seminar. Fall. 1 credit.*

#### **PTDP 6304 Professional Development II**

In this course students will examine both accepted principles of medical ethics and ethics in the profession of physical therapy. Legal and established professional standards will be identified. Students will address issues related to the forces that shape ethical development such as social, cultural, and historical influences.

Students will learn to analyze ethical dilemmas and develop ethical reasoning in pursuit of appropriate action. The learning format of this class is lecture and discussion based on assigned readings and case studies. *Lecture/discussion. Fall. 1 credit.*

#### **PTDP 6305 Preventative Care and Health and Wellness**

This course will provide an overview of the concepts of health promotion and wellness and is directed towards prevention of primary and secondary impairments, functional limitations, and disabilities of individuals within communities. The social determinants of health will be explored and theories affecting wellness behaviors introduced. The course will entail the critical analysis and design of typical intervention sites as well as a framework for implementing effective programs. The format of teaching will include lecture, small-group discussion, and peer instruction. *Lecture/discussion. Summer. 1 credit.*

#### **PTDP 6306 Pediatric Physical Therapy**

This course focuses on the physical therapy management of neuromuscular, musculoskeletal, and pulmonary impairments and selected medical diagnoses in pediatric patients/clients. Pediatric Physical Therapy places emphasis on developmental disabilities. As a continuation of the Pediatrics Module of Medical Sciences, it offers a specific application and synthesis of earlier knowledge specifically related to the pediatric population. The major theories of physical therapy patient/client management for children with developmental and acquired disabilities are discussed. Classroom instruction includes interactive lecture, discussion, and laboratory sessions with emphasis on problem-based learning, handling and facilitation techniques, and therapeutic exercise. Pediatric clinical preceptorship experiences are also included. *Lecture/discussion/laboratory/clinical experience. Fall. 3 credits.*

#### **PTDP 6307 Radiology**

The purpose of this course is to provide the student with the knowledge necessary to visually comprehend plain radiographs and to integrate radiologic assessment into physical therapy examination and treatment intervention. The principles of radiodensity with respect to human tissue,

contrast methods, effect of projection angle, correct viewing methods, fracture assessment, and perception of the third dimension will be discussed, and provide the basis for radiographic assessment of the axial and appendicular skeleton. This course will also provide the student with the knowledge necessary to comprehend MRI, CT, and contrast imaging in the neuromuscular, musculoskeletal, and cardiopulmonary systems. *Lecture/discussion. Spring. 1 credit.*

#### **PTDP 6308 Integumentary Physical Therapy: Prosthetics and Orthotics**

This course covers the pathomechanics, biomechanics, and prescription of prosthetic and orthotic devices, as well as the examination and intervention of individuals with wounds, amputations, and peripheral vascular compromise. The use of sterile technique, hydrotherapy and the principles of wound care are included. The course will be in the form of lecture, discussion, laboratory, and demonstration sessions in order to prepare the student for working with individuals with peripheral vascular compromise, wounds, limb amputations, and prescription orthotics in the clinical setting. *Lecture/laboratory/ discussion. Fall. 4 credits.*

#### **PTDP 6309 Administration and Supervision in Physical Therapy**

This course is designed to provide information and develop skills to manage an organized physical therapy service. There is an emphasis on effective management principles, including organizational structure, human resource management, fiscal planning, department design, continuous quality improvement, and risk management. The course will also describe the external environment of health-care delivery, such as regulatory requirements, professional ethics, and medical-legal issues. The purpose of the doctoral program in physical therapy is to prepare professionally competent practitioners capable of performing comprehensive physical therapy, differential diagnosis, intervention, and clinical research. Graduates of SUNY Downstate's curriculum will provide competent and thorough physical therapy services to a diverse population of clients based on available evidence-based practice. This will include patients with musculoskeletal, neuromuscular, integumentary, and/or cardiopulmonary conditions as well as health promotional and wellness

services to the general population. This required course provides a foundation that is designed to provide the student with the skills and knowledge necessary to manage a physical therapy service. *Lecture/discussion. Spring. 1 credit.*

#### **PTDP 6410 Capstone Project IV**

This is a continuation of Capstone Project III. It is the final course in the capstone project series, which leads toward completion of the project under the guidance of a faculty mentor. Students will complete their capstone project and present it at a scientific forum to be arranged by the Physical Therapy Department. Students will submit a bounded manuscript detailing the project and make a standard poster for the presentation of the project. Students may also submit their abstract to a professional association for presentation. Students will work closely with their faculty mentor to complete the activities required for this course. *Seminar/Independent Study. Spring. 1 credit.*

#### **PTDP 6401 Clinical Internship IV**

This course is the most advanced course of the clinical education sequence (I-IV). This is a 12-week, full-time clinical educational experience that is scheduled for the spring semester of the third year. The student, before entering this course, has satisfactorily completed all course work in the program. The ultimate goal is for the student to become a competent, doctoral-prepared physical therapist with entry-level skills in patient/client management and integration academic knowledge with clinical decision making and critical-thinking skills. Students will be assigned to all clinical settings that are available to the program and will be expected to exhibit the skills and abilities of an entry-level practitioner by the end of this course. Clinical sites may include specialty areas such as pediatrics, geriatrics, burn rehabilitation, performing arts physical therapy, and home-care settings. *Clinical experience. Spring. 12 credits.*

#### **PTDP 6402 Grand Rounds IV**

This is the fourth and final course in the Grand Rounds sequence. The ACCE will coordinate a general Grand Rounds, in which each student will be required to present a 20-minute case report concerning one relevant case for physical therapy based on Clinical Internship IV.

The physical therapy faculty is invited to attend and participate in Grand Rounds IV. Grand Rounds IV will be open to members of the Downstate community and the program's clinical sites. This seminar will focus on exploring the expectations of physical therapy students in a clinical setting. Issues related to the therapist-patient relationship and student-clinical instructor relationship will be discussed. Issues regarding professional behavior, dealing with clinical problems, and the grading scheme used by the clinical instructor will be emphasized. *Seminar. Spring. 1 credit.*

#### **PTDP 6404 Pharmacology**

This course is designed to provide the student with the fundamental knowledge of different drug classifications and the pharmacodynamics of the most frequently used drugs. Learning methods include lecture, audiovisual materials, journal articles, and simulations. *Lecture/discussion. Fall. 2 credits.*

#### **PTDP 6405 Differential Diagnosis**

In this course, students will learn to formulate a diagnosis based upon the screening, examination, and evaluation of impairments and functional limitations of the patient/client. Students and faculty will use role-play and discussion to further integrate the screening, examination, and evaluation of patients/clients with complex multi-system conditions. Through evidence-based clinical decision making, students will discuss the process of making a differential diagnosis. A case-based format will be used to integrate clinical findings in order to arrive at a diagnosis and to determine whether to initiate intervention or refer to another practitioner. Students will critically appraise the different physical therapy diagnoses made by classmates and those of expert practitioners. The scope of the physical therapy practice, formulating diagnoses, and referring to physicians and other health-care practitioners will be discussed. *Lecture/discussion/lab. Spring. 2 credits.*

#### **PTDP 6406 Musculoskeletal Physical Therapy III**

This course will develop the student's skills to appropriately examine, evaluate, and design physical therapy interventions for people who have had musculoskeletal surgeries of the extremities and vertebral column. *Lecture. Spring. 1 credit.*

#### **Interdisciplinary Courses**

See p. 46 for course descriptions.

#### **ADMN 5400 Health Care Delivery in the US**

#### **ANAT 3010 Human Gross Anatomy**

#### **ANAT 3210 Human Neuroanatomy**

#### **INDI 3110 Kinesiology**

#### **MSCI 3211 Medical Sciences**

#### **PHTH 3303 Research Methods and Evidence-Based Practice**

#### **PHYS 3110 Principles of Human Physiology and Biochemistry**

#### **PSYH 5111 Psychiatry**

#### **PHYSICIAN ASSISTANT Bachelor of Science Degree**

Chairperson and Assistant Professor  
*Felix Nwamaghinna*

Medical Director  
*Samy I. McFarlane, MD*

Professor  
*Dawn Morton-Rias*

Assistant Professor  
*Edison Ruiz, Lorraine Sanassi, Ken Martinucci*

Clinical Assistant Professor  
*Jennifer Otey, Andrea Trimmingham, Julie Black-Peart*

Adjunct and Clinical Faculty  
*Daniel Agoba, May Nguyen, Joseph Turkson, Norman McCullough, Alistair Cobham, Natalie Klinoff, Henry Landais, Olga Belyy, Yana Chermodonova, Julia Brandman*

The physician assistant is a professional member of the health-care team who is qualified by academic and clinical education to practice medicine with supervision by a licensed physician. Following a medical model of patient care, physician assistants are qualified to perform a wide range of duties traditionally performed only by physicians. Physician assistants obtain patient histories; perform physical examinations; diagnose illness; determine treatment plans; order and interpret laboratory, diagnostic, and therapeutic procedures; and prescribe medication as well as provide patient education, counseling, and follow-up care.

Physician assistant program graduates in New York State are required to successfully complete the National Commission on Certification of Physician Assistant (NCCPA at [www.nccpa.net](http://www.nccpa.net)) initial certification examination, before becoming licensed and registered to practice medicine in the state. However, they may obtain a limited permit, which allows physician assistants to practice temporarily prior to passing the board exam. The physician assistant's scope of practice is determined by medical discipline, practice setting, level of expertise, and institutional guidelines.

Detailed information regarding the physician assistant profession in New York State and licensure requirements may be

obtained by contacting the Office of the Professions, Board of Medicine ([www.op.nysed.gov/prof/med](http://www.op.nysed.gov/prof/med)).

NCCPA is the only credentialing organization for physician assistants in the United States and is dedicated to assuring the public that certified physician assistants meet established standards of knowledge and clinical skills upon entry into practice and throughout their careers.

Academic regulations are outlined in the SUNY Downstate Student Handbook and PA Program Handbook, provided on-line to all entering students.

#### **THE PROGRAM**

The twenty-seven month, full-time program is designed to provide the academic and clinical foundations for primary-care physician assistants; foster the development of the attitudes, values, and behavior appropriate for health-care providers; and prepare students to participate in a team approach to patient care. Emphasis is placed on understanding the role and responsibilities of physician assistants in the provision of quality health service, inclusive of: the treatment and management of disease states, meeting the health-care needs of a richly diverse patient population, and fostering health promotion and disease prevention.

#### **PROGRAM BACKGROUND**

The SUNY Downstate Physician Assistant Program was developed in 1990 to meet the expanding health-care needs of the underserved in Brooklyn and New York City. The program graduated its first class in 1992 and continues to enroll a richly diverse, well-qualified applicant pool. The program is nationally recognized for its leadership in urban PA education and deployment of diverse physician assistants.

The program, which begins in late May or early June, offers a 27-month, upper-division professional course of study leading to the BS degree. The curriculum integrates the basic sciences, social sciences, medical sciences, and clinical experiences needed to provide a comprehensive introduction to the practice of medicine. The four-semester didactic phase consists of lectures,

laboratories, and practical and simulation experiences designed to provide students with the knowledge necessary to address patients in a clinical context. The clinical phase consists of ten supervised clerkships (clinical training experiences) at a broad range of clinical affiliates, designed to provide senior students with a valuable opportunity to develop and refine their professional clinical skills. Graduates of the program are trained with an emphasis on primary care but are qualified to practice in a broad range of medical disciplines under the supervision of a licensed physician.

#### **ADMISSION REQUIREMENTS**

Please refer to pp. 9-15 of this Bulletin. Check for the latest requirements and apply online through the Admissions section of Downstate's website: <http://sls.downstate.edu/admissions/chrp/pa/index.html>.

#### **ACCREDITATION**

The program is accredited by the Accreditation Review Commission on Education for the Physician Assistant, Inc. and is approved by the New York State Board of Higher Education and Board of Regents. The next accreditation review will take place in 2019.

#### **GRADUATION HONORS**

*Academic Excellence* – to the student who has maintained a high GPA during the didactic phase and has demonstrated outstanding professionalism.

*Clinical Excellence* – to the student who has demonstrated outstanding clinical acumen, professionalism and other qualities, which typify the PA Profession.

*Patricia Devine Award for Achievement, Perseverance and Professional*

*Commitment* – to a senior student who performed very well while experiencing extraordinary personal circumstances.

*Research Award* – to the student who has demonstrated exceptional performance in clinical research.

*PA Class Facilitator* – to the student who demonstrates exemplary facili-

tation of the success of their fellow classmates above and beyond their own individual needs.

*Student Leadership Award* – to the PA class president for providing able leadership of the PA class and PA Club and confidently representing the class to the PA program and campus community.

## CAREER OPPORTUNITIES

Employed in all health-care settings and in every medical and surgical specialty, physician assistants function to increase access and enhance the quality of patient care while contributing to medical cost containment. Demand for physician assistants is steadily increasing, with approximately three to four employment opportunities for every new graduate.

For detailed information regarding the physician assistant profession on a national level, contact the American Academy of Physician Assistants (AAPA) at [www.aapa.org](http://www.aapa.org); the New York State Society of Physician Assistants (NYSSPA) at [www.nysspa.org](http://www.nysspa.org); and the Physician Assistant Education Association (PAEA) at [www.paeonline.org](http://www.paeonline.org).

## COURSE DESCRIPTIONS

### PHAS 3006 Interviewing and Physical Diagnosis

This course introduces the student to the fundamentals of the medical interview and the physical examination. Students acquire the knowledge and skill necessary to obtain a complete medical history. Topics include interviewing techniques, cultural barriers, and effective communication methods. Students develop the skill necessary for performing and recording a complete physical examination, including medical note taking. This course is also designed to prepare the physician assistant student for the clinical phase of the curriculum. Emphasis is on the development of the skills and techniques necessary for performing comprehensive and focused physical examinations, utilizing specific techniques and diagnostic procedures. (Prerequisite: ANAT 3010: Human Gross Anatomy.) *Methods include lectures, labs, case-based learning (CBL).* 4 credits.

### PHAS 3011 Neuroanatomy for PA Students

This course is designed to introduce the student to the major functional components of the central nervous system. Emphasis is given to those aspects that relate to the role of the central nervous system in health and disease. The course provides students with the basic knowledge of neuroanatomy essential to clinical physician assistant practice. The course consists of lectures, labs, and independent study. (Prerequisite: ANAT 3010 Human Gross Anatomy.) *Lecture, Labs.* 5.5 credits.

### PHAS 3100 Clinical Microbiology/ Immunology

This course builds upon general principles of microbiology and immunology and examines the role of bacteria, protozoa, parasites, viruses, and rickettsia and helminths in disease and public health. Included are the systemic diseases caused by these organisms, host parasite relationship, and chemotherapeutic agents. Topics of immunology, including resistance to disease, immunity, serology, and immune disorders, are also considered. Emphasis is placed on medical application and basic clinical diagnostic procedures. *Lecture.* 2 credits.

### PHAS 3101 EKG Interpretation

This course provides students with basic knowledge electrocardiogram (EKG) interpretation, essential for patient care. The emphasis will be on the normal and pathologic finding EKG tracings. In addition, students will consider the differential diagnoses of EKGs within a clinical context. This module presents normal electrocardiograms, from which students will build their knowledge to include pathologic processes such as arrhythmia and ischemia. (Prerequisites: PHAS 3110 Principles of Human Physiology and Biochemistry and PHAS 3300 Pathophysiology.) *Lecture.* 0.5 credits.

### PHAS 3102 Health Promotion and Disease Prevention

This course is designed to provide PA students with a didactic foundation in the principles of health promotion, risk reduction, and disease prevention so that they will be able to integrate components of clinical preventive services into their daily clinical PA practice. Students con-

sider the concepts of preventive services, health promotion, and disease prevention for the individual, family, and community. Students are introduced to the principles of adult learning, teaching, and counseling relative to the health education and counseling of patients throughout the life cycle. Emotional challenges of daily living, normative response to illness and injury, stress reaction, and stress reduction are explored. Students are introduced to concepts of morbidity and mortality in relation to disease states, incidence, prevalence, relative risk, health screening, and immunization guidelines, as well as lifestyle risks. Students also gain a working knowledge of the principles and tools of epidemiology and their relevance to clinical practice, individual and community education, public health, and Systems Based Practice (SBP) and Problem Based Learning Initiative (PBLI). (Prerequisite: MSCI 4100 Research Methods.) *Lecture, lecture presentations, community service.* 2 credits.

### PHAS 3207 Physician Assistant Practice

This course provides physician assistant students with an introduction to clinical practice through the study of the development of the physician assistant profession. Emphasis is placed on understanding the physician assistant's role in the team approach to primary health care through cost-effective treatment and management, health promotion and disease prevention, and patient/community education. *Lecture-Field Work.* 0.5 credits.

### PHAS 3211 Clinical Decision Making

This course is designed to reinforce and refine skills acquired in "Interviewing and Physical Diagnosis" and to further prepare physician assistant students for the clinical phase of the curriculum. Through the process of developing focused history and physical examination, students will begin to integrate information, formulate differential diagnoses through critical thinking, and establish appropriate treatment plans. Utilizing a case-based approach, students learn to recognize the presentation of common diseases/disorders, process patient data, establish diagnostic strategies, and consider the methods used in the treatment and management of patients. Students will further develop patient education and counseling strategies to promote health and prevent disease. As part of the devel-

opment of these clinical skills, students participate in the Physician Assistant Mentoring Program, in which students are paired with and observe a practicing physician assistant. (Pre-requisites: PHAS 3006: Interviewing and Physical Diagnosis and PHAS 3301 Adult Primary Care Medicine). *Lecture and observation.* 2 credits.

### PHAS 3212 Introduction to Psychiatry

This course is designed to introduce students to the concepts of psychiatry as it relates to functional mental health and the recognition of the mental illness in the primary care setting. Utilizing didactic instruction, role playing, evidence-based research, problem-based learning, and group discussions, students explore the PA's role and responsibilities in the recognition, assessment, treatment, and referral of the psychologically impaired and the mentally ill patient as encountered in the primary care and emergency department settings. Students are introduced to techniques utilized in performing a psychiatric interview and formulating appropriate treatment and management plans. As part of primary care practice, techniques for patient education, prevention, and early detection of psychiatric illness are highlighted. (Prerequisite PHAS 3006 Interviewing and Physical Diagnosis.) *Lecture.* 2 credits

### PHAS 3241 Clinical Procedures

A series of lectures and practical lab sessions provide the physician assistant student with basic knowledge and clinical skill necessary to perform common medical procedures and demonstrate competency in minor suturing, venipuncture, medication administration, splinting and casting, endotracheal/nasogastric intubation, urinary bladder catheterization, bimanual pelvic examination, and lumbar puncture. In addition, principles of radiology are presented with emphasis on interpretation of radiographic images to facilitate clinical diagnosis and treatment. (Prerequisites: PHAS 3006 Interviewing and Physical Diagnosis, and PHAS 3301: Adult Primary Care Medicine.) *Lecture.* 3 credits.

### PHAS 3251 Human Sexuality

This course is designed to introduce the student to the biosocial basis of gender development, including sex, gender

and sexual orientation, variety of sexual behaviors, values and attitudes, and dysfunctions. (Prerequisite: PHAS 3006 Interviewing and Physical Diagnosis.) *Lecture.* 1 credit.

### PHAS 3252 Long-Term Care and Gerontology

This course will provide an overview of the physiologic and psychosocial aspects of aging appropriate for the primary care physician assistant. This behavioral science course provides the student with an overview of issues related to caring for chronically ill and dying patients. The student's knowledge of SBP and PBLI will be reinforced. Students will build upon the subject matter learned in "Interviewing and Physical Diagnosis," "Pathophysiology," "Adult Primary Care Medicine," "Pharmacotherapeutics," and "Essentials of Pediatrics, Obstetrics, and Gynecology." (Prerequisite: PHAS 3212: Introduction to Psychiatry.) *Lecture.* 2 credits.

### PHAS 3300 Pathophysiology

Pathophysiology provides a basic introduction to the study of disease and disease processes as a scientific basis for understanding health and disease in the study of medicine. A clear understanding of structural and functional changes in cells, tissues, and organs is imperative for optimal patient management, including appropriate utilization of diagnostic techniques, therapeutic management, and patient education and counseling. This course is designed and sequenced to prepare students for the information that will be provided in "Adult Primary Care Medicine." This course provides the necessary linkage between the basic sciences and the clinical presentation of disease. (Prerequisite: ANAT 3010 Human Gross Anatomy. Corequisite: PHYS 3110 Principles of Physiology and Biochemistry.) *Lecture, CBL module.* 3 credits.

### PHAS 3301 Adult Primary Care Medicine

This clinical medicine course provides students with the didactic foundation necessary to address patients in a clinical context. This course builds upon students' knowledge of anatomy, physiology, and pathophysiology and their skills in history taking and physical examination. It introduces the fundamentals of internal and primary care medicine through the presentation of common signs and symp-

toms associated with disease entities of organ systems or disciplines: cardiology, dermatology, endocrinology, gastroenterology, hematology/oncology, infectious disease, nephrology, neurology, pulmonary, and rheumatology. Emphasis is on the primary-care approach to patient care through correlating common clinical presentations with appropriate evaluation, including laboratory and diagnostic studies and management techniques. Students will also consider their role in providing health education to promote health and prevent disease. (Pre-requisite ANAT 3102 Human Gross Anatomy, PHYS 3110 Principles of Human Physiology and Biochemistry, PHAS 3316 Introduction to Pharmacology). *Lecture.* 8 credits.

### PHAS 3311 Pharmacotherapeutics

This course is an intensive structured study of clinical pharmacology and clinical pharmacy. Drug classifications are discussed as they affect specific organ systems, with emphasis on common dosage, potential side effects and drug reactions, and factors affecting safety and effectiveness. (Prerequisite: PHAS 3316 Introduction to Pharmacology.) *Lecture.* 4 credits.

### PHAS 3316 Introduction to Pharmacology

This course provides the student with the basic concepts and underlying principles of pharmacology. Emphasis will be in the areas of pharmacokinetics and pharmacodynamics. Formalized models will be used to systematically demonstrate the behavior of drugs in the body. (Corequisites: PHAS 3300 Pathophysiology, and PHYS 3110 Principles of Human Physiology and Biochemistry.) *Lecture.* 1 credit.

### PHAS 3411 Essentials of Pediatrics, Obstetrics, and Gynecology

This clinical medicine course provides a basic introduction to the diagnosis and management of common problems in the areas of pediatrics, obstetrics, and gynecology. Building upon the basic knowledge acquired in the prerequisite courses, this course assists students in their ability to recognize normal and abnormal conditions, treat and manage patient conditions commonly encountered in ambulatory as well as in-patient settings, and provide health education.

To further assist students in their development of the knowledge, skills, and

attitudes appropriate for professional clinical practice, clinical assignments in pediatrics and gynecology are included in this course. The clinical assignments provide an opportunity for students to refine their skills in physical diagnosis relative to women and children. Utilizing educational methods such as lecture, readings, self-directed learning, and clinical assignments, students gain greater insight into broader aspects of health care, including health promotion and disease prevention through patient education. *(Prerequisite: PHAS 3301 Adult Primary Care Medicine.) Lectures, community service. 4 credits.*

#### **PHAS 3421 Essentials of Emergency Medicine and Surgery**

This clinical medicine course provides an opportunity for students to examine disease through the disciplines of emergency medicine and the general and subspecialty surgical focus. Building upon the basic knowledge acquired in the prerequisite courses, this course assists students in their ability to recognize emergent and surgical conditions, and to treat and manage patient conditions commonly encountered in emergency departments and surgical units. *(Prerequisite: PHAS 3301 Adult Primary Care Medicine.) Lectures, CBL module. 5 credits.*

#### **PHAS 3501 Issues of Professional Practice**

This course provides a survey of contemporary thoughts on ethical and legal issues concerning medical treatment and professional practice, as well as a personal exploration of individual values. *Lecture. 1 credit.*

#### **CLINICAL CLERKSHIPS**

Clinical clerkships are assigned by the program. Clinical assignments cannot be refused by students except in extraordinary circumstances. *(Prerequisite: successful completion of all didactic courses.)*

#### **PHAS 4000 Clerkship in Internal Medicine**

This clerkship provides students with practical clinical experience to interpret and integrate information obtained via the comprehensive history and physical examination, formulate diagnoses, and develop effective treatment plans. In addition, students learn the indications and limitations of diagnostic procedures and therapeutic regimens common to internal medicine. Students also identify areas for SBP and PBLI by completing assigned projects. *6 credits/6 weeks.*

#### **PHAS 4010 Clerkship in Internal Medicine (Sub-specialty Elective)**

This clerkship provides students with an additional opportunity to experience patient management in the medical sub-specialties, such as cardiology, hematology, oncology, and infectious disease. *3 credits/3 weeks.*

#### **PHAS 4100 Clerkship in Pediatrics**

This clerkship focuses on the diagnosis and management of primary care pediatric patients in ambulatory as well as in-patient and Neonatal Intensive Care Unit (NICU) settings. Emphasis is on the recognition of normal as well as abnormal findings, management of neonates, and neonatal diagnoses and complications, genetic disorders, and management of common childhood illness, assessment of development milestones, immunizations, and well-child care from birth through adolescence. *6 credits/6 weeks.*

#### **PHAS 4200 Clerkship in Surgery**

This clerkship acquaints students with the diagnosis and management of general surgical problems encountered in the hospital as well as ambulatory settings. Students participate in surgical management during the pre-operative phase, assist during surgery, and provide post-operative management. *6 credits/6 weeks.*

#### **PHAS 4210 Clerkship in Surgery (Sub-specialty Elective)**

This clerkship provides students with an additional opportunity to experience patient management in surgical sub-specialties, such as trauma, transplant, neurosurgery, orthopedics, oncology, and/or plastic surgery. *3 credits/3 weeks.*

#### **PHAS 4300 Clerkship in Emergency Medicine**

This clerkship provides students with practical clinical experience by working in an urban acute-care setting. It enables students to develop a focused and systematic approach in the diagnosis and treatment of common adult and pediatric medical and surgical emergencies. *6 credits/6 weeks.*

#### **PHAS 4400 Clerkship in Obstetrics and Gynecology**

In this clerkship, students gain practical clinical experience in the diagnosis, evaluation, and management of both normal and abnormal conditions in obstetrics and gynecology. In addition, students learn to provide prenatal and postpartum care, family planning, health education, preventive services, and genetic counseling and other counseling as appropriate to the obstetrics and gynecology patient. *6 credits/6 weeks.*

#### **PHAS 4500 Clerkship in Family Practice/ Primary Care**

This clerkship provides students with the opportunity to gain experience in the treatment and management of ambulatory medical conditions. Emphasis is on effective and empathetic interviewing and counseling, as well as identification and management of the broad spectrum of primary care medical conditions that are encountered in the ambulatory setting. It will also focus on health promotion and disease prevention. *6 credits/6 weeks.*

#### **PHAS 4600 Clerkship in Psychiatry**

This clerkship provides the training to diagnose and manage patients with psychiatric conditions in the ambulatory, in-patient, and emergency settings, including NICU units. Students learn to recognize and treat acute and chronic mental health disorders, affective and cognitive disorders, as well as disorders associated with substance abuse. *3 credits/3 weeks.*

#### **PHAS 4700 Clerkship in Geriatrics**

This clerkship provides students with practical clinical experience in the diagnosis and management of common geriatric medical conditions in long-term care settings. Additional emphasis is placed on rehabilitation techniques, nutritional support, and psychosocial issues associated with the care of the elderly patient. *3 credits/3 weeks.*

#### **PHAS 4800 Senior Seminar**

This course is designed to enhance the student's clinical experience by thorough review of the content blueprints of organ systems, including but not limited to cardiology, pulmonary, gastroenterology, infectious diseases, endocrinology and hematology. Current changes and trends in medicine are addressed. Students develop the skills necessary to research and prepare formal presentations. *Lecture 1 credit.*

#### **PHAS 5000 AND PHAS 5001 Independent Study**

This provides students who are on a modified course of study an opportunity to review anatomy and physiology, interviewing, physical examination, fundamentals of pathophysiology, among other areas. Courses are individualized to meet students' academic and clinical needs. This is accomplished through written assignments, exams, practicals, independent reading, auditing of lectures, reviewing software, audio and video resources, classroom demonstrations, and presentations. Students on a modified course of study are required to register for PHAS 5000 and/or PHAS 5001. PHAS 5000 3 credits; PHAS 5001 4 credits.

#### **Interdisciplinary Courses**

See p. 46 for course descriptions.

#### **ADMN 3100 Health-Care Delivery in the United States**

#### **ANAT 3012 Human Gross Anatomy**

#### **INDI 5012 Brooklyn Free Clinic Experience**

#### **PHYS 3110 Principles of Human Physiology and Biochemistry**

#### **MSCI 4100 Research Methods**

## INTERDISCIPLINARY COURSES

The following courses are taken in common by students in different programs. See the individual Program of Study forms to find out which courses are required for each program.

### ADMN 3100/5400\* Health Care Delivery in the United States

This foundation course provides an introduction to the present day health care system in the United States. It provides an overview of historical perspective of health care to present day and changes in the future. Health economics, health care reform and financial reimbursement will be covered. The course provides an opportunity for students to explore issues related to professionalism and professional practice. *Computer presentation and discussion. Fall. 1.5 credits*

### ANAT 3010 Human Gross Anatomy

In this course the regional dissection and observation of the human body is combined with lectures and use of models and films. Palpation laboratories are correlated with specific areas of dissection. *Lecture-laboratory. Summer. 6 credits*

### ANAT 3012 Human Gross Anatomy

Human gross anatomy provides students with an understanding of the structure of human body using regional dissection and observation of the human body is combined with lectures and use of models and films. *Lecture-laboratory. Summer. 5.5 credits*

### ANAT 3210 Human Neuroanatomy

There will be 17 two-hour lectures, 4 two-hour lab sessions, and one lab review session (practice practical) distributed throughout the semester. Lecture material in the first half of the course covers regional descriptions of brain organization and, additionally, covers such topics as the blood supply of the central nervous system, neuronal development and neurohistology, fine structural organization of selected brain regions, and the organization of transmitter systems. Lecturers will provide handouts and assign required readings from the textbook. The midterm

and final written exams will include both lecture material and assigned readings. The laboratory sessions use whole and sectioned brain material in exercises on the brain and the vascular structure. In the second half of the course, neuroanatomy is taught with emphasis on how an intact nervous system leads to perception and behavior and how a damaged nervous system fails. *Lecture-laboratory. Spring. 2.5 credits*

### ANAT 5001 Human Gross Anatomy

This course involves the regional dissection, observation of the human body, and lectures, with emphasis on the musculoskeletal system. Palpation laboratories are correlated with specific areas of dissection. Case-based assignments apply course content to occupational therapy practice. *Lecture-laboratory. Summer. 6 credits*

### ANAT 5101 Human Neuroanatomy

This course consists of the study of the central nervous system, including laboratory examination of gross morphology of the human brain in both fresh and stained material. Includes basic anatomy, systems and tracts, vascular system, and integrative function of the nervous system as evidenced in behavioral phenomena. Journal club component requires synthesis of information about clinical applications of neuroanatomy concepts. *Lecture-laboratory. Spring. 2.5 credits*

### INDI 3110 Kinesiology

This course provides for an analysis of human motion including kinematic and kinetic analysis, muscle action, arthrokinematics and osteokinematics, and the biomechanical principles of human motion. The information presented in this course builds upon the knowledge gained in “Human Gross Anatomy.” This course forms an important foundation for students’ analysis and synthesis of how the body moves through space, and the specific internal and external constraints on the body. This foundation will be essential for all clinical courses in physical therapy. Classroom instruction includes traditional lecture, interactive lecture, and demonstrations of biomechanical principles. *Lecture. Fall. 3 credits*

### INDI 5002 Kinesiology

This course consists of the study of human movement. Principles of biomechanics, kinematics, and kinetics are applied to students’ foundations in musculoskeletal anatomy. Kinetic and kinematic analysis of normal and abnormal movement. Additional lab and/or journal club component provides application to occupational therapy practice. *Lecture. Fall. 3 credits*

### INDI 5100 Research Methods

This course is an introduction to designing and critiquing research studies in the allied health professions. Lectures include the fundamentals of defining research problems, conducting literature reviews, selecting appropriate quantitative or qualitative designs, adhering to research ethics, designing studies, and collecting and analyzing data. In a separate program seminar, students apply general research concepts to the occupational therapy profession and research principles to the use of standardized testing in occupational therapy. *Lecture-seminar. Fall. 2.5 credits*

### INDI 5012/5014\* Brooklyn Free Clinic Experience

This elective course is designed to provide a community service experience for undergraduate and graduate CHRP students. Registered students may participate by providing clerical and administrative duties and health care services related to their professions, including patient evaluation, taking vital signs, obtaining patient histories, performing physical exams and providing patient management services under supervision. *1 credit*

### MSCI 3211 Medical Sciences

This course involves the study of patients with medical, neuromuscular, musculoskeletal, and cardiopulmonary conditions across the lifespan. Lecture, case-study presentations, and discussion of etiology, symptoms, and medical management of patients by faculty from the College of Medicine and College of Health Related Professions. This course is divided into four modules: Pediatrics, Medicine, Neurology, and Orthopedics. Each module is worth one credit.

The Medicine Module is one of four

course modules that constitute Medical Sciences. This course module provides Physical Therapy and Occupational Therapy students with an understanding of a wide variety of medical conditions. The etiology of these conditions and their treatment are discussed. The role of the Physical Therapist and Occupational Therapist in recognizing these conditions and how they may affect rehabilitation will be discussed.

The Pediatrics Module is one of four course modules that constitute Medical Sciences. This course module provides Physical Therapy and Occupational Therapy students with an understanding of several developmental disorders of children, as well as child abuse, well baby care, and common pediatric illnesses. The etiology of these conditions and their treatment are discussed. The role of the Occupational Therapist and Physical Therapist in recognizing these conditions and how they may affect rehabilitation, as well as further development of children in adolescence, will be discussed.

In the Neurology Module of Medical Sciences, students learn to discriminate between different neurological signs and symptoms associated with different neurological disease processes occurring at the peripheral, central and autonomic levels of the nervous system. The course is taught using a lecture/discussion format and case examples.

In the Orthopedics Module of Medical Sciences, students will apply their prior knowledge about biomechanics of the musculoskeletal system to understand key principles and procedures in the medical diagnosis and management of common orthopedic conditions. *Lecture. Spring. 4 credits.*

### MSCI 4100 Research Methods

This course is an introduction to designing and critiquing research studies in the allied health professions. Lecture includes the fundamentals of defining a research problem, constructing a rationale, conducting a literature review, formulating hypotheses, designing a study, measuring variables, selecting a sample and analyzing data. In separate program seminars, students apply general research concepts to their individual professions. *Lecture-seminar. Fall. 2.5 credits*

### MSCI 5211 Medical Sciences

This course involves lectures, case-study presentations and discussion of etiology, symptoms and medical management of patients with medical, pediatric, orthopedic, and neurological diagnoses. *Lecture. Spring. 4 credits.*

### PHTH 3303 Research Methods and Evidence-Based Practice

This course involves the designing and critiquing of research studies in the health professions. Lectures include the fundamentals of defining a research problem, constructing a rationale, conducting a literature review, formulating hypotheses, designing a study, measuring variables, selecting a sample and analyzing data. In a separate program seminar, students critique literature and apply general research concepts to the physical therapy profession. This course forms the research foundation for the final research project that will be undertaken in Research Study I-V. The students use their knowledge gained from Human Gross Anatomy, Professional Development I and Clinical Decision-Making, as well as from courses taken concurrently, such as Kinesiology, Physical Therapy Examination I, and Patient/Client Management I and II, to understand concepts gleaned from the physical therapy literature. *Lecture/seminar. Fall. 2.5 credits*

### PHYS 3110 Principles of Human Physiology and Biochemistry

A study of basic physiological and biochemical principles governing the properties of living tissue and their participation in the coordinated function and control of various systems of the body (cardiovascular, respiratory, excretory, digestive, nervous and endocrine) with emphasis on the underlying unity of biological processes in response to and adjustment to environmental change.

Physiology is defined as the science that deals with the functions of the body. It logically follows, therefore, that a sound, comprehensive knowledge of human physiology should occupy a significant part of the academic training of personnel in medicine and related fields. It is essential, if these personnel are to understand and carry out effectively their designated responsibilities in their respective professions. *Lecture/laboratory. Fall. 6.0 credits*

### PSYH 5111 Psychiatry

This course provides a comprehensive overview of psychiatric diagnose and symptom complexes of children and adults. Students are introduced to various modalities of treatment and clinical reasoning, with emphasis on the biopsychosocial dimensions relevant to occupational and physical therapy. Case assignments apply course content relevant to occupational and physical therapy practice. *Lecture. Fall. 2 credits*

### PUBH 5102 Health Care Across the Lifespan

This course is designed to examine health care from infancy to old age.

Selected models are presented for understanding development processes as an individual ages. These models will be drawn from disease states as they evolve across the lifespan. That knowledge will be applied to issues of health maintenance and disease prevention. Introduction to public health topics related to human health and disease, including a review of anatomy, physiology, and pathology of selected organ systems and associated diseases will be discussed. *Lecture. 3 credits*



# Teaching Facilities

The classroom and laboratory facilities of the College of Health Related Professions are located in both the Health Science Education Building (395 Lenox Road) and the Basic Sciences Building (450 Clarkson Avenue). Clinical content is taught at SUNY Downstate Medical Center's University Hospital of Brooklyn, Kings County Hospital Center, and a large network of affiliated hospitals and community health facilities.

## ADVANCED LEARNING RESOURCE CENTER (ALRC)

Located on the sub-floor of the Medical Library, the ALRC provides immersive and simulation-based educational programs for students, clinical trainees, and faculty. High-fidelity mannequins permit identification of pathologic physical exam findings and foster the development of clinical reasoning and procedural skills in a zero-fault environment.

Partial Task Trainers allow trainees to practice specific skills such as endotracheal intubation, central and peripheral line placement, pericardiocentesis, transvenous pacemaker insertion, and other invasive procedures. Compact ultrasound systems and tissue phantoms permit trainees to learn and practice ultrasound-guided techniques for invasive procedures such as thoracentesis, paracentesis, vascular access, and regional anesthesia.

A live Standardized Patient Program involving trained actors who play the role of patients, family members, and others fosters history taking, physical exam, and communication skills.

## COLLEGE COMPUTER LABORATORY

The College of Health Related Professions computer lab is equipped with a laser printer and 24 PCs. Students can use Microsoft Office applications (Word, Excel, and PowerPoint) to create documents, spreadsheets, and slide presentations. In addition, students have fast access to the Internet via the campus network. SPSS and SAS are available throughout the campus.

Each student is issued an email account that can be used for local and Internet messages. The computer lab is open 24 hours, seven days a week for CHRP students. A basic orientation to the computers and the network is offered at the beginning of each semester.

The Medical Informatics Program also has a dedicated computer lab on the 8th floor of the Education Building. The lab has 20 stations, fully equipped with software programs specific to the educational needs of students in this master's program. In this lab, eClinical Works is available for the Medical Informatics students to be able to practice with the Electronic Medical Record.

## OTHER LABORATORY FACILITIES

Many programs offer specially equipped laboratories. They include:

### Diagnostic Medical Imaging Laboratory

This lab houses ultrasound machines, phantom trainers, and a unique collection of models for teaching sectional anatomy.

### Midwifery Classroom/Laboratory

This facility is equipped with gynecologic examining tables, lights, and screens to enable students to learn and practice physical and pelvic assessments in a comfortable, private space.

### Occupational Therapy Laboratory

Adapted computer workstations with assistive technology software, current assessment tools, activities of daily living assistive devices, state-of-the-art sensory processing equipment, and a sensory room are used for teaching and research.

### Physical Therapy Research Laboratory

Equipped with a full range of advanced assessment tools, the laboratory is a resource for students pursuing independent study or research. Students also have access, with faculty supervision, to the Human Performance Laboratory in the Department of Orthopedic Surgery and Rehabilitation Medicine.

### Physician Assistant Classroom/Laboratory

This facility is equipped with examination tables, screens, models, and medical office equipment to enable students to learn and practice physical exam assessments, venipuncture, IV and Foley catheter placements, suturing, casting, and other diagnostic and therapeutic procedures under faculty supervision. Students also practice in the ALRC Simulation Center.

# Clinical Care Facilities

Allied health students receive their clinical training at SUNY Downstate's University Hospital of Brooklyn and at affiliated institutions and sites throughout the metropolitan area. Clinical sites used in the teaching program may vary from year to year.

## UNIVERSITY HOSPITAL OF BROOKLYN

University Hospital of Brooklyn (UHB) is the 376-bed plus 30-bassinets teaching hospital of SUNY Downstate Medical Center and is integral to the clinical education provided to students. As the regional center for Brooklyn and Staten Island, UHB provides, on average, care to approximately 16,000 inpatients and nearly 360,000 visits in its on-site Outpatient Department, Dialysis Center, and offsite ambulatory care centers. More than 71,000 visits are made to UHB's Emergency Department yearly. UHB is a full-service hospital fully accredited in all medical subspecialties.

University Hospital of Brooklyn is a regional provider of outstanding primary and advanced medical care. The cardiothoracic surgery, cardiovascular medicine, and interventional cardiology programs at UHB are among the leading cardiac-care teams in Brooklyn.

As part of an academic medical center, UHB has several specialized programs that support its Children's Hospital and enable it to excel among pediatric services in Brooklyn and New York. The hospital is the designated Regional Perinatal Center for Brookdale, Interfaith, Lenox Hill, and Long Island College Hospitals. UHB's Pediatric Kidney Center is the second-largest facility for pediatric dialysis in the state.

UHB's integration with the College of Medicine has made it possible to assemble a full-time staff of clinicians, basic

scientists, and other health-care professionals who have strong academic backgrounds in their fields of specialization. Faculty members closely supervise the care of patients while instructing allied health students along with medical and nursing students.

## KINGS COUNTY HOSPITAL CENTER

One of the largest acute-care hospitals in the country and the largest municipal hospital in New York City, with 43 acres and 23 buildings, Kings County Hospital Center offers clinical opportunities of every description. Operated by the Health and Hospitals Corporation of the City of New York, Kings County recently completed a state-of-the-art 338-bed inpatient tower as part of its modernization project. Its facilities include one of the country's busiest emergency rooms, a nationally recognized Level I trauma center, and more than one hundred ambulatory care services.

## MEDICAL CENTER, HEALTH AGENCIES, AND CLINICAL SITES

Complementing the clinical experiences available at University Hospital of Brooklyn and Kings County Hospital Center, the College of Health Related Professions maintains affiliations with a broad network of community agencies and hospitals, as detailed in the box "Medical Centers, Health Agencies, and Clinical Sites" in the pages that follow.

## CLINICAL AFFILIATES

5th Avenue Diagnostic.....	New York.....	NY
93-17 Medical Office, PC/Alain Sosa, MD.....	Elmhurst.....	NY
A Place for Kids.....	NewYork.....	NY
Abilities in Action.....	Oceanport.....	NJ
Access Physical Therapy & Wellness.....	Armonk.....	NY
Achieve Physical Therapy.....	Hewlett.....	NY
ACLD Kramer Learning Center.....	Bay Shore.....	NY
Adam I. Cohen, DPT, PC.....	South Ozone Park.....	NY
Advantage Care.....	New York.....	NY
Ahava Medical and Rehabilitation Center.....	Brooklyn.....	NY
Albert Einstein Hospital.....	Bronx.....	NY
All Children’s Therapy c/o Bernadette Tompkins OTR.....	Woodmere.....	NY
Allcare Physical Therapy.....	Brooklyn.....	NY
Alternatives for Children.....	East Setauket.....	NY
Apex Laboratory, Inc.....	Farmingdale.....	NY
Archcare at Carmel Richmond Healthcare & Rehab Ctr.....	Staten Island.....	NY
Archcare at Kateri Residence.....	New York.....	NY
Ari Levine, PT, MSPT.....	Brooklyn.....	NY
Arthritis & Osteoporosis Center of Brooklyn Height.....	Brooklyn.....	NY
Artistic Quality Therapy Associates.....	New York.....	NY
Associated Therapies-Pediatrics.....	Massapequa.....	NY
Austin Area Birthing Center-Duval, WM Cannon, Manch.....	Austin.....	TX
Avalon Gardens Rehab & Health Care Center.....	Smithtown.....	NY
Bayview Nursing & Rehab Center.....	Island Park.....	NY
Bedford Medical Group-Emmanuel Valery, MD.....	Brooklyn.....	NY
Beis Rivka School.....	Brooklyn.....	NY
Bellevue Hospital Center (HHC).....	New York.....	NY
Beyond Basics Physical Therapy.....	New York.....	NY
Bezelel Nursing Home.....	Queens.....	NY
Birch Family Services at Nazareth Early Childhood Center.....	Brooklyn.....	NY
Block Institute.....	Brooklyn.....	NY
Blythedale Children Hospital.....	Valhalla.....	NY
Board of Cooperative Educational Services of Nassau County (BOCES).....	Holbrook.....	NY
Board of Cooperative Educational Services of Nassau County (BOCES).....	Wantagh.....	NY
Board of Cooperative Educational Services of Nassau County (BOCES).....	Westbury.....	NY
Body Owners Physical Therapy.....	Key West.....	FL
Bonnie Shams.....	Brooklyn.....	NY
Bronx-Lebanon Medical Center.....	Bronx.....	NY
Brookdale Hospital Medical Center.....	Brooklyn.....	NY
Brooklyn Birthing Center.....	Brooklyn.....	NY
Brownsville Community Development Corporation.....	Brooklyn.....	NY
Burke Rehabilitation Center.....	White Plains.....	NY
CAM-HELD Enterprise, Inc. dba Just Kids Early Lear ..	Middle Island.....	NY
Carillon Nursing Home and Rehabilitation.....	Huntington.....	NY
Catskill Rehabilitation and Sports Medicine.....	Harris.....	NY
Center for Human Development’s Institute for D.L.....	Springfield.....	MA
Center for Nursing & Rehabilitation.....	Brooklyn.....	NY
Center for Nursing Rehab.....	Jamaica.....	NY
Centers for Specialty Care.....	New York.....	NY
Central Park Physical Therapy-John Lanthrop.....	New York.....	NY
Chana Gelbfish, MD.....	Brooklyn.....	NY
Child Study Center.....	Staten Island.....	NY
Children’s Evaluation & Rehabilitation Center-RK.....	Bronx.....	NY
Children’s Heart Center at Ronald Regan UCLA Medical Center.....	Los Angeles.....	CA

Children’s Specialized Hospital-Ocean.....	Toms River.....	NJ
Cobble Hill Health Care Center.....	Brooklyn.....	NY
Coler Goldwater Memorial Hospital (HHC).....	Roosevelt Island.....	NY
Coler-Goldwater Specialty Hospital & Nursing (HHC).....	New York.....	NY
Community Physical Therapy.....	Forest Hills.....	NY
Community Physical Therapy of Brooklyn.....	Brooklyn.....	NY
Complete Women’s Imaging, PC.....	Oceanside.....	NY
Coney Island Hospital (HHC).....	Brooklyn.....	NY
Createabilities Occupational Therapy, PLLC.....	New York.....	NY
Crown Heights, PT, OT and SLP DBA Milestones.....	Brooklyn.....	NY
Cumberland Hospital (HHC).....	Brooklyn.....	NY
Cynergy Physical Therapy P.C.....	New York.....	NY
Department of Education.....	New York.....	NY
Department of Veteran’s Affairs (VA).....	Jamaica.....	NY
Department of Veterans Affairs (VA).....	Bronx.....	NY
Department of Veterans Affairs (VA).....	Brooklyn.....	NY
Derek Chung, MD.....	Brooklyn.....	NY
DeWitt Rehabilitation & Nursing Center.....	New York.....	NY
Diversified Ergonomics.....	New York.....	NY
Dogwood Therapy Services, Inc.....	Albuquerque.....	NM
Downtown Women’s OB-GYN Associates.....	New York.....	NY
Dr. Susan Smith McKinney Nursing & Rehab Center (HHC).....	Brooklyn.....	NY
Dr. William O. Benenson Rehab Pavillion.....	Flushing.....	NY
Duffy & Bracken Physical Therapy.....	New York.....	NY
Dynamic Solutions Pediatric.....	Brooklyn.....	NY
E.I. Preschool/JGB Education Services.....	New York.....	NY
Early Childhood Associates.....	New York.....	NY
Early Intervention Center of Brooklyn.....	Brooklyn.....	NY
East River Child Development Center.....	New York.....	NY
Echo Sono Labs.....	Brooklyn.....	NY
Eduglobal Associates (EA).....	Indiana.....	PA
Elizabeth Seton Pediatric Hospital.....	South Yonkers.....	NY
Elmhurst Hospital Center (HHC).....	Elmhurst.....	NY
EMH Physical Therapy.....	New York.....	NY
Emilia’s Kids.....	Elmhurst.....	NY
Empire State OTPC-Managed by Health South.....	Brooklyn.....	NY
Englewood Hospital and Medical Center.....	Englewood.....	NJ
Eurofitness Pediatric Rehabilitation Center.....	Brooklyn.....	NY
Evolve Physical Therapy and Sports Rehabilitation.....	Brooklyn.....	NY
Ezra Hatzvy Academy.....	Brooklyn.....	NY
Family Medical Practice, PC.....	Brooklyn.....	NY
Federation Employment & Guidance Services(FEGS) ...	Brooklyn.....	NY
FEGS Health and Human Services System.....	New York.....	NY
First Step Therapy, PLLC.....	Brooklyn.....	NY
Forrest View Nursing Home.....	Forest Hills.....	NY
Forward Physical & Occupaional Therapy, PLLC.....	Brooklyn.....	NY
Fox Rehabilitation.....	Cherry Hill.....	NJ
Full Circle Women’s Health LLP.....	White Plains.....	NY
Fulton Medical Plaza, PC.....	Brooklyn.....	NY
Fund for Public Health in New York, Inc/NYCDOH ...	New York.....	NY
GCP Management (Garden OBGYN).....	Garden City.....	NY
Gentle Care OB/GYN, PC.....	Lynbrook.....	NY
Gillen Brewer School.....	New York.....	NY
Golden Gate Rehabilitation & Health Care Center.....	Staten Island.....	NY
Gouverneur Health.....	New York.....	NY
Grace Plaza Nursing & Rehabilitation Center.....	Great Neck.....	NY
Gramercy Cardiac Diagnostic Services, PC.....	New York.....	NY

Greater Harlem Nursing Home.....	New York.....	NY
Green Chimneys.....	Brewster.....	NY
Greensboro Orthopedics.....	Greensboro.....	NC
Haiti Medical Missions-St. Charles Rehabilitation Center.....	Croix-des- Bouquets.....	Haiti, WI
Hand Therapy of Rockland, LLP.....	New York.....	NY
Hands on Health.....	Lynbrook.....	NY
Hands On Physical Therapy P. C.....	Astoria.....	NY
Harlem Hospital Center (HHC).....	New York.....	NY
HASC Woodmere.....	Woodmere.....	NY
HCR Healthcare, LLC.....	Toledo.....	OH
Health SOS Physical Therapy.....	New York.....	NY
Health South.....	Birmingham.....	AL
Healthcare Associates in Medicine.....	Staten Island.....	NY
Healthworks of Brooklyn.....	Brooklyn.....	NY
HeartShare Human Services of New York.....	Howard Beach.....	NY
Hebrew Academy for Special Children.....	Brooklyn.....	NY
Helen Hayes Hospital.....	West Haverstraw.....	NY
Helen Keller Services for the Blind: The Children’s Learning Center.....	Brooklyn.....	NY
Helping Hands Rehabilitation, LLC.....	Manalapan.....	NJ
Helping Hands Therapy Center.....	Brooklyn.....	NY
Henry R. Paul, MD.....	Brooklyn.....	NY
Hillsborough Board of Education.....	Hillsborough.....	NJ
Holy Name Medical Center.....	Teaneck.....	NJ
Home Physical Therapy Solutions.....	Hicksville.....	NY
Hospital for Special Surgery.....	New York.....	NY
Hudson Center for Women’s Health aka HVO Midwives.....	Nyack.....	NY
Imagine Academy for Autism.....	Brooklyn.....	NY
Infant and Child Learning Center @SUNY HSEB.....	Brooklyn.....	NY
Institute for Community Living, Inc.....	New York.....	NY
Institute of Continuous Learning @ SUNY HSEB/SLIP.....	Brooklyn.....	NY
Interfaith Medical Center.....	Brooklyn.....	NY
Irene Perloff, D.O., MD.....	Brooklyn.....	NY
Ironman Sports Medicine Institute at Memorial Hermann.....	Houston.....	TX
Isabella Geriatric Center Inc.....	New York.....	NY
J.F.K. Johnson Medical Center.....	Edison.....	NJ
Jackson Dermatology Associates.....	Brooklyn.....	NY
Jackson Developmental Center.....	Jackson Heights.....	NY
Jacobi Medical Center.....	Bronx.....	NY
JAG Physical Therapy.....	Cedar Knolls.....	NJ
Jamaica Hospital Medical Center.....	Jamaica.....	NY
Jamaica Hospital Women’s Health Center.....	Jamaica.....	NY
Jana Healthcare: Dr. Laila Farhat.....	Brooklyn.....	NY
Jayne Lewin Rich MPA, OTR/L.....	New York.....	NY
Jennifer Tucci.....	Greenvale.....	NY
Jersey City Medical Center.....	Jersey City.....	NJ
Jewish Home Lifecare, Harry and Jeanette Weinberg Campus, Bronx.....	Bronx.....	NY
Jewish Home Lifecare, Manhattan.....	New York.....	NY
John F. Kennedy Medical Center.....	Edison.....	NJ
Johnson Rehabilitation Institute.....	Edison.....	NJ
Keller Army Community Hospital.....	West Point.....	NY
Kessler Institute for Rehabilitation.....	Saddle Brook.....	NJ
Kessler Institute for Rehabilitation.....	West Orange.....	NJ
Kid Clan.....	Passaic.....	NJ
Kid Clan.....	Clifton.....	NJ
Kidabilities.....	Hawthorne.....	NY

KIDS Therapy Associates.....	San Diego.....	CA
Kings County Hospital Center (HHC).....	Brooklyn.....	NY
Kings Harbor Multi-Care Center.....	Bronx.....	NY
Kingsbrook Jewish Medical Center/ Rutland Nursing Home.....	Brooklyn.....	NY
Kingston University Kingston upon Thames Surrey KT1 1LQ.....	United Kingdom	
Kirby Forensic Psychiatric Center- Office of Mental Health.....	Wards Island.....	NY
Ladacin.....	Wanamassa.....	NJ
Lake View Rehabilitation and Care Center.....	Middle Island.....	NY
Lamm Preschool.....	Brooklyn.....	NY
League Treatment Center.....	Brooklyn.....	NY
Leba Therapeutic Services.....	Highland Park.....	NJ
Lenox Hill Hospital (NSLIJHS).....	New York.....	NY
Little Wonders.....	Glendale.....	NY
Long Beach Medical Center.....	Long Beach.....	NY
Long Beach Schools.....	Long Beach.....	NY
Long Island Sports and Physical Therapy.....	Garden City.....	NY
Loren Shlaes, OTR.....	New York.....	NY
Lourdes Hospital.....	Binghamton.....	NY
Lower East Side Service Center.....	New York.....	NY
Lutheran Augustana Home.....	Brooklyn.....	NY
Lutheran Family Health Centers.....	Brooklyn.....	NY
Lutheran Medical Center.....	Brooklyn.....	NY
Luzato Medical Group.....	New York.....	NY
Maimonides Medical Center.....	Brooklyn.....	NY
Malkah Kahn.....	Brooklyn.....	NY
Mamatoto Resource & Birth Centre.....	Belmont.....	Trinidad
Marcus Garvey Residential Rehab Pavilion.....	Brooklyn.....	NY
Mark Vaynkhadler, MD, FACOG.....	Jackson Heights.....	NY
Marmur Medical.....	New York.....	NY
Maurisha Dash.....	Brooklyn.....	NY
Melek Nathan.....	Brooklyn.....	NY
Memorial Hospital for Cancer & Allied Diseases.....	New York.....	NY
Menorah Center for Rehabilitation.....	Brooklyn.....	NY
Mercy Medical Center.....	Rockville Centre.....	NY
Mercy Midwives Women’s Health Center.....	Bronx.....	NY
Metro Athletic Medicine & Fitness P.C. d/b/a Metro Sports Med.....	Brooklyn.....	NY
MetroChildrens.....	Fresh Meadows.....	NY
Metropolitan Hospital Center (HHC).....	New York.....	NY
Metropolitan Hospital Center (HHC).....	Brooklyn.....	NY
Metropolitan Jewish Geriatric Center.....	Brooklyn.....	NY
MICCASS Physical Therapy.....	New York.....	NY
Michele Cohen, OTR.....	Brooklyn.....	NY
Midwood Physical Therapy.....	Brooklyn.....	NY
Milestones.....	Brooklyn.....	NY
Monmouth Medical Center.....	Long Beach.....	NJ
Monroe Physical Therapy & Wellness, Inc.....	Monroe.....	NY
Montefiore Medical Center.....	New York.....	NY
Montefiore Medical Center.....	Bronx.....	NY
Morris Heights Health Center.....	Bronx.....	NY
Mount Sinai Medical Center.....	New York.....	NY
Mozelle Tobias.....	Brooklyn.....	NY
Mt. Sinai Hospital.....	New York.....	NY
Mt. Sinai Roosevelt.....	New York.....	NY
Nassau Extended Care-A Holly Patterson.....	Hempstead.....	NY
Nassau University Medical Center.....	East Meadow.....	NY
Nathan Littauer Hospital.....	Gloversville.....	NY

Nesconset Center for Nursing & Rehabilitation .....Nesconset ..... NY  
New Rochelle Hospital Medical Center .....New Rochelle ..... NY  
New York Cardiovascular Associates, PLLC.....New York ..... NY  
New York City Board of Education .....New York ..... NY  
New York City Department of Health.....New York ..... NY  
New York City Health & Hospitals Corporation (HHC)..... NY  
New York Community Hospital.....Brooklyn..... NY  
New York Congregational Nursing Home.....Brooklyn..... NY  
New York Eye & Ear Infirmary .....New York..... NY  
New York Hospital at Queens-Dr. David Skupski.....Flushing..... NY  
New York Hospital of Queens-Out-Patient Site .....Fresh Meadows ..... NY  
New York Methodist Hospital .....Brooklyn..... NY  
New York Methodist Hospital Family Health Center-Emmanuel Valery, MD.....Brooklyn..... NY  
New York Presbyterian Hospital.....New York..... NY  
New York Presbyterian-Columbia UMC.....New York..... NY  
New York Sensation.....New York..... NY  
New York State Psychiatric Institute- Audubon.....New York..... NY  
New York University Hospital For Joint Diseases.....New York..... NY  
Newark Beth Israel Medical Center .....Newark..... NJ  
Newburgh Physical Therapy Center.....Newburgh..... NY  
Nexus Physical Therapy .....San Diego .....CA  
Nick Roselli Hand Therapy Rehab .....Fresh Meadows ..... NY  
North Central Bronx Hospital (HHC) .....Bronx..... NY  
North Eastern Network Wellness Center (Dr. Jean Baptiste) .....Brooklyn..... NY  
North General Hospital .....New York..... NY  
North Shore-Long Island Jewish Health System .....Great Neck ..... NY  
North Shore-Long Island Jewish Health System .....New Hyde Park..... NY  
Nostrand Medical Practice (Dr. Carey Daniel) .....Brooklyn..... NY  
NYU Hospitals Center (Joint Disease, Rusk, etc) .....New York..... NY  
O.T. Etc., Inc. ....San Diego .....CA  
Oak Hollow Nursing Center .....Middle Island ..... NY  
Oasis Orthopedic and and Spine Integrated Services .....Brooklyn..... NY  
Office of Chief Medical Examiner of the City of New York.....New York..... NY  
OMNI Managed Rehab Center .....Brooklyn..... NY  
Omni Rehabilitation Center .....Brooklyn..... NY  
Omnisound Services Inc. ....Elmont ..... NY  
On Our Way Learning Center.....Far Rockaway ..... NY  
On Our Way Learning Center.....Brooklyn..... NY  
One on One PT & Sports Rehabilitation (Bklyn & SJ)..Brooklyn..... NY  
One Step Beyond.....Staten Island..... NY  
Palladia Starhill, INC.....Bronx..... NY  
Pamela Lawton Hand & Upper Extremity Rehab.....Brooklyn..... NY  
Park Sports PT& Hand Rehabilitation .....Brooklyn..... NY  
Parker Jewish Institute for Health Care & Rehab .....New York..... NY  
Pathways OT Therapeutic Wellness/Ebert OT, LLC.....Brooklyn..... NY  
Pediatric Cardiology of Long Island.....Roslyn ..... NY  
Pediatric Early Development Services PC .....Jackson Heights..... NY  
Pediatric Occupational Therapy Services.....Teaneck ..... NJ  
Phelps Memorial Hospital Center .....Sleepy Hollow ..... NY  
Positive Beginnings Preschool.....Middle Village..... NY  
Power Play Clinical Services ACDS .....Plainview..... NY  
Premier Physical Therapy & Wellness .....New York..... NY  
Professional Orthopedic & Sports Physical Therapy.....New York..... NY  
Progressive Medical Solutions .....Brooklyn..... NY  
PSE&G Children's Specialized Hospital .....New Brunswick ..... NJ  
Public Health Solutions MIC-Women's Health Srvs.....New York..... NY  
Queens Centers for Progress .....Jamaica ..... NY

Queens Hospital Center (HHC).....Jamaica ..... NY  
Queens Long Island Medical Group .....Garden City..... NY  
Randee Handler .....Holloswood ..... NY  
Rattanjit S. Kohli, MD .....Brooklyn..... NY  
Ready, Set, Grow Pediatrics Occupational Therapy.....Rego Park..... NY  
Reddy-Care Physical Therapy .....Great Neck ..... NY  
Rehabilitation Associates of Brooklyn .....Brooklyn..... NY  
Richmond University Medical Center.....Staten Island..... NY  
River and Mountain .....New Paltz..... NY  
Roads to Recovery PROSE .....Hicksville..... NY  
Robert Wood Johnson University Hospital.....New Brunswick ..... NJ  
Robert Wood Johnson University Hospital @ Hamilton Hamilton ..... NJ  
Robin Appel.....Jamaica ..... NY  
Rochelle Adler, MS, OTR .....Far Rockaway ..... NY  
Rochester General Hospital.....Rochester..... NY  
RPT Physical Therapy .....Brooklyn..... NY  
San Diego Occupational Therapy .....San Diego .....CA  
Seaview Hospital Rehabilitation Center & Home-HHC Staten Island..... NY  
Sensory Freeway Therapy Center.....Brooklyn..... NY  
Sensory Street Pediatric Occupational Therapy, P.C.....Brooklyn..... NY  
Shorefront Jewish Geriatric Center .....Brooklyn..... NY  
South Beach Psychiatric Center-Office of M.H. ....Staten Island..... NY  
South Shore Hand Therapy & Occupational Therapy PL.....Merrick..... NY  
South Shore Midwives (formerly Gaia Midwifery).....Malvern ..... NY  
Special Program in Occupational Therapy Services.....Brooklyn..... NY  
Sports Physical Therapy, PC.....New York ..... NY  
Sports Plus Hand Center .....North Charleston ..... SC  
Sports Therapy and Rehabilitation-STAR Physical Therapy .....New York..... NY  
SportsCare Institute .....Cedar Knolls..... NJ  
Spring Creek Rehabilitation & Nursing Care Center.....Brooklyn..... NY  
St. Charles Hospital (Catholic Health Services of Long Island) .....Port Jefferson..... NY  
St. Christopher's Hospital for Children .....Philadelphia..... PA  
St. Francis Hospital (see Catholic Health Services, LI)....Roslyn ..... NY  
St. Luke's-Roosevelt Hospital Center .....New York..... NY  
St. Mary's Hospital .....Bayside ..... NY  
St. Mary's Hospital (Passaic).....Passaic ..... NJ  
St. Mary's Hospital for Children.....Bayside ..... NY  
Stanley Lamm Institute Preschool.....Brooklyn..... NY  
Staten Island University Hospital.....Staten Island..... NY  
Strivright Auditory Oral School of NY .....Brooklyn..... NY  
Strong Memorial Hospital University of Rochester.....Rochester..... NY  
Suite E: A Place For Kids.....New York ..... NY  
Summer Shepstone, OTR.....Chicago ..... IL  
Summit School .....Fresh Meadows ..... NY  
SUNY Stony Brook University Hospital.....Stony Brook ..... NY  
Susan Quintin, OTR/L.....Bayside ..... NY  
Susan Wagler .....Flushing..... NY  
Tender Touch Rehabilitation Services LLC .....Lakewood..... NJ  
The Brooklyn Hospital Center.....Brooklyn..... NY  
The Children's Evaluation and Rehabilitation Ctr.....Bronx..... NY  
The Foundling Hospital-Elizabeth Seton Children's.....New York..... NY  
The Hearing & Speech Agency of Grt Metro Baltimore. Baltimore..... MD  
The Mount Sinai Hospital.....New York ..... NY  
The Mount Sinai Hospital of Queens.....Long Island City..... NY  
The New York-Presbyterian Hospital .....New York..... NY  
The New York-Presbyterian Hospital / Weill Cornell.....New York..... NY  
The New York Hospital Medical Center of Queens .....Flushing..... NY

The Other Place.....New York ..... NY  
The Perfect Playground.....Staten Island..... NY  
The Rebecca School .....New York ..... NY  
The Regents of the University of California-San Diego ..San Diego .....CA  
The Riverside Premier Rehabilitation and Health CenterNew York ..... NY  
The Talcott Center for Child Development.....Farmington..... CT  
Therapeutic Resources .....Long Island City..... NY  
Thomas N. Koutelos, MD.....Brooklyn..... NY  
Tiny Tots Therapy.....Scotch Plains ..... NJ  
TIRR Memorial Hermann.....Houston .....TX  
Total Vascular Care .....Brooklyn..... NY  
U.S. Athletic Training Center .....New York ..... NY  
United Cerebral Palsy-NYC, Inc. ....New York ..... NY  
United Cerebral Palsy of Greater Suffolk, Inc. ....Commack..... NY  
United Cerebral Palsy of Nassau County, Inc. ....Roosevelt ..... NY  
United Memorial Medical Center.....Batavia..... NY  
Unity Health System.....Rochester..... NY  
University Hospital of Brooklyn .....Brooklyn..... NY  
UOA Physical Therapy .....Brooklyn..... NY  
VA Boston Healthcare System .....Boston .....MA  
Village Care Rehabilitation and Nursing Center.....New York ..... NY  
Village Center for Care .....New York ..... NY  
Visiting Nurse Service of Brooklyn .....Brooklyn..... NY  
Visiting Nurse Service of New York.....New York ..... NY  
Volunteers of America Staten Island Early Learning .....Staten Island..... NY  
Volunteers of America-Bronx Early Learning Center .....Bronx..... NY  
Watch Me Grow.....New York ..... NY  
Waters Edge Healing Occupational Therapy .....Astoria ..... NY  
Wayne ARC.....Newark..... NY  
Weill Cornell Medical College (School/not Hosp.).....New York ..... NY  
Westchester Medical Center.....Valhalla..... NY  
WestMed Medical Group .....Purchase ..... NY  
Whitestone School for Child Development .....Whitestone ..... NY  
Windsor Physical Therapy .....Brooklyn..... NY  
Winthrop University Hospital .....Mineola ..... NY  
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Woodmere Rehabilitation & Health Care Center.....Woodmere..... NY  
Workman Circle Multicare Center .....Bronx..... NY  
WSPT Physical Therapy .....Bronx..... NY  
WSPT Physical Therapy .....Yonkers..... NY  
Wyckoff Heights Hospital .....Brooklyn..... NY  
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\*no students until January 2016 .....College Point..... NY  
Yeled V'Yalda (PT & OT) .....Brooklyn..... NY  
Yeshivah of Flatbush .....Brooklyn..... NY  
Yolanda Delgado.....Jamaica ..... NY  
Yorkville Physical Therapy .....New York ..... NY

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*Dean*

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Clinical Assistant Professor  
Physical Therapy*

\* As of August 2015

# State University of New York

The State University of New York's geographically dispersed campuses bring educational opportunity within commuting distance of virtually all New Yorkers and make up the nation's most diverse system of public higher education.

The State University of New York's 64 campuses are divided into four categories, based on educational mission, the kinds of opportunities available, and degrees offered.

SUNY offers students a wide diversity of educational options: short-term vocational/technical courses, certificate programs, associate degree programs, baccalaureate degree programs, graduate degrees, and postdoctoral studies. SUNY offers access to almost every field of academic or professional study somewhere within the system—some 6,688 degree and certificate programs overall.

Students pursue traditional study in classrooms and laboratories or work from home, at their own pace, through such innovative institutions as the SUNY Learning Network and Empire State College.

SUNY's students are predominantly New York State residents, representing every one of the state's 62 counties. SUNY students also come from every other state in the United States, from four U.S. territories or possessions, and 171 foreign countries.

SUNY enrolls 40 percent of all New York State high-school graduates, and has a total enrollment of nearly 468,000 students.

SUNY students represent the society that surrounds them. More than 21 percent of all students are minorities.

SUNY numbers more than 3 million graduates on its rolls. The majority of SUNY's alumni resides and pursues careers in communities across New York State, contributing to the economic and social vitality of its people.

SUNY is committed to bringing its students the very best and brightest scholars, scientists, artists, and professionals. SUNY campuses boast nationally and internationally recognized figures in all the major disciplines. Their efforts are regularly recognized in numerous prestigious awards and honors.

# State University Campuses

## University Centers

University at Albany  
University at Binghamton  
University at Buffalo  
University at Stony Brook

## University Colleges

College at Brockport  
College at Buffalo  
College at Cortland  
Empire State College  
College at Fredonia  
College at Geneseo  
College at New Paltz  
College at Old Westbury  
College at Oneonta  
College at Oswego  
College at Plattsburgh  
College at Potsdam  
College at Purchase

## Health Science Centers

Health Science Center at Brooklyn (SUNY Downstate)  
Health Science Center at Syracuse (Upstate Medical University)  
Health Science Center at Buffalo\*  
Health Science Center at Stony Brook\*

## Colleges of Technology

College of Technology at Alfred  
College of Technology at Canton  
College of Agriculture and Technology at Cobleskill  
College of Technology at Delhi  
College of Technology at Farmingdale  
College of Agriculture and Technology at Morrisville  
Institute of Technology at Utica (SUNYIT)

## Specialized Colleges

College of Environmental Science and Forestry  
Maritime College  
College of Optometry

## Statutory Colleges \*\*

New York State College of Agriculture and Life Sciences at Cornell University  
New York State College of Ceramics at Alfred University  
New York State College of Human Ecology at Cornell University  
New York State School of Industrial and Labor Relations at Cornell University  
New York State College of Veterinary Medicine at Cornell University

## Community Colleges

Adirondack Community College at Glens Falls  
Broome Community College at Binghamton  
Cayuga County Community College at Auburn  
Clinton Community College at Plattsburgh  
Columbia-Greene Community College at Hudson  
Corning Community College at Corning  
Dutchess Community College at Poughkeepsie  
Erie Community College at Buffalo, Orchard Park, and Williamsville  
Fashion Institute of Technology at New York City  
Finger Lakes Community College at Canandaigua  
Fulton-Montgomery Community College at Johnstown  
Genesee Community College at Batavia  
Herkimer County Community College at Herkimer  
Hudson Valley Community College at Troy  
Jamestown Community College at Jamestown  
Jefferson Community College at Watertown  
Mohawk Valley Community College at Utica  
Monroe Community College at Rochester  
Nassau Community College at Garden City  
Niagara County Community College at Sanborn  
North Country Community College at Saranac Lake  
Onondaga Community College at Syracuse  
Orange County Community College at Middletown  
Rockland Community College at Suffern  
Schenectady County Community College at Schenectady  
Suffolk County Community College at Brentwood, Riverhead, and Selden  
Sullivan County Community College at Loch Sheldrake  
Tompkins Cortland Community College at Dryden  
Ulster County Community College at Stone Ridge  
Westchester Community College at Valhalla

\*The Health Science Centers at Buffalo and Stony Brook are operated under the administration of their respective university centers.

\*\*These operate as contract colleges on the campuses of independent universities.

## EDUCATIONAL RIGHTS\*

The Family Educational Rights and Privacy Act of 1974 protects the rights of students to inspect and review certain educational records and prohibits the non-consensual release of personally identifiable information from such records which is not “directory information.” Students currently enrolled at Downstate may object to the release of certain categories of directory information pertaining to them by providing written notification to the Dean’s Office of their college within 14 days following the first day of classes. The categories of directory information at Downstate are:

- Name address, telephone numbers, dates of attendance
- Previous institutions, major field of study, degrees conferred
- Past and present participation in officially recognized activities, student photo, date and place of birth

The failure of any student to object specifically to the release of certain or all categories of directory information within the time indicated is interpreted as approval. Please see policy “Family Education Right and Privacy Act” in the *Student Handbook* for further information.

## EDUCATION LAW

The following applies to students who are unable to attend classes on certain days because of their religious beliefs: Sect. 224-a. (New York State Education Law).

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that s/he is unable, because of religious beliefs, to register or attend classes or to participate in an examination, study, or work requirement on a particular day or days

2. Any student in an institution of higher education who is unable, because of his or her religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school because of his or her religious beliefs an equivalent opportunity to register for classes or make up an

examination, study, or work requirements which he or she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If registration, classes, examinations, study, or work requirements are held on Friday after 4:00 p.m. or on Saturday, similar or makeup classes, examination, study, or work requirements, or opportunity to register shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements or registration held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his or her availing himself or herself of the provision of this section.

6. Any student who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section shall be entitled to maintain an action or proceeding in the supreme court of the country in which such institution of higher education is located for the enforcement of his or her rights under this section.

6-a. It shall be the responsibility of the administrative officials of each institution of higher education to give written notice to students of their rights under this section, informing them that each student who is absent from school, because of his or her religious beliefs, must be given an equivalent opportunity to register for classes or make up any examination, study or work requirements which he or she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to such student such equivalent opportunity.

7. As used in this section, the term “institution of higher education” shall mean any institution of higher education, recognized and approved by the Regents of the University of the State of New York, which provides a course of study leading to the granting of a post-secondary degree or diploma. Such term shall not include any

institution which is operated, supervised or controlled by a church or by a religious denominational organization whose education programs are principally designated for the purpose of training ministers or other religious functionaries or for the purpose of propagating religious doctrines. As used in this section, the term “religious belief” shall mean beliefs associated with any corporation organized and operated exclusively for religious purposes, which is not disqualified for tax exemption under section 501 of the United States Code.

\* See the Student Handbook for a full description of student rights.

SUNY Downstate Medical Center reserves the right to alter the existing rules and regulations, and academic programs, as deemed necessary by the institution. SUNY Downstate Medical Center expressly reserves the right, whenever deemed advisable: (1) to change or modify its schedule of tuition and fees; (2) to withdraw, cancel, or reschedule, or modify any course, program of study, degree or any requirement or policy in connection with the foregoing; and (3) to change or modify any academic or other policy.

Essential changes of information in this Bulletin concerning new academic regulations, policies, or programs will be published in newsletters or other University publications. It is the responsibility of each student to ascertain current information that pertains to the individual’s program, particularly with regard to satisfaction of degree requirements by consultation with the student’s advisor, the student’s program, the office of the student’s dean, the Office of Student Affairs, the Registrar’s Office, and other offices as appropriate. In preparing this Bulletin, every effort has been made to provide pertinent and accurate information; however, SUNY Downstate Medical Center assumes no liability for Bulletin errors or omissions.

The State University of New York Downstate Medical Center does not discriminate on the basis of race, sex, sexual orientation, color, creed, age, national origin, handicap, religion, marital status or status as a disabled veteran or veteran of the Vietnam era in the recruitment and employment of faculty or staff, in the recruitment of students, or the operation of any of its programs and activities, as specified by Federal and State laws or regulations. Applications are encouraged and welcomed from New York State residents, out-of-state students, and from members of underrepresented minority groups. New York State residents receive preference for admission.

# State University of New York Downstate Medical Center (Health Science Center at Brooklyn)

## SUNY DOWNSTATE MEDICAL CENTER

450 Clarkson Avenue  
Brooklyn, NY 11203

- College of Medicine
- School of Graduate Studies
- School of Public Health
- College of Health Related Professions
- College of Nursing

## ADMISSIONS

**College of Health Related Professions**  
Phone: (718) 270-2446; Fax: (718) 270-7592  
admissions@downstate.edu

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Midwifery: Midwifery.CHRP@downstate.edu

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The Bulletin is produced by the Office of Institutional Advancement, Office of Student Affairs, and the College of Health Related Professions.

Design: studiokat, llc

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## U

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## W

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Bookstore  
<http://www.downstate.edu/fsa/bookstore.html>  
Bursar’s Office, see Student Handbook, page 26  
<http://sls.downstate.edu/bursar/>

Academic Calendars  
<http://sls.downstate.edu/registrar/calendars.html>  
Office of Diversity, see Student Handbook, p 43  
<http://www.downstate.edu/diversity/index.html>

Faculty Student Association  
<http://www.downstate.edu/fsa/>

Financial Aid  
[http://sls.downstate.edu/financial\\_aid/](http://sls.downstate.edu/financial_aid/)

Library  
<http://library.downstate.edu/>

Programs of Study  
Diagnostic Medical Imaging  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/DMI-2015NEWProkofStudy\\_002.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/DMI-2015NEWProkofStudy_002.pdf)

Medical Informatics  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/MIMS-2015NEWProkofStudy.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/MIMS-2015NEWProkofStudy.pdf)

Midwifery – Master of Science  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/NEWNEWMidwifery-2015ProkofStudy\\_000.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/NEWNEWMidwifery-2015ProkofStudy_000.pdf)

Midwifery – Advanced Certificate  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/MW-C2015ProkofStudy.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/MW-C2015ProkofStudy.pdf)

Occupational Therapy  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/OT-SU2015ProkofStudy.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/OT-SU2015ProkofStudy.pdf)

Physical Therapy  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/PT-2015ProkofStudy\\_000.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/PT-2015ProkofStudy_000.pdf)

Physician Assistant  
[http://sls.downstate.edu/registrar/chrp/program\\_of\\_study/documents/PA-2015ProkofStudy\\_000.pdf](http://sls.downstate.edu/registrar/chrp/program_of_study/documents/PA-2015ProkofStudy_000.pdf)

Registrar, Office of  
<http://sls.downstate.edu/registrar/>

Residential Life  
[http://sls.downstate.edu/residential\\_life/](http://sls.downstate.edu/residential_life/)

Student Affairs, Office of  
[http://sls.downstate.edu/student\\_affairs/](http://sls.downstate.edu/student_affairs/)

Student Handbook  
[http://sls.downstate.edu/student\\_affairs/handbook.html](http://sls.downstate.edu/student_affairs/handbook.html)

Student Life  
<http://sls.downstate.edu/>

**Support Services for Students**  
Academic Development  
[http://sls.downstate.edu/academic\\_development/](http://sls.downstate.edu/academic_development/)

Minority Affairs  
[http://sls.downstate.edu/minority\\_affairs/](http://sls.downstate.edu/minority_affairs/)

Student Health  
[http://sls.downstate.edu/student\\_health/](http://sls.downstate.edu/student_health/)

Student Counseling  
[http://sls.downstate.edu/student\\_counseling/](http://sls.downstate.edu/student_counseling/)

Tuition and Fees (Bursar’s Office)  
[http://sls.downstate.edu/bursar/tuition\\_fees.html](http://sls.downstate.edu/bursar/tuition_fees.html)

University Police, see Student Handbook, p 45-46  
<http://www.downstate.edu/police/>