

BULLETIN 2000-2006

SUNY Downstate Medical Center

College of Medicine

Master of Public Health Program

School of Graduate Studies

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
- College of Health Related Professions
- College of Nursing

ADMISSIONS

College of Medicine/MD Degree; MPH Program

Box 60
(718) 270-2446
admissions@downstate.edu

School of Graduate Studies/PhD Degree; MD/PhD Program

Box 41
(718) 270-2740
Denise.Sheares@downstate.edu

FINANCIAL AID

Box 110
(718) 270-2488
finaid1@downstate.edu

ADDITIONAL INFORMATION

Office of Minority Affairs

Box 6
(718) 270-3033
oma@downstate.edu

Residential Life and Services

(718) 270-1466
residentiallife@downstate.edu

WEBSITE

www.downstate.edu

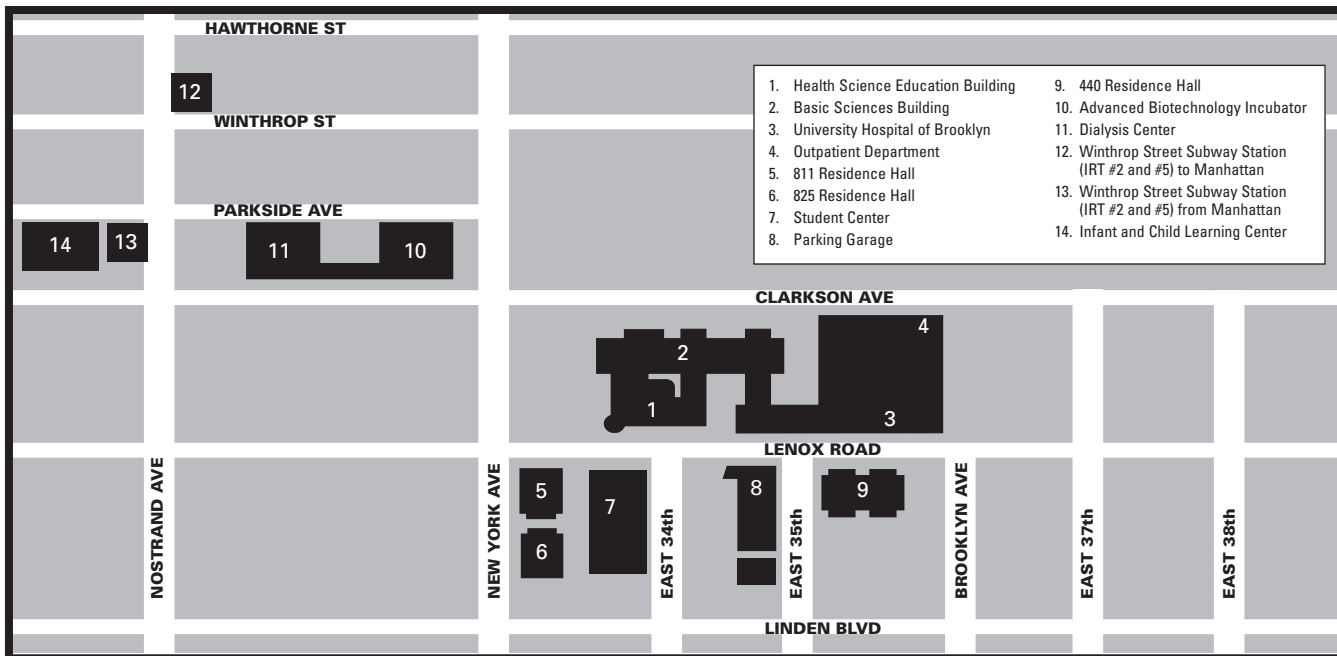
BULLETIN 2000-2006

SUNY Downstate Medical Center

College of Medicine

Master of Public Health Program

School of Graduate Studies



Transportation to the SUNY Downstate College of Medicine

SUNY Downstate is located at 450 Clarkson Avenue, just off New York Avenue.

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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Administration

BOARD OF TRUSTEES

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Vice Chair

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Aminy I. Audi

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Lou Howard

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Vice Chancellor and Secretary of the University

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Madgie A. Ford

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Constance Shames, MD

Alumni Representative

Michael Pettei

Student Representative

Trisa Campbell

Nonvoting Student Representative

SUNY DOWNSTATE ADMINISTRATION

John C. La Rosa, MD

President

Eugene B. Feigelson, MD

*Senior Vice President for Biomedical Education
and Research and Dean, College of Medicine*

Ivan M. Lisnitzer, PE

*Executive Vice President and Chief Operating
Officer*

JoAnn Bradley, EdD

*Senior Vice President for Institutional
Advancement and Philanthropy / Vice
President for Academic Affairs*

Frederick J. Hammond

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Robert P. Jacobs, MD

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Interim Vice President for Facilities

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President for Operations, University Hospital
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*Vice President for Biotechnology and Scientific
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Richard Freeman, MD

*Chief Medical Officer, University Hospital of
Brooklyn*

Stephan Kass

Vice President for Human Resources

Renée Poncet

*Vice President for Compliance and Audit
Services*

Grace Wong

*Vice President for Managed Care and Clinical
Business Plan Development*

COLLEGE OF HEALTH RELATED PROFESSIONS

Dawn Morton-Rias, PD, RPA-C

Dean

COLLEGE OF MEDICINE

Eugene B. Feigelson, MD

Dean

COLLEGE OF NURSING

Daisy Cruz-Richman, PhD, RN

Dean

SCHOOL OF GRADUATE STUDIES

Susan Schwartz-Giblin, PhD

Dean

Lists as of 1/20/05

SUNY Downstate Medical Center

EDUCATIONAL MISSION STATEMENT

SUNY Downstate's Colleges of Medicine, Health Related Professions, and Nursing, and its School of Graduate Studies 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—officially, the State University of New York Health Science Center at Brooklyn—is one of the nation's leading urban medical centers. Part of the 64-campus system of the State University of New York, Downstate is the major provider of medical education, health care, and research for New York City's Brooklyn and Staten Island communities.

Located on a 13-acre urban campus in the East Flatbush section of Brooklyn, Downstate is composed of the College of Medicine, the School of Graduate Studies, the College of Nursing, the College of Health Related Professions, a major research center, and the 376-bed University Hospital of Brooklyn. BS, MS, MPH, MD, and PhD degrees are granted. Downstate has a student body of 1,350, a faculty of 3,500 (including full-time, part-time, and voluntary staff), and support staff of 3,700.

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 (see "The Founding of Downstate Medical Center"). In 1931 the school was rechartered as the Long Island College of Medicine, with affiliated hospitals throughout Brooklyn.

The "Downstate" era began in 1950, with the merger of the Long Island College of Medicine and the newly constituted State University of New York. In 1985, the school celebrated the 125th anniversary of the College of Medicine, at which time the institution was formally renamed the State University of New York Health Science Center at Brooklyn, a name that reflects the full scope of its activities. However, the school continues to be known as "Downstate"—in the community, by students, as well as faculty and alumni.

SUNY DOWNSTATE COLLEGE OF MEDICINE

The College of Medicine grants the MD degree; it also sponsors, with the School of Graduate Studies, a combined MD/PhD degree. The College of Medicine curriculum is organ-based. The first two years emphasize the study of the basic sciences, while the third and fourth year are primarily devoted to clinical medicine. The curriculum includes a clinical medicine component beginning in the first year that introduces students to ambulatory patient care and clinical skills development. In the third and fourth years, the emphasis is on clinical medicine, but an advanced science component is included and time is provided for students to pursue their research interests.

Downstate also grants the MPH degree. The Master of Public Health Program is currently housed in the Department of Preventive Medicine and Community Health in the College of Medicine.

SCHOOL OF GRADUATE STUDIES

The School of Graduate Studies offers three PhD degree-granting programs: Molecular and Cellular Biology, Neural and Behavioral Science, and a joint PhD program in Biomedical Engineering in collaboration with the Brooklyn campus of Polytechnic University. Students should consult the website www.downstate.edu/grad for the most recent information on program offerings.

ACCREDITATION

SUNY Downstate is accredited by the Middle States Commission on Higher Education. The College of Medicine is fully accredited by the Liaison Committee on Medical Education.

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

es 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 hospital. 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.

College of Medicine

MD DEGREE

- Admissions
- Tuition and Fees
- Student Financial Aid
- Academic Program
- Clinical Care Facilities
- Support Services for Students
- Other Organizations on Campus
- Academic Policies

Admissions

Admission information is revised annually and is available in the *Medical School Admissions Requirements Handbook*, published annually by the Association of American Medical Colleges, and from SUNY Downstate Medical Center's Admissions Office. Current information about Downstate's admissions procedures, requirements, and policies are available on its website: www.downstate.edu.

ADMISSIONS POLICY

The Committee on Admissions considers the total qualifications of each applicant without regard to sex, race, color, creed, national origin, religion, age, sexual orientation, marital status, or disability. Decisions regarding admission are based on multiple factors, including prior academic performance; completion of the courses required for admission; potential for academic success, including performance on such standardized tests as the Medical College Admission Test (MCAT); communication skills; character; personal skills; health-related experiences; and motivation for medicine.

Admissions preference is given to New York State residents, although qualified out-of-state residents are encouraged to apply and are accepted. Applications from women and members of groups underrepresented in medicine are welcomed and encouraged.

REQUIREMENTS FOR ADMISSION

An applicant must have completed at least 90 semester credits of study from a Council for Higher Education Accreditation (CHEA) regionally accredited (e.g., Middle States Commission on Higher Education) college or university. Admissions preference is also given to applicants who have earned or will have earned a bachelor's degree in a regionally accredited college or university.

STUDENTS EDUCATED ABROAD

For students educated abroad, a minimum of two full-time semesters (one academic year) of college study at an accredited college or university in the United States or Canada prior to application is required. In addition, applicants must demonstrate English profi-

PREREQUISITE COURSES

Prerequisite courses required for entrance into SUNY Downstate College of Medicine include:

Courses

| | |
|--|--------------------|
| English* | 6 semester credits |
| General Biology or Zoology, including labs | 8 semester credits |
| General Physics, including labs | 8 semester credits |
| Inorganic Chemistry, including labs | 8 semester credits |
| Organic Chemistry, including labs | 8 semester credits |

** In general, the Committee on Admissions does not accept English courses taken abroad to fulfill the English admissions requirement. Courses that have the English department prefix are accepted to fulfill the English requirement. If the college or university accepts other courses to fulfill writing or English requirements, or a student has taken an interdisciplinary course, the applicant should include a letter from the college stating this information with the Supplemental Application form.*

The College of Medicine is fully accredited by the Liaison Committee on Medical Education.

ciency, both verbally and in writing, if their prior medium of instruction was in another language.

If a substantial amount of a student's education was completed abroad, or if science prerequisites were completed abroad, he or she must submit an educational credentials evaluation from an approved agency (National Association

of Credential Evaluation Services) to enable the Committee on Admissions to assess prior academic performance. A list of approved agencies is available from the Admissions Office.

The Committee on Admissions looks favorably on a program of study that includes at least one year of college mathematics and advanced science sub-

jects; a course in biochemistry is strongly recommended. Other desirable courses include anatomy, physiology, histology, cell biology, and neuroscience. The Committee on Admissions also seeks individuals who have a demonstrated commitment to community and social-service outreach activities.

APPLICATION PROCEDURES

How to Apply

SUNY Downstate participates in the American Medical Colleges' Application Service (AMCAS) system. Applicants should complete the AMCAS web application at www.amcas.org.

AMCAS

Section for Student Services
Association of American Medical Colleges
2501 M Street, NW, Lobby-26
Washington, DC 20037-1300
(202) 828-0600

www.amcas.org

Early application is strongly recommended. Applicants should complete the web application prior to September 1. The applicant is responsible for submitting official transcripts from all universities attended to AMCAS. Official university transcripts should not be sent to Downstate's Admissions Office unless a specific transcript has been requested.

Medical College Admissions Test (MCAT)

Applicants must submit an MCAT score. The Committee on Admissions recommends that applicants take the test in the spring prior to the application year. MCAT application forms are available by writing to:

MCAT Program Office
PO Box 4056
Iowa City, IA 52243
www.mcat.org

Only MCAT scores three years old or less are accepted. See the College of Medicine website to determine if a previously-taken MCAT score qualifies for acceptance. For those applying for Fall admission, the latest date to take the MCAT and still be considered for admission is August of the year before. Component scores for each MCAT series are looked at individually.

Applicants who take the MCAT under nonstandard conditions are considered on the same basis as all other applicants.

Letters of Recommendation

A letter of recommendation from the premedical advisor or committee at the applicant's undergraduate college is required. If the college does not have a premedical committee or advisor, two letters from college professors in two different departments are required. One letter must be from a professor in a science department, and the other should be from a professor in the applicant's major field of study. Both letters must be from faculty members with whom the applicant has taken classes and whom the applicant knows personally.

Applicants enrolled in a graduate program must submit a letter of recommendation from the faculty advisor or major professor in addition to the letters specified above.

Applicants should not submit more than the specified number of recommendation letters required, as this will delay the processing of the application.

Additional guidance regarding letters of recommendation is available on SUNY Downstate's website.

Supplemental Application and Fee

Applicants must also complete a SUNY Downstate Supplemental Application. The Supplemental Application is available as a PDF file on the Downstate website, www.downstate.edu. In addition to the service fee charged by AMCAS, the State University of New York (SUNY) requires that a nonrefundable application fee of \$80 also be charged. Checks or money orders should be payable to "SUNY" and submitted with the Supplemental Application form to the Office of Admissions. For applicants who have received an AMCAS fee

waiver, the SUNY application fee will also be waived.

Application Deadlines

The deadline for submitting an AMCAS application is December 15. The deadline for completing an application on file in the Admissions Office is February 1. Incomplete applications will not be reviewed after this date.

Application Status

Applicants should not telephone the Admissions Office regarding their application status. Downstate will make every effort to keep applicants informed of the status of their application in writing or by email.

Application Checklist

Please Note: It is the applicant's responsibility to make certain that the application is complete. A complete application consists of the following:

- American Medical College (AMCAS) application
- SUNY Downstate Medical Center Supplemental Application
- Medical College Admission Test (MCAT) scores
- Letter of recommendation from premedical advisor or committee (or two letters from college professors as listed above)
- \$80 nonrefundable application processing fee

Incomplete applications will not be processed for admission consideration.

An applicant who decides to withdraw his or her application from consideration must notify the Office of Admissions immediately, in writing, by e-mail (admissions@downstate.edu), or via fax (718-270-7592), to avoid further processing and to benefit other applicants.

PERSONAL INTERVIEW

Invitations for a personal interview are offered only to applicants whose qualifications are competitive for admission. The interview provides a means for the College of Medicine and the applicant to learn more about each other. It also offers the opportunity for discussion and clarification of information from the application. Applicants are invited for interviews beginning in September.

NOTIFICATION STATUS

Once an application is complete (see “Application Checklist” in the shaded box), it will be reviewed. Downstate will keep applicants informed of their admission status in writing or by email. See the Downstate website for more information.

ACCEPTANCE

Acceptance notices are mailed beginning in October and continue until the class is filled (“rolling admissions”). An alternate list is maintained throughout the summer, until registration.

Applicants accepted for admission are required to reserve their place in the class by submitting a \$100 deposit that will be applied toward the first semester’s tuition. The deposit is refundable until May 15, and is nonrefundable after that date.

Accepted students are required to submit completed health forms to the Student Health Office prior to July 1. Official final transcripts from all colleges and universities attended must be submitted to the Admissions Office prior to August 1. All accepted students are also required to complete a CPR and first-aid course prior to August 1, and submit proof of completion to the Admissions Office.

DEFERRALS

Accepted applicants may request a deferral for one year in order to participate in educational activities or social-service projects. See the Downstate website for more information.

RE-APPLICANTS

Re-applicants must submit a new AMCAS application, a new Supplemental Application and application fee, and new copies of the premedical letters of recommendation (unless letters are on file from an application submitted in the previous year). Re-applicants adhere to the same policies, procedures, and deadlines as first-time applicants.

EARLY DECISION

Applicants who are interested in applying only to SUNY Downstate may apply for admission as “Early Decision” applicants. AMCAS applications must be on file by August 1. Decisions are made by October 1. Unsuccessful candidates are eligible to apply to other medical schools or be considered under Downstate’s regular admission process after October 1. All requirements for Early Decision are the same as regular admissions; only the deadlines differ.

MD/PhD PROGRAM

The College of Medicine and the School of Graduate Studies jointly sponsor a program leading to a combined MD/PhD degree. This program combines a medical education with an intensive research experience, and is designed for students who are interested in pursuing a career in academic medicine. Students are supported with a stipend and a tuition scholarship throughout the duration of the program.

Applicants to this program must apply for admission separately to both the College of Medicine and the School of Graduate Studies. They are considered for the combined MD/PhD as part of the admissions process in both schools. The deadline to have a completed application on file with both colleges is December 15. Early application is recommended.

A School of Graduate Studies application and letter of recommendation forms may be obtained on-line at www.downstate.edu/grad and clicking on “Admissions.” For the MD applica-

tion on the AMCAS website, applicants should indicate “Combined Graduate/Medical Degree.”

MASTER OF PUBLIC HEALTH PROGRAM

This is a concurrent degree program in which students pursue both the MD and the MPH curriculum simultaneously. Course offerings have been synchronized so that students may receive both degrees at the end of four years. Two separate applications are required (MD through AMCAS; MPH through Downstate). The review of MPH applications begins after February 1. More information is available on the Downstate website at www.downstate.edu/mphprogram.

TRANSFER ADMISSIONS POLICY

Admission to advanced standing is limited to U.S. citizens or permanent residents who are currently registered, matriculated, in good standing, and in attendance as second-year medical students in an LCME (Liaison Commission on Medical Education)-accredited college of medicine in the United States. Individuals who have earned the MD degree are not considered for transfer. Applications are accepted to the third-year class only.

Admissions preference is given to New York State residents.

The Admissions Committee takes into consideration as much information as possible regarding an applicant’s total qualifications for the study and practice of medicine. Decisions regarding admission are based on a number of factors, including prior academic performance, particularly in medical school; letters of recommendation; Medical College Admissions Test (MCAT) scores; Step 1 of the United States Medical Licensing Exam (USMLE); communication skills; character; personal skills; and motivation for medicine, as demonstrated through letters of recommendation and the personal interview.

TRANSFER ADMISSIONS REQUIREMENTS

Premedical Education

Only applicants who qualify for admission to the first-year class, in terms of premedical education, will be considered for admission to the third-year class. Applicants must have a minimum of 90 semester hours of satisfactory college coursework and a bachelor's degree, which includes the following courses:

| | |
|--|-------------|
| English | 2 semesters |
| Biology or Zoology, with lab | 2 semesters |
| General Physics, with lab | 2 semesters |
| Inorganic Chemistry, with lab | 2 semesters |
| Organic Chemistry, with lab | 2 semesters |

Applicants educated abroad must have completed at least one year of full-time study in an accredited college or university in the United States. For accepted transfer applicants, a course-by-course educational evaluation is required if any premedical science course requirements were completed abroad.

Medical Education

In addition to meeting all premedical requirements, applicants for admission to the third-year class must have satisfactorily completed all first- and second-year courses in their LCME medical-school curriculum.

Year 1

Gross Anatomy, Biochemistry, Embryology, Histology/Cell Biology, Introduction to Clinical Medicine, Human Behavior, Physiology, Neuroscience, Genetics, Preventive Medicine (Biostatistics and Epidemiology)

Year II

Microbiology, Pathology, Nutrition, Pathophysiology, Pharmacology, Psychopathology, Preparation for Clinical Medicine, Preventive Medicine

Transcripts

Official transcripts of all academic work—premedical, graduate, and medical school—are required.

Letters of Recommendation

A letter from the premedical college's Health Professions Advisory Committee must be forwarded to Downstate's Admissions Office. If there is no such committee, letters from faculty in two different premedical science (biology, chemistry, or physics) departments in which the applicant has taken courses are acceptable.

A letter of recommendation from the Dean's Office of the medical school the applicant is attending is also required, and must include certification that the applicant is matriculated, in good standing, and eligible for promotion.

Personal Interview

The personal interview provides a means for both the school and the applicant to learn more about each other. It also provides an opportunity for discussion and clarification of information submitted on the application form. In addition, the interviewer endeavors to appraise such personal qualifications as communication skills and motivation. Ordinarily, one interviewer conducts the interview.

Transfer Application Procedure

1. A SUNY Downstate Transfer Application form must be submitted prior to May 1. Applications are available from the College of Medicine Admissions Office. A non-refundable application fee of \$80, payable to SUNY, must be submitted with the application.
2. Official transcripts from all colleges attended—undergraduate, graduate, and medical—must be forwarded.

3. A letter of recommendation from the Health Professions Advisory Committee at the applicant's college must be forwarded. In the absence of such a committee, letters from faculty in two different premedical science (biology, chemistry or physics) departments in which the applicant has taken courses are acceptable.
4. A letter of recommendation from the applicant's Dean's Office must be forwarded.
5. Official MCAT scores must be forwarded.
6. Proof of registration to take Step 1, USMLE prior to July 1 must be forwarded.

The deadline for completed applications (except for Step 1 scores) to be on file in Downstate's Admissions Office is May 1. If an application is withdrawn, the Admissions Office should be notified immediately to avoid further processing and to benefit fellow applicants.

The review of transfer applications begins in June. All applicants are notified of their final status, in writing, by late June.

The third year begins with a mandatory orientation program in the early part of July. Matriculation is conditional pending Downstate's receipt of passing scores on Step 1, generally in August.

For more information, write to:
Medical School Admissions Office
SUNY Downstate College of Medicine
450 Clarkson Avenue, Box 60
Brooklyn, New York 11203-2098
(718) 270-2446
Office Hours: Monday-Friday,
9:00 a.m. to 5:00 p.m.

Tuition and Fees

Current information regarding tuition charges and fees appears in the appendix of the *Student Handbook*, which is published and updated annually. Current tuition, fees, and financial aid information are available on the institutional website, www.downstate.edu.

Tuition

FULL-TIME STUDENTS

Tuition is determined annually by the SUNY Board of Trustees and is subject to change. Applicants should check Downstate's website for the most up-to-date information on tuition and cost of education.

Payment is generally made in two parts, the exact dates being determined each year. Students leaving school prior to the established payment dates are responsible for paying tuition for any time attended during the academic year. Liability for tuition is determined on a semester basis using the academic calendar and SUNY policy for tuition liability and refunds.

All medical students (except transfer students) are obligated to pay at least eight full semesters of tuition. Transfer students are obligated to pay tuition equivalent to their time of attendance—e.g., third-year transfer students pay four semesters of full-time tuition. Students who encounter academic difficulty and are required to repeat the year or other educational activities as determined by the faculty will incur obligations for more than eight semesters of tuition.

PART-TIME STUDENTS

Students taking less than a full schedule (fewer than 12 credit hours) per semester are considered part-time students and are billed accordingly. As part-time students, they are ineligible for TAP, but may be eligible for other forms of aid depending on credit load. Students returning from a leave of absence may also be charged in this manner, depending on when they return and their schedule.

REFUNDS

Students leaving school for any reason are entitled to a refund or are liable for payment of tuition as indicated in the *Student Handbook*.

DEFERRAL OF TUITION PAYMENT

Deferral of tuition payment and dorm-ent payment can be obtained only by presenting appropriate documentation to the Office of Financial Aid by the date established each semester.

LATE PAYMENT FEE

Students who do not settle their account as requested will be assessed a late-payment fee. Student accounts past due after the end of the term may also be subject to assessment of interest and other collection costs.

TUITION AND FEE INCREASES

Tuition and fees are subject to amendment at any time at the discretion of the Board of Trustees of the State University of New York. Every effort will be made to provide advance notice of such changes.

RETURN OF TITLE IV FINANCIAL AID

Students leaving the institution may be liable to return any Title IV financial aid that has not been "earned" based on federal regulations. The amount of aid earned increases as the term progresses. If a student leaves early in the semester, he or she will have earned only a small portion of aid; if he or she leaves later, a larger portion of aid will have been earned.

Once a student has completed 60% of the term, he or she will have earned all (100%) of the Title IV Financial Aid. If a student leaves before completing 60% of the term, he or she will have to repay any "unearned" aid funds that were already disbursed.

COLLEGE OF MEDICINE ESTIMATED STUDENT BUDGET, 2004-2005

Current information is in the Financial Aid section of Downstate's website.

Note: Budget projections are subject to change.

| | 1st Year (11 mos.) | 2nd Year (12 mos.) | 3rd Year (11 mos.) | 4th Year (11 mos.) |
|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Tuition and Fees* | \$19,145 | \$19,145 | \$19,145 | \$19,185 |
| Room and Board | \$12,520 | \$11,270 | \$15,020 | \$13,770 |
| Books and Supplies | \$ 2,790 | \$ 1,594 | \$ 846 | \$ 862 |
| Miscellaneous** | \$ 6,508 | \$ 6,590 | \$ 7,356 | \$ 8,564 |
| Transportation | \$ 2,250 | \$ 2,026 | \$ 2,700 | \$ 2,476 |
| Loan Fees | \$ 400 | \$ 400 | \$ 400 | \$ 400 |
| Total: | \$43,613 | \$41,025 | \$45,467 | \$45,257 |

*Nonresident tuition and fees are \$33,845 per year **Miscellaneous includes Downstate Health Insurance

Fees

Current fee information is on the website.

STUDENT ACTIVITY FEES

Under Board of Trustees resolution #17-91 dated March 24, 1971, as amended by #71-327 dated October 27, 1971, SUNY Downstate students voted to assess themselves a mandatory Student Activity Fee. The full text of the resolution is distributed annually to appropriate student organization treasurers and is available for inspection by any student in the offices of the direc-

STUDENT ACTIVITY FEES 2004-2005

| | |
|--|-------|
| College of Medicine | \$120 |
| College of Nursing (Master's Program) | \$110 |
| MPH. | \$90 |
| School of Graduate Studies . . | \$100 |
| Graduation fee (all students) | \$40 |

tor of Student Activities or the Faculty-Student Association. Part-time students are charged in accordance with the number of credits carried.

STUDENT HEALTH FEES 2004-2005

The student health fee for all full-time students is \$50 per semester prorated to \$4.25 per credit for part-time students. The student health fee is mandatory.

COLLEGE FEES 2004-2005

The college fee for all full-time students is \$12.50 per semester; for part-time students, \$0.85 per credit.

INTERNATIONAL STUDENT HEALTH INSURANCE

Students attending on an international student visa (F-1, J-1) are required to pay for SUNY-sponsored health insurance, the exact amounts to be determined each year by the State University of New York System Administration.

RESIDENCE HALLS RENTAL— REFUNDS/LIABILITY/DEPOSITS

1. All students must pay an advance room deposit of \$500, payable to SUNY, at the time they submit their license on application for on-campus housing. This deposit should accompany the license and is nonrefundable after July 1. Students who defer payment of this deposit based on financial aid and who fail to notify the housing office in writing by July 1 of a decision not to take on-campus housing will be billed \$500.
2. Once either a single or married student-licensee assumes occupancy during the academic year, he or she is fully liable for the balance of the academic-year rental except as indicated in #5 below. For rent-liability purposes, the academic year is considered to be from the day before the beginning of the academic year for a specific program and class year to the day after the last day required by the academic program (including Board Exams).
3. Payment of the academic-year rental obligation for single students may be made in two installments, during fall and spring registration. Married student-licensees are permitted to pay

on a monthly basis, but will forfeit this privilege if they fall behind in their payments. Student-licensees who intend to pay their rent from financial aid funds must obtain a letter of deferment from the Office of Financial Aid and present it to the Bursar's Office during registration. Advance deposits paid may be deducted from the fall payment.

4. The summer period is considered to be from June 1 through August 31. Liability for rent during the summer period is based on actual occupancy, and is due on or before June 5. A student-licensee who vacates prior to the expiration of an academic year will be fully liable for the full academic-year rental, except in the following instances:

- a. Withdrawal due to induction into the military.
- b. Withdrawal due to circumstances beyond the control of the student (generally, illness or illness in family).
- c. Withdrawal due to clinical work or coursework taken at other institutions beyond the New York City metropolitan area.

5. A student-licensee who vacates prior to the expiration of an academic year will be fully liable for the full academic-year rental, except in the following instances:

- a. Withdrawal due to induction into the military.
- b. Withdrawal due to circumstances beyond the control of the student (generally, illness or illness in family).
- c. Withdrawal due to clinical work or coursework taken at other institutions beyond the New York City metropolitan area.

A student licensee wishing to apply for a reduction in the rental charge for one of the reasons stated above must first officially check out of the residence halls by completing exit procedures.

RETURNED CHECKS

A service charge is imposed on checks returned from the bank for any reason (insufficient funds, closed account, etc.). The service charge is in accordance with State University Policy Item No. 050, which states: "Each campus may levy a service charge of \$20 for checks which are returned unpaid by the bank against which they are drawn." Checks given in payment of tuition and fees that are returned by the bank after the tuition-payment deadline are subject to a \$40 late-payment fee.

Residency Guidelines

NEW YORK STATE RESIDENCY GUIDELINES FOR TUITION DETERMINATION

An individual's domicile is that place where one maintains a permanent home and to which one intends to return. A residence hall is generally not considered a permanent home, and additional documentation is required for exceptions.

The deadline for change of residency by matriculated students with appropriate documentation is one month prior to Downstate's registration date for the next semester (a change-of-residency status must be filed six weeks prior to the registration deadline for it to be in effect). The application for continuing or returning students is available in the Registrar's Office.

NEW YORK STATE RESIDENCY DETERMINATION

Residency applications for in-state versus out-of-state tuition rates for entering students are made by filing an application through the Admissions Office. A U.S. citizen or permanent resident of the United States whose domicile has been in New York State for a one-year period prior to registration pays in-state tuition rates. Persons who do not meet this one-year requirement are out-of-state residents and pay out-of-state tuition rates. In-state rates are applied to members of the U.S. Armed Forces while on full-time active duty in New York State. This classification is provided to the eligible individual only and not to the spouse or dependents of such person.

Individuals who are not U.S. citizens or permanent residents of the United States must provide proof of immigration status before a residency determination can be made. Students on a temporary immigration status, aliens not lawfully present in the United States, and students awaiting approval of an application for a change of immigration status are generally not eligible for New York State residency for tuition purposes. Each case will be considered individually, following SUNY's "Administrative Policies on the Establishment of Residence for Tuition Purposes."

FEES POLICIES 2004-2005

All fees are payable to SUNY Downstate. Current fees are in the *Student Handbook*.

| Item..... | Charge * |
|-------------------------------------|------------|
| Drop/Add Fee | \$20 |
| Late Registration Fee | \$40 |
| Duplicate Diploma..... | \$30 |
| Mailing Fee | \$ 9 |
| Licensure | \$15 |
| Transcripts..... | \$ 5 |
| Mailbox Key Replacement..... | \$20 |
| Carrel Key Replacement | \$20 |
| Late Payment Fee | \$40-\$120 |
| Student Health Fee (Full-Time)..... | \$50 |
| Student Health Fee (Part-Time)..... | \$4.25 |
| Technology Fee (per semester) | \$50 |

* Fees are 2004-2005 rates.

The term “resident” is defined as an individual whose domicile is in New York State. The following principles would assist the residency determination under this policy.

1. An individual’s domicile is that place where one maintains a permanent home and to which one intends to return. (In general, a residence hall is not considered a permanent home address.)
2. One retains a given domicile until it is abandoned and another established.
3. One does not acquire a new domicile simply by a presence in New York State for attendance at an institution of higher education. The act of living within the State’s boundaries is, in itself, an insufficient demonstration of residency. The student must demonstrate establishment of a domicile (permanent place of abode) in New York State. Living in New York State solely for the purpose of attending a college or other postsecondary institution does not, in itself, demonstrate that legal residence has been established.
4. The domicile of an unemancipated student is that of the parents or guardians. Evidence of emancipation must include the establishment of financial independence. Factors relevant to the determination of financial independence include, but are not limited to, the following:
 - a. employment of student on a full- or part-time basis
 - b. sources and extent of financial support by parents or guardian
 - c. sources and extent of other income
 - d. independent filing by student of federal or state income-tax return
 - e. parental claim of individual as dependent for exemption on federal and state income-tax return
 - f. residence with parents or guardian during summer or other academic-term recess
 - g. status of student as financially independent for purposes of receipt of federal and/or state financial assistance
5. Proof of domicile is based upon an intention to make New York State a permanent home and the existence of facts tending to confirm such intention. Factors relevant to the determination of domicile include:
 - a. residence of parents, spouse, and children
 - b. place of voter registration
 - c. residence for personal income-tax purposes
 - d. financial independence, business pursuits, employment, and income sources
 - e. situs of motor-vehicle and other personal-property registration
 - f. situs of real and personal property
 - g. state issuing driver’s license

Student Financial Aid

Current information appears on the institutional website (www.downstate.edu).

PHILOSOPHY AND PURPOSE

A student who has been admitted to SUNY Downstate should not be denied an education due to a lack of funds. However, the primary responsibility for meeting educational expenses rests with the student and his or her family.

The purpose of Downstate's financial aid program is to provide assistance to students who cannot meet the entire

cost of their education and to ease the burden for families more able to assist the student. To achieve this goal, a program of institutionally administered financial aid is coordinated with aid programs from outside agencies. Aid from Downstate is intended primarily for those students who need additional aid beyond what is available from outside sources.

WHAT IS FINANCIAL AID?

Simply stated, financial aid is any grant, scholarship, or loan offered for the express purpose of helping a student

meet education-related expenses. Such aid is usually provided by or through colleges, federal and state agencies, and foundations and corporations.

Grants and scholarships are generally regarded as "gift" assistance and need not be repaid, although they may carry certain provisions to which one must adhere. Loans are borrowed money, offered at various interest rates, which can be repaid over an extended period after the student leaves the institution. Federal work-study jobs are available to students who have financial need and wish to earn money for educational expenses.

HOW TO APPLY FOR FINANCIAL AID

More detailed information is updated annually on Downstate's Financial Aid website: <http://sls.downstate.edu/financialaid>.

1. Free Application for Federal Student Aid (FAFSA)

Students who know that they will need financial aid should complete the Free Application for Federal Student Aid (FAFSA) as soon as possible after January 1 each year, whether or not they have been admitted to Downstate. Students should file before March 1 for priority aid.

If a student cannot file taxes for the year prior to March 1, taxes should be estimated as closely as possible and so indicated. SUNY Downstate must be included as a college choice; its Title IV school code is 002839. All questions on the FAFSA must be answered. Filing can be done on the web at <http://fafsa.ed.gov>.

2. Institutional Application

All students desiring aid must submit an institutional application. The paper application is available at the Office of Financial Aid, or it may be downloaded from the web. There is also an interactive web application on the Downstate Financial Aid website (address above).

3. Student Aid Report (SAR)

As a result of filing the FAFSA, a student receives a Student Aid Report (SAR), either by mail or by e-mail if an e-mail address was provided. The SAR summarizes the information completed on the FAFSA and includes Estimated Family Contribution. Students should review the SAR, providing any requested information or making corrections, according to instructions.

4. Bank Loans

Unsubsidized and subsidized Stafford Loans are offered to all students who are eligible and who submit a FAFSA and an Institutional Application. The maximum eligibility is shown on the award letter. If a student accepts a Stafford Loan, a lender must be chosen and the student must request the amount of the loan in writing.

Students new to Downstate will receive information about how to sign a Master Promissory Note. Once the note has been signed, it remains in place for future years. The loan funding is forwarded to the Bursar's Office. After school charges are paid from the loan fund, the student receives the remainder.

5. Tuition Assistance Program (TAP)

Students who indicated that they are New York State residents when they completed the FAFSA on the web are given a link to the TAP Application for New York State financial aid. This on-line form will be prefilled with some information from the FAFSA. Students should review the data, supply the missing information, and submit the completed form. Students who have used a paper FAFSA will be mailed a TAP application. Students who do not complete the TAP application on-line will be mailed an Express TAP Application (ETA) that will also be prefilled with their FAFSA data.

6. Scholarships

Downstate participates in federal and state need-based programs that require parental information submitted annually on the FAFSA, regardless of dependency status. If parental information is provided annually, a student is automatically considered for all scholarships available through Downstate. Scholarship amounts are determined each year, and prior-year amounts are not necessarily maintained. For consideration for outside scholarships, students must conduct their own searches. All students are advised to register on FATWEB at www.fastweb.com.

WHAT IS FINANCIAL NEED?

A student is determined to be in need of financial aid when the calculated contribution based on income and assets from all sources is less than the sum of the student's cost of attendance at the school. Financial need is the total sum remaining after all of an applicant's resources (parental contribution, spouse's earnings, veterans benefits, external scholarships, funds from others, savings, etc.), as measured by the FAFSA (Free Application for Federal Student Aid) have been subtracted from the school's approved student budget. More simply stated: Cost of attendance minus expected student and family contribution equals financial need.

HOW COST OF ATTENDANCE IS DETERMINED

Cost of attendance is derived from a standard "student expense budget" which includes tuition and fees, room and board, personal expenses, books and supplies, and transportation. Some of these are considered "direct expenses" (those paid to Downstate, e.g., tuition), while others are indirect expenses such as food and transportation. This budget provides for a moderate standard of living, neither bare bones nor luxurious. Only expenses directly attributed to a student's costs may be used in establishing a budget. The average cost of books and living expenses is reviewed annually by the Office of Financial Aid. The school-approved budget is computed for actual periods when the student is enrolled.

BUDGET ADJUSTMENTS

Adjustments to student budgets are made on a case-by-case basis. If a student has expenses beyond his or her control that are not included in the normal student budget, he or she may apply for a budget adjustment. Car payments or lifestyle choices are not allowable. Examples of possible adjustments include:

- Out-of-pocket (uninsured) medical or dental costs
- Day-care expenses for children if the student's spouse is employed or a full-time student, or if the student is a single parent

Other expenses are allowed only if they are necessary and directly related to attendance at Downstate.

To apply for a budget adjustment, a student must: (1) complete a form, available from the Office of Financial Aid; (2) write a letter describing the need; and (3) provide documentation that verifies statements in the letter (e.g., dental bills, child-care receipts).

WHAT IS AN EXPECTED FAMILY CONTRIBUTION?

The "expected contribution" is derived from the data submitted in the FAFSA. The formula used (Federal Methodology) analyzes the information submitted and determines a student's potential for covering educational costs. This is done on an annual basis. Students may actually pay more or less than the family contribution. The expected contribution is not a prediction of how much cash a student actually has on hand, or a value judgment about how a student's current income or savings ought to be used. Rather it is an estimate of a student's capacity over time to absorb some of the costs of education. The estimate reflects how much responsibility a student has, relative to others, but it makes no particular assumptions about how a student will discharge his or her responsibilities. Students with special family circumstances are encouraged to discuss their situation with the Office of Financial Aid.

ANNUAL RENEWAL OF AID

Most aid is need based; thus the amount of a financial aid award will be redetermined each year. Students must reapply annually.

NOTIFICATION OF FINANCIAL AID AWARD

Official notification of financial aid awards is sent to applicants in the spring. Students who submit late applications may not receive award notifications prior to fall matriculation. The award notification identifies the period of aid, amount of aid, and sources of financial aid funds. The cost of attendance and the student's other assumed

or estimated financial resources are also included in the award letter. Since it takes several days for the college to receive funds after registration, students should be prepared to meet expenses for the first few weeks of the term from their own resources.

OUTSIDE SCHOLARSHIP ASSISTANCE

Any outside scholarship assistance received by a financial aid applicant will first be used to reduce loan assistance from SUNY Downstate Medical Center. In rare instances, outside scholarship assistance may also reduce scholarship/grant assistance from SUNY Downstate.

ENTRANCE/EXIT INTERVIEW PROCESS FOR LOAN RECIPIENTS

In accordance with federal regulations, all borrowers must have both an entrance interview and an exit interview for federal student loans. Downstate students will accomplish this at an interactive website, the address for which will be given after the student has received material to aid in the completion of the interview. If further help is needed, students should request an appointment with the Financial Aid Office staff.

ENTRANCE INTERVIEW

Students offered Stafford Loans who have received Stafford or Direct Loans at prior schools will not need to complete an additional entrance interview. All others must complete one, including recipients of Perkins Loans.

EXIT INTERVIEW

All student-loan borrowers must complete the exit interview when leaving Downstate. Perkins exit interviews are conducted by the Bursar's Office. Stafford exit interviews are completed on the web after the student has received materials to aid in their completion. At graduation, the cap and gown will be released to a borrower only after the exit interview is complete.

SATISFACTORY ACADEMIC PROGRESS

Federal and state law and regulations require that all students receiving financial assistance, including all federal student-aid funds and New York State TAP funds, maintain satisfactory academic progress. In compliance with these regulations, policies have been adopted at Downstate.

The College of Medicine, as a graduate school not adhering to grade-point-average standards, monitors its students under its own requirements, which are more stringent than federal and state requirements. Those students who are deemed eligible to continue in the College of Medicine are considered eligible for aid.

Students from other schools at Downstate will be considered eligible under federal requirements:

1. *Cumulative Grade Point Average:* All students receiving aid must maintain a cumulative grade-point average of 2.0 or above.
2. *Maximum Time Frame:* Students must complete their program within 150% of the normal allowed time frame for completion (e.g., the PA program of 7 semesters must be completed within 11 semesters).
3. *Incremental Review:* Annually, students' records are reviewed to determine if their progress in the prior year is adequate to allow them to complete within the Maximum Time Frame. Each student must have completed 67% of all credits attempted. Any student who has not completed 100% of courses during the year is subject to this review.

Review for these standards occurs after the end of each semester, after grades are posted. If it is determined that a student has failed to meet the standards, he or she will be notified immediately that aid is denied beginning at once.

APPEAL OF FINANCIAL AID DENIAL

A student who has been denied aid due to a failure to meet Satisfactory Progress requirements may appeal the denial on the basis of circumstances beyond his or her control. The appeal must be in writing and must adhere to the following requirements:

1. The "Appeal for Exemption to Financial Aid Policy" form must be completed.
2. The student must write a letter that describes the reasons for the failure to comply.
3. The student must provide documentation supporting the reasons for failure to comply (e.g., a doctor's statement regarding medical reasons).

The appeal must arrive at the Office of Financial Aid no later than three weeks before the close of classes for the term in which renewed aid is desired. The Director of Financial Aid or a designee will review the appeal and make a written decision given to the student within two weeks of receiving the appeal.

REAUTHORIZATION

Federal student aid under Title IV (aid governed by the Department of Education) of the Higher Education Act (HEA) must be reauthorized by Congress regularly. All rules regarding Title IV aid are thus subject to change. Title IV aid includes Pell Grants, Federal Supplemental Educational Opportunity Grants, Federal Work Study, Perkins Loans, and loans in the FFELP Program (see below).

DISBURSEMENT OF AID

Any student aid that Downstate receives on a student's behalf is applied first to his or her school charges (tuition, fees, housing). The Bursar's Office then delivers the remainder of the aid to the student.

Forms of Financial Aid

Downstate cannot guarantee that it will meet 100% of any student's need, since aid is subject to many limitations. An aid package may contain grants and work-study, depending on a student's need. Downstate offers loans to all students up to the maximum amount of their eligibility.

Financial Aid packages vary from year to year. A student may receive a one-year scholarship with low loan amounts; in the next year, without a scholarship, loan amounts would be higher.

Most graduate students are eligible only for loans and for work-study (if the student requests work). More grants are available to undergraduates. Scholarships and grants are very limited and are awarded to those students with the greatest financial need.

All student aid mentioned below, available directly through Downstate's Financial Aid Office, requires the submission of a FAFSA and an Institutional Application, plus any other documentation that the federal government or the school may require to complete information relating to the FAFSA.

LOANS

FFELP

The largest loan program is the Federal Family Education Loan Program (FFELP). Loans in this group are the Stafford Subsidized and Unsubsidized Loans and the PLUS Loans. Funding comes directly from banking institutions. Downstate does not participate in the Ford Direct Loan Program, where funding comes from the federal government. The variable annual interest rate is set on July 1 each year.

Subsidized Stafford

The academic year limit is currently at \$8,500 for graduate students.

Unsubsidized Stafford

These loans are available only to Independent (as defined in federal law regarding student aid) Students. The academic-year limit is \$10,000 for graduate students, plus an additional \$20,000 for medical students with a

nine-month academic year, with prorated amounts available for academic years of different lengths.

Aggregate limits for combined outstanding debt (subsidized plus unsubsidized): undergraduate dependent: \$23,000; undergraduate independent: \$46,000 (no more than \$23,000 may be subsidized); standard graduate: \$189,125; no graduate student may exceed \$65,000 subsidized. To apply:

1. Submit a FAFSA and an Institutional Application annually to receive an offer of Stafford loans.
2. Complete a written acceptance of the offer annually, indicating lender and amount desired on the acceptance form. After receipt of acceptance, the Financial Aid Office certifies the loan and reports it to the loan guarantor and selected lender.
3. Complete the Master Promissory Note (MPN). Instructions are sent by the guarantor, and may be filled out on paper or by e-mail on the web. The MPN covers lending in all years of attendance at Downstate.
4. Once the MPN is on file with the guarantor and lender, and school has begun, the student receives the first disbursement, which comes to the Bursar's Office. FFELP loans have a minimum of two disbursements. The student can receive half of the loan in the first disbursement. The second disbursement comes at the midpoint of the student's enrollment—usually at the beginning of the spring semester.

PLUS (Parent Loan for Undergraduate Students) Loans

These loans are available only to the parents of dependent students. They are offered only to students who indicate interest in receiving loans, either on the FAFSA or directly to the Financial Aid Office. Instructions are given upon request. There is no annual or aggregate loan limit, but the limits are determined by the school's cost of attendance.

Federal Perkins Loans

Funding is available directly from Downstate's program. Federal law allows a maximum of \$4,000 for undergraduates and \$6,000 for graduates. Actual offers are dictated by funds available at the school, and the maximums are only offered for exceptional cases. Interest is 0% during school and deferment, 5% when repayment begins.

FEDERAL WORK-STUDY (FWS)

This is need-based work. Eligible students who have been given an award in this program may work at on-campus jobs. Salary is provided through the FWS program, rather than through Downstate. FWS provides an opportunity for students to limit their borrowing.

SCHOLARSHIPS/GRANTS

Medical students receiving grants will have them "front-loaded": on average, higher amounts are given in the first year, with less offered in succeeding years. This allows students to borrow less in early years, thus keeping Unsubsidized Loan interest charges lower.

Pell Grants

Undergraduate students with need are eligible to participate in this federal program. Awards vary depending on need and enrollment level. The amount of a Pell Grant a student may receive is generally the same from school to school, mostly depending on school costs.

FSEOG

This grant is supplemental to the Pell Grant and available only to Pell Grant recipients. It can considerably enhance the Pell award at Downstate. The amount a student may receive is also dependent on need and enrollment level.

TAP (New York State Tuition Assistance Program)

These grants are for tuition costs only, and for state residents attending full-time in degree-granting programs. The grants vary according to the family's net taxable income on the New York State tax return.

APTS (Aid for Part-Time Study)

This award is available to TAP-eligible students who are attending part-time. Submission of a separate application and a New York State tax return to the Financial Aid Office is required.

SDS (Scholarships for Disadvantaged Students)

The following students are eligible: medical, physician assistant, occupational therapy, and physical therapy. Grants vary depending on discipline, but range between \$1,000 and \$12,000. Parental information is required from all students regardless of dependency status.

Regents Health Care Scholarships

For information, see the New York State Higher Education Services Corporation (HESC) website: www.HESC.com.

EMERGENCY LOANS

These loans are available through the FSA Association, and only students who have applied for and been offered aid through Downstate's Financial Aid Office may receive them. A student whose aid is not yet available for any reason may apply for the loan, which will be repaid by the Bursar when the pending aid becomes available. The Emergency Loan is not a service to the student, but a business arrangement made between the student and the FSA. The loan requires a fee to be paid. See the *Student Handbook* for details.

Academic Program

In the spring of 2000 the Dean's Council for Education approved eight domains of competence for medical students to master as a condition for graduation from SUNY Downstate Medical School. Each of the competencies encompasses broad educational objectives that together constitute a unified concept of the professionally competent medical school graduate.

THE EIGHT DOMAINS OF COMPETENCE

SUNY Downstate's domains of competence delineate the attitudes, knowledge and skills that students should possess upon graduation from this medical school. Each domain represents a distinct but interrelated component of an integrated model of physician competency. These competencies form the basis for graduation from Downstate, assuring that the physician is knowledgeable, technically skilled, socially conscious and professionally responsible. Upon graduation from SUNY Downstate, the student will have demonstrated the following:

1) Professionalism

The graduate demonstrates integrity and honesty in her/his role as a physician, respect and responsiveness to the needs of patients and society that supersedes self-interest, and high standards of moral and ethical behavior. Included in this is awareness of the ethical dimensions and broader social issues in the practice of medicine and health care policy.

2) A Knowledge of Basic Science that Forms the Basis of Clinical Medicine

The graduate demonstrates knowledge of the basis of disease and its natural history at the molecular, cellular, and systemic level, understanding the scientific rationale that guides therapeutic intervention. Inherent in this competency is an understanding of the scientific process and a commitment to the use of scientific knowledge in the clinical care of patients.

3) Effective Communication

The graduate conducts a thorough patient-centered interview, eliciting a medical history from patients of diverse backgrounds in major clinical venues, forming a therapeutic alliance that encourages patient education, counseling and shared decision-making. The graduate communicates clearly in writing and orally with members of the health care team in order to effectively teach and coordinate care.

4) Basic Clinical Skills

The graduate demonstrates skill in eliciting information from the medical history and physical examination in a compassionate and respectful manner. The graduate uses appropriate and cost-effective laboratory tests and technology, and synthesizes patient information to arrive at a reasoned diagnosis, therapeutic plan, and ongoing management.

5) An Understanding of Health Maintenance and Disease Prevention

The graduate demonstrates the ability to educate patients and their families to adopt health-promoting behavior, and to work within a health care team to optimize health. Moreover, the SUNY graduate will know those practices that maintain the health of the patient and those that address the health of a population.

6) An Awareness of Healthcare in the Context of Community and Society

The graduate understands the many non-biological factors that influence health, disease, disability, and access to care. Specifically, the SUNY graduate will be aware of those issues affecting health and the resources available to care for patients within an urban, culturally diverse community.

7) Information Management

The graduate must demonstrate competency in utilizing resources that support clinical decision-making, including an understanding of the principles of evidence-based medicine. This requires the ability to critically appraise the literature and to apply this knowledge to the care of the individual patient.

8) A Commitment to Life-Long Learning

The graduate recognizes and reflects upon personal limitations in knowledge and experience, and uses feedback to enhance her/his ability to fulfill the role of physician. There is evidence of a clear commitment to ongoing learning to maintain state-of-the-art patient care.

Curriculum

During the first year, the focus is on the basic components of human biology and behavior, as well as on the essential aspects of the physician-patient relationship. Using this foundation, the second-year student begins the study of human disease, its diagnosis, prevention, and treatment, and is taught the techniques of physical diagnosis. The third year is devoted to clerkships (required introductory clinical courses) in each of the clinical disciplines, in which the student functions as a member of a health-care team under close faculty and resident supervision.

The College of Medicine implemented a major revision in its medical curriculum beginning in 1998. Curricular reform was stimulated by changes in the organization and practice of medicine; the explosion of new scientific and clinical information; the desire to integrate basic and clinical science throughout the four years of medical training; the need for an earlier exposure to patient care and environments where health care is delivered; the need to foster a team approach with other professionals in the health-care network; the need for more small-group and student-based learning; and the desire for medical education to stimulate curiosity and questioning, and maintain altruism and idealism.

HEGIS Code

The College of Medicine is registered with the New York State Department of Medicine under HEGIS Code 1206.00. Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for student-aid awards.

FIRST-YEAR CURRICULUM

The first-year curriculum uses a multidisciplinary systems-based approach to teach the normal structure and function of the body. Each week includes one day of an early clinical experience course and four days of basic science. Material from the disciplines of biochemistry, cell biology, embryology, gross anatomy, histology, genetics and molecular biology, physiology, and neuroscience are learned in integrated blocks:

- Genes to Cells
- Skin and Connective Tissue
- Musculoskeletal System
- Blood/Lymphoid/Head and Neck
- Cardiovascular System
- Respiratory System
- Gastrointestinal System & Intermediary Metabolism
- Urinary System
- Endocrine & Reproductive Systems
- Neuroscience

Each block includes a combination of large and small group learning formats. These include Case-Based Learning sessions, lectures, histology and gross anatomy laboratories, conferences, and other small group discussion sessions. The ten blocks are organized into seven grading units consisting of one long block or two shorter blocks.

MEDI 1100 Genes to Cells / Skin and Connective Tissue

Genes to Cells: Genetics and basic aspects of cell and molecular biology that apply to all tissues and organ systems are covered, together with genetics. Topics presented in lecture, Case Based Learning, and exercises include protein and structure, transcription of mRNA and its translation into proteins, cell structure, and mechanisms of inheritance.

Skin and Connective Tissue: This block uses the structure and function of epithelium and connective tissue as a foundation for the discussion of skin. It integrates material from biochemistry, cell biology, and histology, and includes lecture material concerned with the cell biology of cytoskeleton, secretion, and inter-

cellular junctions. The accompanying laboratories focus on the epithelium and connective tissue and skin.

3 credits

MEDI 1105 Musculoskeletal System

This block includes the structure, function, and development of the body wall and limbs, and serves as a vehicle for introducing basic concepts about muscles and the nervous and vascular systems. Basic concepts of embryogenesis and the nervous and vascular systems are introduced. Methods of instruction include lecture, Case-Based Learning, and gross anatomy and histology laboratories.

5 credits.

MEDI 1106 Blood/Lymphoid / Head and Neck

The basic elements of blood and blood-cell development are covered along with the mechanisms involved in blood clotting and blood-gas exchange at both the structural and biochemical levels. Structure and function of the immune system are discussed with an emphasis on the cellular aspects of immunology. The laboratories include identification of blood-cell type, hematopoiesis, the histology of the immune system, and the anatomy of the head and neck. 3 credits.

MEDI 1107 Cardiovascular and Respiratory Systems

Cardiovascular System: The cardiovascular block presents an integrated view of the anatomy, histology, physiology, and cell biology of the cardiovascular system. This block emphasizes electrophysiology of the heart, biochemistry of cardiac muscle, hemodynamics of circulation, structure and function of smooth muscle, microcirculation, and the overall relation and control of the cardiovascular system. State-of-the-art information on gene-therapeutic approaches to cardiovascular disease is presented.

Respiratory System: The respiratory block includes the normal structure and function of the airways and lungs. Topics also include the role of other structures that help regulate breathing and the exchange of oxygen and carbon dioxide both at the periphery and in the lungs. Methods of instruction include lecture, Case-Based Learning, and gross anatomy and histology laboratories.

5.5 credits.

MEDI 1111
Gastrointestinal System and Intermediary Metabolism

The gastrointestinal block presents the gross anatomy, histology, and physiology of the gastrointestinal tract, as well as the intermediary metabolism of absorbed nutrients. The utilization of nutrients for energy generation and the synthesis and degradation of molecules such as carbohydrates, lipids, amino acids, and nucleotides are emphasized. A variety of small group learning methods as well as lecture and laboratories are used. 5 credits.

MEDI 1112
Endocrine, Reproductive, and Urinary Systems

Urinary System: By means of lectures, laboratories, and problem-based learning, the renal/urinary block covers the normal structure and function of the kidneys, ureters, bladder, and urethra. Major functional topics include the role of the kidneys in regulating the volume and composition of body fluids and the control of micturition.

Endocrine System and Reproductive System: The histology, cell biology, physiology and biochemistry of the endocrine and reproductive organs are introduced, using a combination of lectures and small group case-based learning sessions. Both basic science and clinical faculty contribute, to give students fundamental information with a clinical perspective. Laboratory sessions are used to introduce students to the histology of the endocrine and reproductive system organs. 6 credits.

MEDI 1114
Neuroscience

This block focuses on the anatomy and physiology of the central nervous system. The treatment of the central nervous system covers organizational principles, major systems, and brain-behavior relationships. Lecture topics include the anatomy of the CNS, cognition and behavior, cognition, development, and aging. The anatomy and histology of the CNS are covered in laboratory sessions. 6 credits.

MEDI 1110
Essentials of Clinical Medicine I

Essentials of Clinical Medicine helps students early in their training to gain the fundamental skills necessary to begin their development as complete, competent, and empathic physicians.

This year-long course focuses on the development of skills in basic clinical communication, knowledge of ethical principles guiding the doctor-patient relationship, knowledge of human behavior across the life cycle, and an understanding of statistical techniques used in medical research and evidence-based medicine. A combination of large-group sessions, small group discussion, and experience in clinical settings are used to acquire knowledge and skills and practice their application. 6 credits.

SECOND-YEAR CURRICULUM

The second year of the College of Medicine curriculum uses an integrated approach to the teaching of the major disciplines. Material is taught in blocks that use case-based learning, problem-solving sessions, laboratories, conferences, and lectures.

MEDI 2201
Infection, Immunity, and Inflammation

The fundamental principles of immunology, microbiology, pathology and pharmacology that are necessary for the organ-system based blocks that follow are presented. Specific infectious diseases are covered based on their ability to illustrate important principles. Besides an introduction to infectious diseases, the block includes musculoskeletal and skin diseases. Epidemiological considerations, preventive measures, and issues concerning bioterrorism are discussed. Basic microbiological skills are taught in laboratories. 9 credits.

MEDI 2205
Hematology and Neoplasia

This block is an introduction to understanding the molecular basis of neoplasia in general, with emphasis on hematologic cancers. Specific topics include the hemostatic system (including the genetics and biochemistry), anemias, functional disorders of the white blood cells, blood platelets and blood coagulation, and the blood banking system. Instruction in the pathophysiology and treatment of these disorders is taught by lecture, case-based learning, and in laboratory sessions. 4 credits.

MEDI 2111
Gastrointestinal System II

This block provides an understanding of the biological basis of the common and important disorders of the oral cavity, gastrointestinal tract, liver, biliary tree, and pancreas. Diseases of the gastrointestinal tract are presented. The pathophysiology and treatment of these diseases are discussed in small-group sessions and presented in lecture along with the radiologic examination of the gastrointestinal tract and laboratory exercises covering enteric and parasitic organisms. 3 credits.

MEDI 2107
Cardiovascular and Respiratory Systems II

Cardiovascular System: This block begins with an elaboration of the basic structure and function of the autonomic nervous system and the cardiovascular system, with an introduction to primary disorders of these systems and their associated treatments. The pathophysiology, epidemiology, prevention, and treatment of cardiac disease are emphasized in case-based sessions and lectures. Cardiac lesions are examined in the laboratory and by radiologic and echocardiographic methods.

Respiratory System: Diseases of the respiratory system and basic respiratory therapeutics are introduced, and their effects on the mechanics and regulation of breathing and gas exchange are discussed. Environmental and occupational risk factors for pulmonary disease are presented in lecture and small group formats. Infectious and inflammatory diseases of the lung are studied in the laboratory. 5.5 credits.

MEDI 2112
Endocrine, Reproductive and Urinary Systems

The student develops an understanding of the interrelationship of the endocrine and renal systems in the cause of hypertension and disorders of the internal milieu, and representative disorders of the renal system. Diseases of the male and female reproductive systems are studied.

The role of the kidney in the control of body fluid homeostasis and disorders that result when homeostatic control is disturbed, and the pathophysiological processes caused by over- and underproduction of hormones and the appropriate pharmacological interventions are presented in lecture, case-based learning, and laboratory sessions. 4.5 credits.

MEDI 2114 Nervous System and Psychopathology

This course connects basic neuroscience to the diagnosis and management of neurological and psychiatric problems. The course is integrated with the teaching of the neurological and psychiatric examination in the Essentials of Clinical Medicine II course. The student learns to apply the knowledge of basic neuroscience to both clinical and scientific neurological and psychopathological problems through lecture, small group discussion, and patient presentations. 5.5 credits.

MEDI 2110 Essentials of Clinical Medicine II

The themes of the second year of the Essentials of Clinical Medicine sequence are disease prevention and health promotion; clinical communication skills with an emphasis on negotiating agendas, the sexual history, giving bad news and promoting change; physical diagnosis; evidence-based medicine; ethics; and the role of culture. Teaching modalities and learning venues include lectures, small group discussions, physical diagnosis laboratories, and preceptorships in offices and clinics. 5.5 credits.

THIRD AND FOURTH YEAR CURRICULUM

The third and fourth years are integrated into an 81-week unit. It consists of the required clerkships listed below, a four-week subinternship in Medicine or Pediatrics, a two-week course on emerging concepts in medicine, and 20 weeks of electives.

CLERKSHIPS

Due to space limitations, required clerkships are open to SUNY Downstate College of Medicine students only.

MEDI 3000 Transition to Clerkships

This mini-course provides an overview of skills, knowledge and attitudes required for clinical clerkships. Through lecture and small group exercises, students learn about the continuum of care of patients from hospital admission through discharge and follow-up, the medical student's role in patient care, the learning habits and attitudes required to succeed in clinical settings, and methods of assess-

ment and evaluation used in the clinical years. *Prerequisites: Satisfactory completion of first and second years of medical school.*

The "Transition to Clerkships" course is the required introduction to the third-year clerkships, 1 credit.

MEDI 3101 Medicine Clerkship

Students are introduced to clinical medicine; develop skills and knowledge needed to evaluate patients; learn the principles underlying therapy; and develop an appreciation of their role as a member of a health-care team, a sense of responsibility for the well-being of their patients, and an understanding of the effort and dedication required of a care-giver. *Maximum number of students 40; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; ten weeks—five weeks at Kings County Hospital Center or University Hospital and five weeks at an affiliate hospital; 10 credits.*

NERU 3201 Neurology Clerkship

This clerkship provides experience in the physical examination, diagnosis, and management of patients with neurological diseases. Students are assigned patients for whom they assume responsibility under the supervision of resident and attending neurologists. Students participate in weekly clinical conferences and outpatient clinics, and are introduced to the use of neurological tests, such as EEG, EMG, CT scans, MRI scanning, cerebral angiography, and myelography. *Maximum number of students 23; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 4 weeks; 4 credits.*

OBYG 3301 Women's Health Clerkship

A wide variety of clinical experiences provide learning opportunities in the area of women's health from menarche to menopause and beyond. Students gain experience in procedures such as collecting and interpreting a cervical cytology, participating in delivery and postpartum care, and counseling patients on health issues such as contraception, pregnancy, and breastfeeding. Both outpatient and inpatient experiences are used. *Maximum number of students 29; prerequisites: satisfactory completion of first and second years of medical school; passing Step 1 USMLE; 6 weeks; 6 credits.*

PEDS 3401 Pediatrics Clerkship

The pediatric clerkship is designed to provide students with the basic knowledge and skills necessary to evaluate and manage patients from birth through adolescence. Students are expected to acquire an understanding of history taking skills (including interviewing parents), basic procedures, and physical diagnosis techniques as they apply to pediatric patients of various ages. Students spend four weeks in an in-patient setting and two weeks in a combined nursery/ambulatory setting. *Maximum number of students, 26; prerequisites: satisfactory completion of first and second years of medical school; passing Step 1 USMLE; 6 weeks; 6 credits.*

PSYH 3501 Psychiatry Clerkship

Students work on in-patient psychiatric units in evaluation, treatment, and management of patients under supervision. In-patient work is supplemented with selected outpatient clinical experiences and a program of formal didactic instruction. *Maximum number of students 25; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 6 weeks; 6 credits.*

SURG 3601 Surgery Clerkship

The student follows patients on a variety of surgical services throughout their illnesses and takes an active part in the therapy, including the performance of minor technical procedures, assisting at operations, and following results. Emphasis is placed on the clinical, rather than the technical, aspect of surgery. Instructional venues include rounds, teaching conferences, and an audiovisual laboratory in addition to clinical teaching at the bedside. *Maximum number of students 40; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 8 weeks; 8 credits.*

PRIMARY CARE CLERKSHIP I
(select either PRIM 3801 or FAMP 3802)

Interdisciplinary Primary Care I
PRIM 3801

Students spend six consecutive weeks in a functioning clinical ambulatory-care setting in either medicine, medicine/pediatrics, pediatrics, or family medicine. Students expand existing skills in medical interviewing, and physical diagnosis while developing additional skills in differential diagnosis, health maintenance, patient counseling, and follow-up. In addition to direct patient-care responsibility, small-group case discussions and topic reviews of particular importance to primary care form the core of the teaching. Students present an in-depth review of one primary-care topic during the course, and in addition may elect to do a special project in ambulatory or community health to receive an Honors grade. Students spend one afternoon a week at the SUNY Downstate campus taking Essentials of Clinical Medicine III, which reemphasizes and extends skills and knowledge acquired in the first two years of the ECM sequence. *Maximum number of students 25-27; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 6 weeks; 6 credits.*

FAMP 3802

Students spend six consecutive weeks participating in a variety of activities designed to expose them to the challenge of providing care to non-hospitalized patients. The main goal of this experience is to develop basic clinical and procedural skills for common presenting problems in each of six core areas: Adult Health, Child Health, Women's Health, Geriatrics, Behavioral Medicine, and Preventive Medicine and Well Care. Students work one-to-one with physicians, physician assistants, and resident physicians in the role of primary "student" physicians in an office-based setting in the care of children, families, and adults with a range of acute and chronic problems. Students also spend one afternoon a week at the SUNY Downstate campus taking Essentials of Clinical Medicine III, which reemphasizes and extends skills and knowledge acquired in the first two years of the ECM sequence. *Maximum number of students 10-12; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 6 weeks; 6 credits.*

ANES 3901
Anesthesiology Clerkship

The anesthetized patient provides an excellent model for students to learn how to recognize and treat individuals whose respiratory, cardiovascular, and central nervous system have been electively depressed. Students are able to apply basic-science principles to understand the pathophysiology of the patient with CNS, cardiovascular, and respiratory depression. Students become knowledgeable about the risks and hazards of anesthesia and the problems unique to the specialty. Students are expected to take an active part in the perioperative care of patients presenting for surgery and anesthesia. In addition to participating in clinical care, students attend rounds, conferences, and lectures. *Maximum number of students 10; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 2 weeks; 2 credits.*

EMED 3701
Emergency Medicine Clerkship

The clerkship is designed to provide the student with an introduction to the appropriate diagnosis and management of patients requiring emergency and/or critical care. Students are expected to perform a thorough history and physical exam, monitor and assess vital signs, and generate a differential diagnosis. Students are exposed to major trauma and medical resuscitations, early interventions that prevent mortality and morbidity, and electrocardiogram and radiographic interpretations. The student is also introduced to the performance of basic emergency procedures under supervision such as phlebotomy, IV insertion, arterial blood gas, nasogastric tube insertion, suturing, and splinting. In addition, emergency medicine involves attention to the establishment of a relationship with the patient and the family, as they cope with the emotional trauma of emergencies, critical illness, dying, and death. In addition to clinical experience, a lecture series is provided. *Maximum number of students 15; prerequisites: satisfactory completion of first and second years of medical school, passing Step 1 USMLE; 2 weeks; 2 credits.*

PRIM 4003
Primary Care II Clerkship—Geriatrics/Palliative Care

The curriculum ensures a foundation in attitudes, knowledge and skills required for competent and compassionate care of older patients. It is focused on acquiring proficiencies in the attitudes, knowledge, and skills needed for elder care. Knowledge and experience are gained of the common geriatric syndromes including altered mental status, iatrogenesis, mobility including falls, sensory deficits, failure to thrive, sleep disorders, pressure ulcers, incontinence, and nonspecific presentation of disease. Risk-reduction and preventive care are emphasized. The Clerkship includes a lecture series on Palliative Care with emphasis on the EPEC, a site visit to Calvary Hospital, and direct clinical experiences at the individual sites. A palliative care website is available for student participation and will be an additional requirement for completion of this segment. *Maximum number of students 20; prerequisites: satisfactory completion of first and second years of medical school; Primary Care I, passing Step 1 USMLE; 4 weeks; 4 credits.*

MEDI 4004
Emerging Concepts in Medicine

Emerging Concepts in Medicine is a two-week course that introduces graduating seniors to recent advances in medicine that will impact their future practice. The faculty consists of speakers from Downstate and outside the institution who are actively involved in translational research. The specific goals of the course are to expose the fourth year medical students to selected areas of medicine; how these fields are evolving and their anticipated impact on the practice of medicine in the future. 2 credits.

MEDI 5000
Transition to Residency

This brief fourth year course is focused on preparing students to take a different and much more responsible role in care of patients and in self-directed learning. Topics include professional behavior (legal issues and responsibility to patients), strategies for learning and teaching during residency, and changes in lifestyle (e.g., families and parenthood, debt management). 1 credit

MD/PhD Program

The College of Medicine and the School of Graduate Studies jointly sponsor a program leading to a combined MD/PhD degree. This program combines a medical education with an intensive research experience, and is designed for students who are interested in pursuing a career in academic medicine. Students are supported with a stipend and a tuition scholarship throughout the duration of the program.

Master of Public Health Program

This is a concurrent degree program in which students pursue both the MD and the MPH curriculum. Course offerings have been synchronized so that students may receive both degrees at the end of four years. More information is available on the Downstate website at www.downstate.edu/mphprogram. (See also, page 33, for admissions information on the Master of Public Health Program.)

Research Opportunities

Downstate encourages medical students to participate in research throughout the four years of medical school. There are a large number of research choices in such areas as molecular biology of gene expression, developmental neurobiology, prostate cancer, cardiac electrophysiology, synaptic plasticity, HIV infection in women, growth factors, genetics of alcoholism, and virus-host interactions.

Medical students who have made a significant research contribution are eligible to graduate with a “Distinction in Research.” Students who are interested in combining a medical education with an intensive research experience should consider the MD/PhD program.

Many students work on research projects during the summer between the first and second years of medical school. Funds may be obtained from a competitive research fellowship program, work-study, or from an individual mentor’s grant. A list of faculty mentors and their research topics is distributed annually to all medical students in the spring semester.

Research projects may be taken on a noncredit basis through the first- and second-year electives process or as senior elective credit (see Course Selection Book under extramural and research elective topic headings). For research projects of significant duration and effort, it is possible to request a leave of absence for up to a year through the Leave of Absence procedure.

Alpha Omega Alpha (AOA)

(The following is excerpted from the 1992-93 AOA Chapter Booklet. Additional information appears in the Student Organization section of the Student Handbook.)

Alpha Omega Alpha (AOA) is the national honor society for colleges of medicine in the United States. It was founded in 1902 by William Webster Root and five other medical students at the College of Physicians and Surgeons in Chicago. Chapters elect undergraduate members from students in their last two years of medical school. Scholastic

excellence is a key criterion but not the only one for election; capacity for leadership, compassion, and fairness in dealing with one’s colleagues are also to be considered.

Members may be elected to AOA as students, residents, or faculty members. The local chapter elects student members from those in their last two years of medical school. A maximum of one-sixth of the class total may be selected from each medical school class, of which not more than 25 percent may be selected in their junior year. Transfer students may also be considered for election to AOA in their senior year, after they have completed one academic year at Downstate.

Academic Policies

Current academic policies are described in the *Student Handbook*. The *Student Handbook* is distributed annually to all matriculated students.

Student Conduct

Detailed policies, student conduct rules, and disciplinary procedures appear in the *Student Handbook*, which is published annually.

Clinical Care Facilities

Medical students receive their clinical training at the on-campus University Hospital of Brooklyn; at Kings County Hospital Center (located directly across Clarkson Avenue); and at affiliated institutions and sites throughout the metropolitan area. Current information is posted on the institutional website (www.downstate.edu).

UNIVERSITY HOSPITAL OF BROOKLYN

University Hospital of Brooklyn (UHB) is the 376-bed teaching hospital of SUNY Downstate Medical Center and integral to the clinical education provided to medical students. As the regional center for Brooklyn and Staten Island, UHB provides, on average, care to over 13,000 inpatients and nearly 326,000 visits in its on-site Outpatient Department, Dialysis Center, and three off-site ambulatory care centers located in Bedford-Stuyvesant, Midwood, and East New York. More than 50,000 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 form the base for the Children's Medical Center and enable the hospital to excel among pediatric services in Brooklyn and New York. UHB is the designated Regional Perinatal Center for Brookdale, Interfaith, and Lenox Hill hospitals. It has one of the premier pediatric urology centers in the nation functioning outside a children's hospital. Its Pediatric Kidney Center is the second-largest facility for pediatric dialysis and transplantation in the state.

There are 51 general and specialty residency programs for more than 850 residents and fellows.

University Hospital'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. The staff is enriched by a part-time faculty of voluntary attending physicians from the community who devote time to Downstate. Faculty members closely supervise the care of patients while instructing medical students and other future health professionals.

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. It is 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. Kings County averages 23,000 admissions, 140,000 emergency room visits, and more than 543,000 outpatient visits annually.

CLINICAL AFFILIATES

Complementing the clinical experiences available at University Hospital of Brooklyn and Kings County Hospital are a wide variety of hospitals and clinical settings throughout the metropolitan area. The list of clinical sites used in the teaching program may vary from year to year and is updated annually in the *Course Selection Book* and other university information sources.

The clinical sites currently (2004-2005) used for medical student clerkships are:

Brookdale University Hospital and Medical Center

525-bed voluntary hospital with more than 20,000 admissions, 149,000 outpatient visits, and 100,000 ER visits annually. Brookdale is designated a Level One Trauma Center.

Brooklyn Hospital Center

653-bed voluntary hospital with more than 23,500 admissions, 145,000 outpatient visits, and 92,000 ER visits annually.

Coney Island Hospital

376-bed New York City Health and Hospitals Corporation hospital with more than 22,000 admissions, 286,000 outpatient visits, and 60,000 ER visits annually.

Lenox Hill Hospital

616-bed voluntary hospital with more than over 28,000 admissions, 67,000 outpatient visits, and 34,000 ER visits annually.

Long Island College Hospital

516-bed voluntary teaching hospital with more than 17,000 admissions, 121,000 outpatient visits, and 57,000 ER visits annually.

Long Island Jewish Medical Center

833-bed voluntary hospital with more than 37,000 inpatient admissions, 509,000 outpatient visits; and 57,000 ER visits annually.

Lutheran Medical Center

476-bed voluntary hospital with more than 18,000 admissions, 541,000 outpatient visits, and 51,000 ER visits annually. Lutheran is designated a Level One Trauma Center.

Maimonides Medical Center

705-bed voluntary, not-for-profit hospital with more than 31,000 admissions, 209,000 outpatient visits; and 88,000 ER visits annually.

New York Methodist Hospital

560-bed voluntary hospital with more than 26,000 admissions, 124,000 outpatient visits, and 65,000 ER visits annually.

North Shore University Hospital

795-bed voluntary hospital with more than 44,000 admissions, 213,500 outpatient visits, and 27,000 ER visits annually.

Staten Island University Hospital

813-bed voluntary hospital with more than 36,000 admissions, 432,000 outpatient visits, and 75,000 ER visits annually.

St. John's Episcopal Hospital, South Shore

332-bed voluntary hospital with more than 12,000 admissions, 139,000 outpatient visits; and 32,000 ER visits annually.

St. Vincent's Medical Center of Staten Island

449-bed voluntary hospital with more than 26,000 admissions, 270,000 outpatient visits, and 71,000 ER visits annually.

Department of Veterans Affairs, New York Harbor Healthcare System, Brooklyn Campus

348-bed tertiary-care hospital with designated primary-care program and ambulatory-care center.

Support Services for Students

ACADEMIC ADVISEMENT

During the first two years of medical school, students are encouraged to seek academic assistance from their course directors or faculty instructors regarding how to improve their academic performance in a particular course. Students in academic difficulty should also seek early assistance from the Office of Academic Development and the director of student counseling (for anxiety reduction and relaxation techniques).

Students who have questions regarding academic policies or their academic status, or seek information regarding academic support services, may seek assistance from the dean of students, the associate dean of student affairs (basic science years, i.e., first- and second-year students), or the assistant dean of student affairs (clinical years, i.e., third- and fourth-year students) in the Office of Student Affairs.

During the clinical years, students in academic difficulty in a particular course are encouraged to seek assistance from their clerkship course director or faculty preceptors/attendings, the Office of Academic Development and the director of student counseling. Students who have questions regarding academic policies or their academic status in the clinical years, or who seek information regarding academic support services, may seek assistance from their clinical assistant dean, the dean of students, or the assistant dean of student affairs.

CLINICAL ASSISTANT DEANS

In January of the third year of medical school, students are assigned a clinical assistant dean. There are four clinical assistant deans who provide advisement on the senior year program of study and who prepare the Medical Student Performance Evaluation (MSPE, formerly known as the Dean's Letter for residency) used in the residency application process.

OFFICE OF ACADEMIC DEVELOPMENT

The mission of the Office of Academic Development is to enhance students' academic performance. During each of their four years of study and training, medical students are confronted by a range of new challenges. Incoming students must rapidly adapt to exacting time constraints, to the level of detailed knowledge required for passing, and to the volume of information presented during each block.

During their first year, many students, even outstanding ones, find the new learning environment daunting and difficult to adjust to. During the second year, parallel adjustments are required for effective study and mastery of new material. During the third year, medical students must adapt to the unique demands of clinical learning and thinking.

To make medical studies less stressful and more enjoyable, the Office of Academic Development offers a variety of services, including group and individual tutorials that help students break the study codes for learning medicine during their first and second years. The office also supports students' preparation for the United States Medical Licensing Examinations (Step 1 and Step 2). In addition, the office offers review sessions, workshops and seminars for third and fourth-year students.

The director and assistant director also

provide individual academic advising and counseling and related services to all students in the following areas:

- study skills
- test-taking
- learning in a clinical environment
- memory and retention
- reading efficiency
- resource management
- time management
- subject-matter tutorials
- Step 1 and Step 2 licensing examinations

The office is staffed by a director, assistant director, and administrative assistant. The office is located in Room 620, Health Science Education Building; the telephone contact number is (718) 270-7536; office hours are 9:30 a.m. – 5:30 p.m., as well as from 8:00 a.m. – 9:00 p.m. by appointment.

OFFICE OF MINORITY AFFAIRS

The Office of Minority Affairs directs several programs specifically targeted to furnish needed information and support for students who are underrepresented in medicine—African Americans, Native Americans, Mexican Americans, and Hispanics. One such program, Operation Success, is a six-week summer program designed to provide a sampling of course content scheduled for the first academic semester. A skills-development component helps to improve basic study and time-management skills. The program also offers students the chance to meet and develop relationships with faculty and classmates, helping them feel comfortable in the new environment.

The office also administers several programs that encourage and assist students to enter medicine, allied health, or basic science. An undergraduate Summer Research Fellowship is avail-

able in either the basic sciences or clinical specialties. The PATH program works with students from several local colleges to prepare them to enter the healthcare professions.

The Office of Minority Affairs provides support to two student organizations: the Daniel Hale Williams Society, Downstate's chapter of the Student National Medical Association (SNMA), is named for an African American physician who was the first to perform surgery on the heart and have the patient survive. Its goals are educational, social, and service-oriented. SALUD, Downstate's chapter of the National Boricua Latino Health Organization (NBLHO), promotes health awareness and provides information relating to illnesses that primarily affect the Latino community.

RESIDENCY INFORMATION AND ADVISEMENT

SUNY Downstate has a reputation for clinical excellence. 2003 data from the Association of American Medical Colleges ranks Downstate 6th nationally in the number of alumni who hold faculty positions. (This list is available on the Student Affairs section of the Downstate website.)

Residency advisement is available to all students throughout their four years. The following books provide helpful information:

Iserson, Kenneth. *Getting into a Residency: A Guide for Medical Students*

Taylor, Anita D. *How to Choose a Medical Specialty*

"Careers in Medicine" is an on-line program (www.aamc.org/careersinmedicine) designed to assist medical students in understanding options for choosing a specialty and applying to residency programs. There are four stages in the program: self-assessment, career exploration, decision-making, and implementation.

During the first and second years of medical school, students should avail themselves of various electives that are designed to give them a brief exposure to a specialty field (these electives appear in the *Course Selection Book*). In the early spring of the first year, second-year students give a presentation on the summer education activities in which they participated during the previous summer.

First- and second-year students are encouraged to take advantage of the activities sponsored by such groups as the Family Practice Club, the Sports Medicine Club, Peds R Us, and the Surgery Club.

The Alpha Omega Alpha (AOA) Medical Honor Society organizes a Subspecialty Forum in the spring. Faculty representatives from approximately ten departments talk to first- and second-year students about their field of medicine and considerations if a student is interested in going into that specialty.

A list of Specialty Advisors is distributed to students annually. This is a list of individuals designated by each department who are prepared to offer students specialty counseling and advisement.

At the beginning of the third year, students receive a guidebook explaining how their clerkships relate to residency training. In the fall and spring of that year, career-advisement workshops are offered to undecided students. In the spring, departmental information sessions regarding residency programs are offered in conjunction with the senior-year elective registration. In addition, several class meetings are given by the Office of Student Affairs on residency-process timelines, senior electives, and interviewing techniques, and an extensive residency application process meeting is held. A more detailed residency guidebook is provided for senior-year guidance.

Residency Information Resources

Medical School Faculty Online Directory. An on-line listing of full-time faculty at all 125 U.S. medical schools, searchable by last name: <http://services.aamc.org/facsearch>.

AMA FREIDA. The American Medical Association has extensive information on U.S. residency programs accredited by the Accreditation Council on General Medical Education: www.ama-assn.org/vapp/freida/srch.

STUDENT COUNSELING

The Student Counseling Service is part of the Student Health Service and provides counseling and psychological services to matriculated students in the Colleges of Medicine, Nursing, Health Related Professions, and School of Graduate Studies. All information revealed to the counselor is strictly confidential and cannot be shared with another person without the student's consent. It is staffed by a licensed clinical psychologist who has extensive academic and professional experience in the field of academic counseling.

The Student Counseling Service has been established to help students deal with academically related stress as well as with any other personal problem that can interfere with their performance in school. These problems include anxiety and fear, depression, low self-esteem, interpersonal difficulties, family problems, and habit-control problems (e.g., overeating, alcoholism, and drug abuse). Additional information regarding programs and services is detailed in the *Student Handbook*.

STUDENT HEALTH

The Student Health Service provides primary care for acute conditions, illnesses, and injuries to the more than 1,500 full-time and part-time matriculated students at SUNY Downstate. It also provides routine health clearances, immunizations, and tuberculin testing when needed. Services are not provided to students not paying the Student Health fee, students on leave of absence, or to the families of matriculated students. Student Health also includes, at no extra charge, a student counseling service for all matriculated students.

All students must submit a completed health form that includes, among other things, documentation of a tuberculin test (or chest x-ray if tuberculin is positive) and immunity to measles, mumps, rubella, and varicella. Students not complying with this requirement will not be permitted to register for classes.

Purpose and Functions

The Student Health Service makes available to matriculated students preventive, therapeutic, and consultative medical care. The coverage provided by Student Health does not include hospitalization, laboratory fees, radiology fees, psychiatric care (other than initial evaluation and counseling by an on-campus psychologist), dental care, or consultation with physicians other than Downstate physicians. Students in the School of Graduate Studies who are covered by the SUNY Graduate Student Employee Health plan use Student Health for primary care and referral to network physicians.

SUNY Downstate and its affiliated hospitals have protocols for exposure to blood and body fluids. This is detailed in the Student Health information pamphlet and in the *Student Handbook*.

Additional information regarding programs, hours, services, and policies is available in a brochure published by the Student Health Service and also in the *Student Handbook*.

Student Health Advisory Committee

The Student Health Advisory Committee includes members of the faculty, the director of the Student Counseling Service, the director of the Student Health Service, administrators, and students. The role of the Committee includes making recommendations regarding health services, counseling, health insurance, utilization of the yearly student health fee, and any other student health issues. The committee serves as an advisory body. Students with questions or suggestions are encouraged to speak to the director of the Student Health Service or the Office of Student Affairs.

Student Health Insurance

Student health insurance is mandatory for all students. Information about the health-insurance plan currently available may be obtained from the Office of Student Affairs.

Other Campus Organizations

ALUMNI ASSOCIATION— COLLEGE OF MEDICINE

Every medical student and graduate of the College of Medicine is a member of the Alumni Association. Annual dues finance alumni office costs and alumni publications and provide for record maintenance, archives, and services to alumni and students.

The charitable mission of the Alumni Association is accomplished through the Alumni Fund and administered by the Board of Trustees. Contributions to the Alumni Fund support a variety of programs for medical students, including scholarships, research fellowships and scholarly pursuits, travel stipends for electives abroad, the White Coat Ceremony, and many other student activities.

MENTORING PROGRAM

The Mentoring Program is sponsored jointly by the Alumni Association and the Dean's Office. Its purpose is to provide personal attention and advisement to first-year students and to create an environment that eases their adjustment to medical school. First-year students are matched to clinical faculty on the basis of their specialty interests, and to second-year student co-mentors. Mentors strive to establish supportive relationships with their students by engaging them in social, clinical, and research activities that satisfy their needs and offer a perspective on medicine as a career.

PARENTS ASSOCIATION

Purpose

- To introduce parents to the College of Medicine and help them become acquainted with it.
- To acquaint parents with the College's academic program through guest speakers from the College (faculty and administration) and to learn about various medical specialties.
- To assist parents in learning how to cope with the emotional needs of medical students.

History

The parents of the students at the Long Island College of Medicine began working as a group in 1943. They assisted in a fundraising campaign to expand the College's physical plant and to help meet its annual deficit. In 1947, the group was formally organized as the Parents' Society of the Long Island College of Medicine by adopting a constitution and bylaws. The Parents Association is committed to having a "better understanding among parents, professional staff, students, the school, and the community."

Membership

Annual dues are \$35 (\$25 for single parents); meetings are held on the third Thursday of each month. These membership meetings provide an opportunity for parents to meet each other and share students' common concerns and problems.

Master of Public Health Program

MPH

MD/MPH

MS/MPH

- Nursing
- Occupational Therapy
- Physical Therapy

Admissions

Courses of Instruction

MPH

The Master of Public Health (MPH) Program, which grants the degree of Master of Public Health, focuses on urban health, with an emphasis on immigrant health. The basics of public health—biostatistics, epidemiology, health-systems management, environmental health, health behavior, and risk reduction—are an integral part of the program, along with the core requirements for the urban and immigrant health track. These include public health theory and practice; urban health models; community organization; immigrant health; and sex, gender, race, and ethnicity.

Electives that complement the required courses complete the program's theoretical basis. The Practicum and the Special Project, which blend theory with practice, complete the final requirement for the degree. The credit requirements for the degree are 36 credits for health professionals and 45 credits for non-health professionals.

Students include physicians, nurses, physician assistants, and other health professionals, as well as recent college graduates and professionals seeking additional education. In addition to the regular MPH degree, there are several concurrent degree programs for individuals who wish to obtain an MPH degree with another health-professional degree.

MD/MPH

The MD/MPH program is a concurrent degree program that confers both the MD and MPH degrees within the four years of medical school. It is designed for individuals who wish to blend medicine and public health either for academic, research, or clinical purposes. Medical students enter the program during the first year of medical school, preferably in the summer prior to medical-school matriculation.

The MPH and MD coursework is given simultaneously throughout the first two years, with the MPH coursework being completed by the end of the second or third summer. The Practicum project can be performed either during the first two years of medical school or during the final two years.

MS/MPH

Two MS/MPH programs are offered, one with the College of Nursing, and one with the Occupational Therapy Program in the College of Health Related Professions.

MS/MPH Program (Nursing)

The MS/MPH combines nursing and public health and confers both degrees within a two- to three-year period. The program is designed for nurses seeking a master's degree in nursing who wish to focus on public health issues in their work. A more complete description of this concurrent degree program can be found in the College of Nursing Bulletin.

MS/MPH Program (Occupational Therapy/Physical Therapy)

The MS/MPH combines occupational or physical therapy and public health and confers both degrees.

Students who enroll in this concurrent curriculum space their occupational/physical therapy coursework over one additional year, while taking one or two public-health courses each semester. For administrative purposes, students are considered part-time students in both the Occupational/Physical Therapy Program and the Public Health Program.

Admissions

Current admissions information and policies appear on the SUNY Downstate website.

REQUIREMENTS FOR ADMISSION

Candidates for degrees are enrolled as regular MPH graduate students upon satisfactorily completing the requirements for admission. Applicants should submit the following to the SUNY Downstate Admissions Office:

- Completed admissions application form (may be obtained from Downstate website, Admissions Office, or MPH Program Office)
- Official transcripts of all undergraduate and graduate courses; applicants are expected to have a bachelor's degree from an accredited institution or equivalent education as approved by the program director
- Letters of recommendation (see the application form for the number of letters required)
- Results of the Graduate Record Examination (GRE), Medical School Application Test (MCAT), or other acceptable graduate examination as delineated in the *MPH Program Bulletin* (see the SUNY Downstate website for acceptable examinations).

The completed application is reviewed by the MPH Program Admissions Committee, which is composed of a multidisciplinary group faculty within the MPH Program. Applications for the program are welcomed three times during the year: Spring Semester, October 15; Summer Semester, February 15; Fall Semester, April 15.

NONMATRICULATED MPH GRADUATE STUDENTS

A graduate student enrolled in another program at Downstate may be admitted to a course given by the MPH Program if acceptance is approved by the MPH program director. Physicians in residency programs may also take a course or courses with the approval of the residency director or departmental chair and the MPH Program Director.

TRANSFER CREDITS

A maximum of six credits can be transferred or exempted for the MPH Program.

- 6 credits of approved course work from an accredited institution that has not been used to complete a degree at the other institution can be transferred to credits for the MPH Program only; OR
- 6 credits of passed exemption examinations for the non-health professional courses only: Introduction to Human Health and Disease (3 credits) and Health Care Across the Lifespan (3 credits); OR
- 3 credits of an approved course from an accredited institution that has not been used to complete a degree at another university, and 3 credits of a passed exemption examination for non-health professionals in the MPH Program.

Credit transfers must be approved by the program director. The student must furnish official written proof of the course-content equivalency. If the student fails to provide this in a timely fashion, the option for credit transfer may be denied.

Academic Regulations

Current academic policies are described in the *Student Handbook*. The *Student Handbook* is distributed annually to all matriculated students.

Student Conduct

Detailed policies, student conduct rules, and disciplinary procedures appear in the *Student Handbook*.

Financial Aid

Eligible students may apply for financial aid by following the instructions on the Financial Aid section of the institutional website, www.downstate.edu.

HEGIS Code

The Master of Public Health program is registered with the New York State Department of Medicine under HEGIS Code 1214.00. Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for student aid awards.

Courses of Instruction

MPH CORE COURSES

URBA 5101

Principles of Biostatistics

Introduction to statistical methods in public health. The course covers descriptive statistics, probability concepts, estimation of parameters, hypothesis testing, simple linear regression, correlation, and analysis of attribute data. 3 credits.

URBA 5102

Principles of Epidemiology

Introduction to epidemiological principles in public health. The course covers principles, basic methods, and concepts associated with measuring and interpreting patterns of disease in populations. Disease surveillance and the use of epidemiology in public health are also covered, especially as they pertain to urban environments. 3 credits.

URBA 5103

Health Behavior and Risk Reduction

An introduction to the concepts, theories, and status of research in health promotion and disease prevention, with an emphasis on methods employed to modify group and individual health-related behaviors. This course examines methods of ascertaining health behaviors, the design and interpretation of behavioral intervention programs to modify behaviors, and current trends in the study of how lifestyle and preventive health practices impact on public health. 3 credits.

URBA 5104

Issues in Environmental Health

Major environmental health issues. The course addresses public-health issues in the management of water quality, wastewater, occupational health, trace elements, municipal and hazardous waste, vector control, and air quality. 3 credits.

URBA 5105

Principles of Health Systems Management

Concepts and principles of management applied to planning, organizing, staffing, leading, controlling, financing, and evaluating health-services organizations. Further focus is on management and organization interaction as well as managerial roles, styles, activities, and decision-making. 3 credits.

URBAN AND IMMIGRANT HEALTH TRACK CORE COURSES

URBA 5201

Introduction to Public Health Theory and Practice

Introduction to the broad concepts of public-health practice, including the mission, core functions, structure, policy role, program activities, and collaborative endeavors of public-health agencies. Theoretical and practical perspectives are studied to illustrate contemporary strategies for health promotion and disease prevention at local, state, and national levels. 3 credits.

URBA 5202

Issues in the Health of Immigrant Populations

Emigration country can have important effects on the émigré's health. The demographic, scientific, clinical, economic, social, political, ethical, and legal factors of the country of origin interact with those of the new country. They are manifest in different ways in the health of new and old emigrants. This course considers these and related public health issues across the lifespan. 3 credits.

URBA 5203

Sex, Gender, Race, and Ethnicity in Health

The health and well-being of human beings have been under intense scrutiny and involved important changes during the twentieth century and into the twenty-first century. Sex/gender and racial/ethnic inequities are being addressed and gaps in knowledge are narrowing. These changes involve multiple factors; this course considers many of those factors as they interact with demographic, scientific, clinical, economic, social, political, ethical, and legal issues. 3 credits.

URBA 5204

Urban Health Issues

The goal of this course is to prepare public health professionals to analyze and intervene in urban health issues. The course explores the health of urban populations around the world, with a special focus on New York City, from historical, economic, social, spatial, and medical per-

spectives. Key concepts include social capital, social cohesion, social hierarchies, social networks, public health infrastructure, healthy neighborhoods, health disparities, globalization, and micro-geographic analysis. Each semester the class will explore three health topics in depth and will organize a neighborhood mini-conference on one of these topics in collaboration with local stakeholders. In addition, each student will perform weekly analyses of his/her neighborhood of residence and periodic analyses of the neighborhood surrounding SUNY Downstate. 3 credits.

URBA 5205

Community Organizations

Emphasis on community organizations as a major interventional approach to community dynamics, social change, and community participation in addressing health problems. The course explores methods for identifying and analyzing community health problems and their causes. 3 credits.

SOCIAL AND BEHAVIORAL SCIENCES TRACK CORE COURSES

URBA 5601

Research Methods and Measurement in the Behavioral Sciences

This course is designed to present an overview of the design and methods used for behavioral research in public health. Topics include an overview of the scientific method, a discussion of quantitative methods such as, survey development, quasi-experimental research, and randomized controlled trial designs used for behavioral research in public health. The course will also cover issues related to qualitative research design and methods; including focus group development, interview techniques, and ethnographic research. *Prerequisites:* URBA 5102 and URBA 5103. 3 credits.

**URBA 5603
Psychosocial and Behavioral
Epidemiology**

This course will provide an introduction to the social, psychological, and behavioral issues that influence patterns of health and health care delivery. The focus is on the integration of the biomedical, social, psychological, and behavioral factors that must be taken into consideration when public health initiatives are developed and implemented. The course will be based on ecological theories of influences on health behavior. The course will also include the application of epidemiologic methods to the study of social, psychological, and behavioral influences on health, disease, and recovery/mortality. *Prerequisite: URBA 5103.* 3 credits.

**REQUIRED COURSES
FOR NON-HEALTH-
PROFESSIONAL
STUDENTS**

**URBA 5001
Introduction to Human Health
and Disease**

For students with little or no background in the biological sciences, this course provides an introduction to a wide range of public-health topics related to human health and disease, including a review of anatomy, physiology, and pathology of selected organ systems and associated diseases. The course can be waived. See Course Exemption policy. 3 credits.

**URBA 5002
Health Care Across the Lifespan**

This course examines health care from infancy through old age. Selected models are presented for understanding development processes as an individual ages. That knowledge is applied to specific public-health issues. The course can be waived. See Course Exemption policy. 3 credits.

**PROFESSIONAL
DEVELOPMENT
COURSES**

**URBA 5003
Writing with Power**

Techniques for producing writing that is clear, concise and compelling. This workshop will introduce strategies for avoiding common writing pitfalls and for effectively organizing, proofing and revising writing. The workshop culminates in the development of a clear and coherent public health intervention action plan. 1 credit.

**URBA 5004
Mastering Math**

Designed to enhance key concepts in mathematics and statistics. This course will review basic math operations, formula solving and manipulation, and basic concepts of algebra. The purpose is to provide a strong mathematical foundation to pursue relevant coursework in introductory biostatistics and epidemiology. 1 credit.

ELECTIVE COURSES

**URBA 5300
Introduction to Biostatistical
and Epidemiological Concepts**

Designed for students who wish to develop a more comprehensive grasp of key concepts prior to the core courses in these areas, this course presents and discusses elements of critical analysis of biostatistical and epidemiological concepts. 1 credit.

**URBA 5301
Public Health and Medicine**

Public health and medicine are inextricably linked yet often viewed as separate. Where does medicine end and public health begin? Who has the responsibility for a population's health? This course focuses on both questions and presents the application of public health and medicine within the context of urban communities, particularly those with immigrant populations. 3 credits.

**URBA 5302
Chronic Disease and Public
Health**

Cardiovascular disease and cancer are the leading causes of mortality among all racial and ethnic groups in the United States. These diseases, as well as many of the leading causes of morbidity – rheumatoid arthritis, osteoporosis, diabetes, and others – compromise life and well-being. This course examines the etiology and prevention efforts for leading chronic diseases among different racial and ethnic groups living in an urban setting. A special focus is directed toward immigrant groups. *Prerequisite courses for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5303
Human Sexual Behavior**

Focus on aspects of human sexual behavior from a psychosocial and behavioral perspective. A brief review of human anatomy and physiology as well as developmental abnormalities is considered. The purpose is to educate health professionals about the strong influences of sexuality in all its facets. *Prerequisite Course for non-health professionals: URBA 5001.* 3 credits.

**URBA 5304
Issues in HIV Prevention**

Facets of HIV prevention, including risk factors and the impact of social, economic, racial/ethnic, cultural, and religious factors on the development of the disease. Studies focusing on different communities at high risk are analyzed. *Prerequisite Course for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5305
Issues in Adolescent Health**

The myriad factors that influence adolescent development are considered juxtaposed against societal and public-health issues. This course provides the student with an opportunity to enhance knowledge regarding this period of human development. *Prerequisite Course for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5306
Injury and Violence Prevention**

Examination of injury and violence as seen in urban settings. The course is designed to incorporate models into practical application in communities using case examples. *Prerequisite Course for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5307
Substance-Abuse Prevention and Treatment**

Planning, implementing, and evaluating alcohol, drug abuse, and tobacco programs in worksites, schools, and communities. The course includes epidemiological issues, research efforts, and state-of-the-art treatment programs. *Prerequisite Courses for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5308
Global Health**

Global health issues with a special emphasis on health and health care in developing countries. Special attention is given to the health and social problems of growing third world cities and the roles of non-governmental organizations, bilateral first-world government agencies, and international organizations. *Prerequisite Courses for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5309
New and Emerging Threats**

Bioterrorism, drug resistant infectious diseases, Smallpox, Anthrax and Variant Creutzfeldt-Jakob Disease (Mad Cow Disease) represent some of the new and emerging threats to human health. Prophylaxis, detection, personal protection, and decontamination are critical factors in response. Special attention is directed toward local, regional, national, and international response effectiveness. *Prerequisite courses for non-health professionals: URBA 5001 and URBA 5002.* 3 credits.

**URBA 5310
Introduction to Research**

Basics for participating in the development, implementation, and evaluation of research studies in public health, particularly health-care delivery. Each student is expected to develop and present a research proposal. *Prerequisite Courses: URBA 5101 and URBA 5102.* 3 credits.

**URBA 5311
Social Marketing**

Social marketing is a key ingredient in strategies to develop, implement, and evaluate health communication and education programs. This course focuses on developing and presenting a social marketing plan addressing a specific public health issue among a specific racial or ethnic group. 3 credits.

**URBA 5312
Clinical Research Workshop**

This is an intense workshop for beginning or experienced researchers to prepare a protocol for a study that they actually intend to carry out. In addition to a rigorous overview of the basic principles and methods of clinical and public health research, the course includes extensive practical experience in protocol writing, data analysis with SPSS, and critical thinking. For practice in analysis, students will work on an existing data set of 1000 breast cancer patients from Brooklyn. Reliable access to a word-processing program and to the Internet is necessary to participate in the class. *Prerequisite Courses: URBA 5101 and URBA 5102 or equivalent and approval of instructors.* 3 credits.

**INDEPENDENT STUDY
PROGRAM**

**URBA 5502
Independent Study**

Independent study courses focus on a particular issue or set of issues related to a specific topic in public health. An Independent Study Program consists of assignments, research papers, clinical experiences, and presentations submitted for academic credit. The student works closely with the professor to determine the study focus and methods of evaluation. Independent Study Programs are approved at the discretion of the MPH program director, in consultation with Program faculty. *1-4 credits depending on the course of independent study; to be offered upon request and agreement between student and faculty member.*

**PRACTICUM AND
SPECIAL PROJECT**

**URBA 5500
Practicum**

A 250-hour field experience in a local, state, national, or international setting and a scientific paper that presents a thorough consideration of the experience. *Prerequisite Courses: The majority of the program courses must have been completed prior to engaging in the Practicum experience. 1 credit per semester. To be carried out based on submitted and approved practicum proposal.*

**URBA 5501
Special Project**

Students who are licensed physicians, doctors of osteopathy, nurses, physician assistants, or dentists may qualify for an alternate option that consists of a 60-hour practicum experience plus a research study prepared according to the program's required standards. Students must submit an application to the MPH program director for permission to carry out the Special Project. *Prerequisite Courses: URBA 5101, URBA 5102, and URBA 5309. In addition, the majority of the program courses must have been completed prior to engaging in the Special Project experience. 1 credit per semester. Carried out based on submitted and approved practicum proposal.*

School of Graduate Studies

PhD MD/PhD

Graduate Study

Admissions

Financial Information

Programs of Study

Courses of Instruction

Joint Doctoral Program in
Biomedical Engineering

Student Computing

Graduate Study

Founded in 1966, the School of Graduate Studies is one of four colleges that make up the State University of New York Downstate Medical Center, officially known as the Health Science Center at Brooklyn, and is accredited by the Middle States Association of Colleges and Secondary Schools. The School of Graduate Studies now offers three PhD degree-granting programs: Molecular and Cellular Biology, Neural and Behavioral Science, and a joint PhD program in Biomedical Engineering in collaboration with the Brooklyn campus of Polytechnic University. All students are accepted by a school-wide admissions committee provisionally into one of the three PhD programs, although they are permitted to change their affiliation up until the end of their first year.

The interdepartmental organization of graduate programs reflects the interdisciplinary nature of modern biomedical research. Neural and Behavioral Science research ranges from molecular and cellular neurobiology to systems and behavioral neuroscience. Many of Downstate's neuroscientists are involved in studying signal transduction mechanisms and macromolecular complexes. Among them is a group whose goal is to understand spatial learning, memory, and navigation (i.e., how the brain makes spatial maps and how this function is altered in aging and/or in Alzheimer's disease). Transgenic or "knock-out" mice that have altered levels of gene expression of the presumptive signal transduction molecules are assessed with navigational assays.

Downstate also has a very active opioid research program in which investigators study dependence, tolerance, and sex-steroid regulation of opioid pathways and of pain. Gender-related issues are an increasing focus of biomedical research at Downstate. In addition to

gender differences in pharmacological modulation of pain, rodent models are also used to investigate the anxiety that is induced during estrous-cycle progesterone withdrawal.

The clinical relevance of Downstate's neuroscience research is exemplified by cutting-edge research projects aimed to elucidate the cellular and molecular mechanisms of stroke and epilepsy, neuroengineering methods and neuro-robotics to control sensory and motor prosthetic devices, and novel optical-tomography imaging systems that use light at near-infrared wavelengths to image pathophysiological tissue specimens of brain and breast. Investigations on RNA transport in neuronal dendrites aim to understand the functional role in synaptic transmission. Computational neurobiologists are collaborating on selected animal studies by modeling brain circuitry involved in epilepsy and stroke.

Research in molecular and cellular biology focuses on several areas: 1) genes that regulate development of the heart and cardiovascular system during embryogenesis, 2) genes that regulate liver regeneration, and 3) lipid metabolism in relation to heart disease, using transgenic mouse models and molecular mechanisms of lipoprotein assembly in the gastrointestinal system.

There is substantial research on immunology that focuses on cells important for host defense against infections and tumors, evolution, and the generation of antibody diversity; regulation of B-cell differentiation related to immunodeficiency and cancer using a transgenic mouse model, and a novel tissue culture system. Some faculty members use yeast to model eukaryotic regulation of transcription, e.g., chromatin remodeling, nuclear import and export, and the role they play in cell-cycle progression. Other investigators are studying transcription by bacteriophage RNA polymerases as a model of in vivo molecular motors. Yet others

have characterized novel translation-initiation factors in eukaryotes, and the crystal structure of RNA polymerase in *E. coli*.

The interdepartmental structure of Downstate's graduate programs also fosters research collaborations and consolidates educational and scientific resources. One of the chief objectives of the School of Graduate Studies is to educate those students who will become teachers and investigators in the biomedical sciences. An atmosphere conducive to scholarship and research is fostered, focusing on understanding the basic biological processes that underlie human health and disease. Students are also introduced to biomedical scientists in non-academic careers, e.g., those working in biotech start-up companies in Downstate's Advanced Biotechnology Park.

MD/PhD PROGRAM

The MD/PhD Program, which leads to the conferral of both MD and PhD degrees, is designed for students who intend to enter a career of research and teaching in academic medicine. In general, MD/PhD students are supported with both a stipend and a tuition scholarship throughout the medical and graduate school years.

Graduates of this program differ from most basic scientists in having had the extensive medical training required to investigate problems of disease. They also differ from most clinicians in having the detailed background, fundamental knowledge, and intensive research experience required for applying biomedical sciences techniques to clinical investigation.

The general aim of the program is to provide education in pre-clinical and clinical aspects of medicine equivalent

to that obtained by regular medical students, along with intensive research experience in the basic medical sciences equivalent to that obtained by graduate students. Thus, students are expected to complete all requirements for an MD degree and a PhD degree, including a doctoral thesis. The entire program takes at least six years but usually more.

During the program's first two years, students are enrolled in the standard curriculum of the College of Medicine. They are expected to work in research laboratories at the medical center during the summer months following completion of first- and second-year classes in the College of Medicine. The final choice of sponsoring graduate program may be deferred until the end of the second year. The supervision of a student's research program is the responsibility of the sponsoring PhD program.

After completing the first two basic science years in the College of Medicine, students pursue full-time graduate work. Following their thesis defense, they return to the third year of the College of Medicine. Academic credit for courses taken in the College of Medicine are transferable up to a maximum of 24 credits toward the PhD degree.

MASTER OF SCIENCE PROGRAM

The School of Graduate Studies contributes to Polytechnic University's MS in Biomedical Engineering Program by providing courses in biomedical sciences that are specially designed for engineering students. Full descriptions of master's programs in the College of Nursing and in the College of Health Related Professions are provided in their bulletins.

POSTDOCTORAL FELLOWS

All basic science and clinical departments may sponsor postdoctoral fellows who are involved in basic science or clinical investigation. In general, several years of postdoctoral experience are required for those intending to pursue an academic career. The fellowship period provides an opportunity to obtain the breadth of experience required for a successful career in research and teaching.

More usually, postdoctoral fellows are sponsored by individual faculty members who agree to provide support and the requisite facilities. There are no formal regulations governing acceptance, duration of study, or allocation of support from Downstate's resources, although general guidance may be obtained from the Office of the Dean of the School of Graduate Studies.

Fellows are notified of all Downstate events and are invited to participate in the three graduate programs' biweekly seminar series, special symposia, meetings, lectures, and conferences.

Academic Policies

Current academic policies are described in the *Student Handbook*. The *Student Handbook* is distributed annually to all matriculated students.

Student Conduct

Detailed policies, student conduct rules, and disciplinary procedures appear in the *Student Handbook*.

Admissions

Current admissions information and policies appear on the institutional website: www.downstate.edu.

Applicants are selected on the basis of their qualifications, without regard to sex, age, race, creed, national origin, or handicap. The School of Graduate Studies strongly welcomes and encourages applicants from underrepresented minority groups. Decisions regarding admission are based on a number of factors including, but not limited to, research experience, academic records, results of standardized tests, letters of recommendation, and a personal interview. Qualities such as interest, intellectual curiosity, perceptivity, and ability to reason are strongly considered in addition to the academic record.

The School of Graduate Studies, as a unit of the State University of New York, gives preference for admission to residents of New York State. However, applications from out-of-state residents are very much encouraged. The school is also authorized under federal law to enroll non-immigrant foreign students with appropriate visas. Admission to the School of Graduate Studies is limited to students seeking the degree of PhD or MD/PhD for research in basic biological sciences and biomedical sciences.

Candidates are considered by a school-wide admissions committee and admitted mostly in September, but occasionally in January. Candidates for a doctoral degree are only admitted on a full-time residence basis. Members of the graduate faculty sponsor students in their own fields of expertise, and application to the School of Graduate Studies implies willingness on the part of the candidate to work on subject matter that is relevant to ongoing faculty research at Downstate.

REQUIREMENTS FOR ADMISSION

Graduate Students

Applicants should submit the following documents to the Office of the School of Graduate Studies, Box 41, SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, NY 11203-2098:

1. Completed application for admission (forms may be obtained from the Graduate School Office or downloaded from the Graduate School website: www.downstate.edu/grad).
2. Official transcripts of all undergraduate and graduate courses. Applicants are expected to have a bachelor's degree from an accredited institution.
3. Letters of recommendation from two or more persons familiar with the applicant's academic background and potential for research.
4. Results of the Graduate Record Examinations. Applicants to the MD/PhD Program may instead submit results of the Medical College Admission Test. Graduates of U.S. medical schools may submit results of the United States Medical Licensing Examination.

The completed application is reviewed by a school-wide admissions committee of multidisciplinary faculty. Before acceptance, an applicant is invited for a personal or telephone interview. Students are expected to specify a particular graduate program at the time of application, but may change their mind up until the end of their first year of study at the School of Graduate Studies—after they have completed at least one laboratory rotation.

There is rolling admission; however, the absolute deadline for September matriculation is May 1. Stipends as well as tuition scholarships are available to graduate students.

MD/PhD Program

Students in this program work toward a combined MD/PhD degree, and they are alternately enrolled as students in

either the College of Medicine or in the School of Graduate Studies. Applicants to this program must first apply for admission to the College of Medicine, and they are then considered for the combined MD/PhD program as part of the admissions procedure. Students who are already enrolled in the College of Medicine may apply for admission to the MD/PhD program at any time during their first two years of study.

In evaluating applicants for the program, considerable emphasis is placed on prior research experience, such as that gained during summers or through appropriate electives, and on demonstrated potential for a research career.

Applications should be submitted as early as possible during the preceding academic year, since the number of stipends and tuition scholarships is limited.

Nonmatriculated Graduate Students

A graduate student enrolled at another institution may be admitted to take a course given by a particular program if acceptance is recommended by the program director and approved by the dean; the specific courses must be approved by the home institution. Postdoctoral fellows and research assistants at Downstate may also register as nonmatriculated students to take courses offered by the School of Graduate Studies upon recommendation by their faculty supervisor and approval by the dean. Credits earned as a nonmatriculated student are limited to 12.

Transfer Credit

Transfer credit toward the doctorate will be granted for graduate level work at accredited institutions, in accordance with the regulations of the Commissioner of Education, Section 52.2(e)(3). Up to 24 credits may be transferred. Any advanced credit must be approved by the dean and must be in keeping with the candidate's academic objectives. Program requirements, however, may only be waived by the executive committee of the program.

Financial Information

Current financial aid information is listed on the institutional website.

TUITION AND FEES

Currently, all matriculating graduate students receive a full tuition scholarship. Tuition for full-time graduate students is \$7,100 per year for New York State residents and \$10,920 per year for nonresidents. Students carrying fewer than 12 credits in a semester are charged tuition at the rate of \$288 per credit (resident) or \$455 per credit (nonresident). Student fees, on the other hand, are the responsibility of the student: An annual college fee of \$25 is required for all full-time students, as are a \$75 Student Activities Fee and a \$50 per semester Student Health Fee.

All financial obligations must be cleared prior to completion of each academic year. Students who have not cleared their account will not be allowed to register, receive a transcript or letter of recommendation, have academic records certified, be granted a leave of absence, or have a degree conferred.

REFUNDS

If a student leaves the school for any reason—cancellation of registration, withdrawal, transfer, or dismissal—tuition is refundable according to the schedule published in the *Student Handbook*.

ESTIMATE OF EXPENSES

Expenses vary depending on the general lifestyle of the student, on-campus and off-campus living arrangements, and the selection of books, equipment, and course materials. However, upper limits for standard educational expense budgets are established each year in order to distribute equitably the limited amount of federal, state, and institutional aid.

Married students receive consideration based on a single-student budget, because financial aid can be used to finance only the student's direct educational cost.

The following approximations were compiled to assist graduate students in developing expense budgets for 2004-2005:

SINGLE STUDENT 2004-2005

| | |
|---------------------------------|-----------------|
| Tuition | |
| Resident | \$7,100 |
| Non-Resident | \$10,920 |
| Fees | \$250 |
| Room (average cost) .. | \$8,800 |
| Board..... | \$6,000 |
| Personal Expenses | \$4,000 |
| Transportation | \$900 |
| Books | \$300 |
| <hr/> | |
| Total for twelve months: | |
| Resident:..... | \$27,350 |
| Non-Resident: | \$31,170 |

FINANCIAL AID

Full-time graduate students are eligible for a full tuition scholarship as well as other financial aid in the form of fellowships and teaching assistantships. Currently, these are provided from school-wide resources in the first and second year and from research grants awarded to individual thesis advisors after the first two years. In addition, graduate students may be supported by training grants, or by individual pre-doctoral fellowships. The minimum teaching assistantship/stipend for the 2004-2005 academic year was \$21,065 annually for entering PhD students. After the first two years, students may be provided supplementary funds, if available from research grants or other institutional resources, up to a maximum total stipend of \$24,000 annually. (Check the website for the most up-to-date information.)

Downstate has consistently supported the national goal of making educational opportunity available to all who can benefit from it, whether or not they are able to pay the cost themselves. No student who believes that he or she qualifies for admission should be deterred from applying because of inadequate financial resources.

Programs of Study

Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for student-aid awards.

Courses are numbered as follows:

GI100-GI500

Core courses in School of Graduate Studies

G100-G500

Courses offered by individual graduate programs

M100-M200

Departmental courses in College of Medicine, approved for graduate credit

HEGIS CODES

School of Graduate Studies Programs HEGIS Codes*

| | |
|--------------------------------|---------|
| Molecular and Cellular Biology | 0416.00 |
| Neural and Behavioral Science | 0425.00 |
| Biomedical Engineering | 0905.00 |

MOLECULAR AND CELLULAR BIOLOGY: PROGRAM OF STUDY

| Fundamental Courses | Credits | Program Requirements |
|---|-------------------|---|
| Molecular and Cellular Biology 1..... | 6 | Mandatory |
| Molecular and Cellular Biology 2..... | 6 | Mandatory |
| Graduate Biochemistry..... | 4 | Mandatory |
| Responsible Conduct in Research | 1 | Mandatory |
| Major Courses (choice of 2 required) | | |
| Developmental Biology | 3 | Major Elective |
| Virology | 3 | Major Elective |
| Molecular Genetics | 3 | Major Elective |
| Advanced Molecular Immunology | 3 | Major Elective |
| Genomics and Proteomics | 3 | Major Elective |
| Electives | | |
| Human Immunology | 2 | Elective |
| Seminars, Journal Clubs, and Other Requirements | | |
| Seminar Series in Molecular and Cellular Biology | 1 | Mandatory, all years |
| Research Topics in Biomedical Science..... | 0 | Mandatory, first year |
| Current Topics in Cell and Developmental Biology (Journal Club) | 1 | Elective |
| Lipid and Vascular Biology..... | 1 | Elective |
| Microbiology and Immunology Seminar Series | 1 | Elective |
| Research Techniques (laboratory rotation) | 3 | 2 rotations required |
| Teaching..... | 0 | 50 hours required |
| Work in Progress Seminars..... | 1 | Attendance and annual presentation required |
| Total Credit Requirement: | 46 Credits | |

NEURAL AND BEHAVIORAL SCIENCE: PROGRAM OF STUDY

| Fundamental Courses | Credits | Program Requirements |
|--|---|---|
| Graduate Biochemistry..... | 4 | Mandatory |
| Introduction to Cellular and Molecular Neuroscience | 5 | Mandatory |
| Neuroscience Block of First-Year Medical Course (includes lab) | 6 | Mandatory |
| Responsible Conduct in Research | 1 | Mandatory |
| Major Courses (choice of 2 required) | | |
| Molecular and Cellular Biology 1..... | 4 | Major Elective |
| Molecular and Cellular Biology 2..... | 4 | Major Elective |
| Gross and Cellular Neuroanatomy | 3 | Major Elective |
| Mathematical Modeling in Life Sciences | 2 | Major Elective |
| Cellular Physiology and Biophysics | 3 | Major Elective |
| Membrane Function and Junctional Transmission | 2 | Major Elective |
| Principles of Instrumentation in Neuroscience..... | 2 | Major Elective |
| Dendritic Spines: Structure, Function, and Plasticity | 2 | Major Elective |
| Developmental Biology | 3 | Major Elective |
| Electives Grouped by Theme | | |
| Biophysics | | |
| Current Topics in Physiology and Biophysics..... | 2 | Elective |
| Directed Readings in Electrophysiology | 3 | Elective |
| Developmental Neurobiology | | |
| Current Concepts in Developmental Neuroscience | 2 | Elective |
| General Neuroscience | | |
| Selected Topics in the Limbic System..... | 3 | Elective |
| Directed Readings in Neuroscience | 2 | Elective |
| Discussions in Behavioral Neuroscience | 1 | Elective |
| Molecular Neuroscience | | |
| Reverse Genetics for Neuroscientists | 3 | Elective |
| (includes lab component)..... | 4 | Elective |
| Current Topics in Experimental Pathology (Neuropathology) | 1 | Elective |
| Human Immunology | 3 | Elective |
| Proteomics and Genomics | 1 | Elective |
| Biochemistry: Protein Structure and Function | 4 | Elective |
| Advanced Immunology | 3 | Elective |
| Neuropharmacology | | |
| Directed Readings in Neuropharmacology | 2 | Elective |
| Current Topics in Neuropharmacology | 1 | Elective |
| Pharmacology Methods and Experimental Pharmacology | 2 | Elective |
| Selected Topics: Pharmacology of Cell Death..... | 1 | Elective |
| Seminars, Journal Clubs, and Other Requirements | | |
| Seminar Series in Neuroscience | 1 | Mandatory, all years |
| General Neuroscience Journal Club | 1 | Choice of journal club, mandatory, all years |
| Molecular and Cellular Neuroscience Journal Club | 1 | Choice of journal club, mandatory, all years |
| Research Techniques..... | 3 | 2 lab rotations required |
| Teaching..... | 0 | 50 hours required |
| Work in Progress Seminars..... | 1 | Attendance and annual presentation required |
| Total Credit Requirement: | 46 Credits, 14 Credits Mandatory | (exclusive of seminar, journal club) |

Courses of Instruction

MCB G-201 **Molecular and Cellular Biology I** *Brehon Laurent, PhD*

This course provides the molecular foundation for students in the MCB Doctoral Program. Each week there are two 2-hour lectures and one 2-hour discussion period. Topics include DNA chemistry, replication and repair; transcriptional machinery in prokaryotes and eukaryotes; regulation of transcription; RNA processing; protein synthesis; gene regulation in prokaryotes; chromatin structure, function and remodeling; genetics in the age of genomics; epigenetic regulation of gene expression in higher eukaryotes; molecular immunology; site-specific recombination; lambda; VDJ and class switching; gene conversion; and hypermutation.

Discussion sessions constitute an important part of the course and introduce students to the critical reading of research papers. Course instructors will assign 1-2 research articles the week before the corresponding lectures that students should read thoroughly before the session and be prepared to discuss. The level of participation will be noted. Exam questions are taken from material covered in both lectures and discussion sessions. Essay questions are designed to test integrative knowledge rather than knowledge of simple, factual details. Students should be prepared to propose experiments that will test a given hypothesis or idea.

Reference text: It is recommended that students purchase the latest edition of either *Molecular Biology of the Cell*, Alberts, et al. (Garland Publishing Inc.), or *Molecular Cell Biology*, Lodish, et al, (W. H. Freeman and Co.). *Offered annually in the fall semester; 6 credits.*

MCB G-202 **Molecular and Cellular Biology II** *Maureen McLeod, PhD,* *and Bill Chirico, PhD*

This first-year graduate-level course is designed to provide students in the MCB Doctoral Program with a broad background in cellular biology. The course is divided into three sections: cell structure/function, cell signaling, and cell development. Each week there are two

1.5-hour lectures and one 1.5-hour journal discussion period. The lectures cover topics and experimental approaches used in cell biology from the textbooks and more current literature. The purpose of the discussion groups is to reinforce the information and concepts presented during the lectures.

Students critically review at least one representative publication. The paper, which is chosen by the instructor, is available one week before the class meeting. Each student is responsible for all aspects of the paper during the discussion session. Students are selected at random to describe the purpose of the experiment, to present the methods and results, and to critically evaluate the paper.

There is an exam at the end of each section of the course; questions may have different formats, including but not restricted to short answer, essay, and experimental design. The discussion sections are equally a source of exam material as are the lectures. Students are evaluated on their contributions to the discussions as well as on their performance on exams.

Reference text: It is recommended that students purchase the latest edition of either *Molecular Biology of the Cell*, Alberts, et al. (Garland Publishing Inc.), or *Molecular Cell Biology*, Lodish, et al, (W. H. Freeman and Co.). *Offered annually in the spring semester, meets twice per week for 1.5 hours each session; 6 credits.*

MCB G-203 **Research Seminars in Molecular and Cellular Biology**

An outstanding series of advanced research seminars that exposes students to world leaders in their respective fields from other institutions as well as to faculty who participate in the Molecular and Cellular Biology Program. *Weekly, fall and spring semesters; 1 credit per semester.*

BIOC G-203 **Graduate Biochemistry**

Julie Rushbrook, PhD

Graduate Biochemistry is one of two courses in the Graduate School Core Curriculum. It is a lecture course that

meets three times a week for 1.5-hour per session. Topics include proteins, protein purification and analysis, enzymes and kinetics, bioenergetics, carbohydrate chemistry, lipid metabolism, amino-acid metabolism, nucleotide metabolism, metabolic integration, and hormone signaling. Grades are based on the results of four written examinations and one oral presentation. The topic of the oral presentation is selected at random by the instructor from eight assigned topics, all of which must be prepared.

There is no required text; individual lecturers suggest a written source of information to supplement the lecture material.

Offered annually in the fall semester; MCB students take the course in the first year; NBS students take the course in the second year. 4 credits.

CORE G-500 **Responsible Conduct in Research**

Alice Herb, JD, LLM

This course is designed to acquaint PhD and MD/PhD candidates in the sciences with the ethical and legal principles and practices that will guide the manner in which they conduct and report scientific research now and in the future. The goals of the course are to provide an ethical framework from which to identify and consider dilemmas arising in the course of their or other's research, to create an appreciation of the importance and value of ethical principles to science, and to become sensitive to the ethical and legal implications and questions that surface in the pursuit of new and untried scientific discoveries.

To assure a better fusion of science and ethics, the course is taught by a team consisting of an attorney/ethicist and a scientist. The ethicist, Professor Herb, provides the continuity and consistency of material while the scientist, a faculty member, brings the scientific perspective, methodology, and context. Experts in areas such as patent law may be invited as guest lecturers.

The course is planned to begin at a point that would be most logical—the beginning of a research project—and proceed along the continuum of scientific research: how a project is developed and structured; if and how it gets funded; who gets credit; what, where, and how it gets published; what can go wrong; what the implications of the research may be to human subjects and animal subjects; and what the implications of the research itself may be in a socioeconomic context. (Example: the Human Genome Project.)

Instruction is both didactic and interactive. For each session, students are expected to read the assignment, reflect, and write a one-page paper on the material and be prepared to engage in in-depth discussions. The cultural diversity of the student body is not only acknowledged, but special efforts are made to explain differing cultural values. *Spring semester; 1 credit.*

ANAT G-109 **Seminar Series in Lipid and Vascular Biology**

M. Mahmood Hussain, PhD

This seminar series is intended to expose graduate students to state-of-the-art developments in the fields of lipid, vascular biology, and atherosclerosis. World-famous investigators are invited to present their latest developments. Students get a chance for informal discussion with the speakers. *Weekly, fall and spring semesters; 1 credit per semester.*

ANCB G-512 **Developmental Biology**

Michael Wagner, PhD

The course is expected to broaden the students' exposure to current research in developmental biology. This advanced course combines faculty lectures and student presentations. Students introduce the topics by providing background information on the specific organ systems whose development is covered by the faculty lecture.

The required textbook is *Developmental Biology* (Sixth Edition), Scott Gilbert. For all student background sessions, appropriate chapters and sections from Gilbert are the primary source from which students should draw, followed by other textbooks or reference books that may have more in-depth information on a specific topic. Each student confers with the faculty member for whom he or she is presenting background material, in order to obtain

guidance on what information should be presented. *Offered annually, the class meets once a week for 2 hours. 3 credits.*

BME G-518 **Genomics and Proteomics**

Steve Carleton, PhD

This course is designed to introduce students studying molecular and cellular biology to the emerging fields of functional and comparative genomics and proteomics. The course consists of twelve lectures given by various SUNY faculty, and student literature presentations based on the lectures. Genomics topics include microbial genomes, small eukaryotic genomes, the human genome, and metagenomics. Proteomics topics include functional and structural genomics, chemical genomics, principles of protein crystallization, and analytical methods and applications. Reading and homework is assigned for each lecture. Each student is expected to present two 20-30-minute PowerPoint presentations on assigned journal articles. *The course meets once a week for 2.5 hours for 12 weeks. Fall semester, 3 credits.*

BME G-610 **Cellular and Molecular Neuroscience**

Peter Bergold, PhD

This course provides a comprehensive overview of cellular neuroscience and consists of twenty lectures and two exams. The course is roughly divided into three parts. The first part concentrates on the physiology and biophysics of neurons and includes topics such as bioelectricity, ion channels, and membrane potentials. The second part concentrates on neuronal signal transduction, gene expression, and transport of RNA and protein, and includes such topics as second messengers and regulation of mammalian adenylyl cyclases. The third part is an in-depth look at synaptic transmission and plasticity, including such topics as neurotransmitters and neuropeptides, neurotransmitter receptors, presynaptic activity, and the neuromuscular junction.

Recommended textbooks are *Fundamental Neuroscience: Essentials of Neural Science and Behavior*, 1st edition, Eric R. Kandel, James H. Schwartz, Thomas M. Jessell (Appleton & Lange); *Principles of Neural Science*, 4th edition, Eric R. Kandel, James H. Schwartz, Thomas M. Jessell (Appleton & Lange), and *Basic Neurochemistry*, 6th edition,

Editor in Chief: George J. Siegel, MD (Lippincott, Williams & Wilkins). *Fall semester; 3 credits (or 5 credits including a minicourse on hippocampal circuitry).*

BME G-620 **Biomedical Imaging I**

Harry L. Graber, PhD, and Christoph H. Schmitz, PhD

The objective of the course is to provide a thorough grounding in the mechanisms and concepts related to image acquisition and subsequent image processing in various biomedical imaging modalities. Course material falls into two broad principal areas: an extensive overview of mathematical and physical considerations in instrumentation common to all forms of biomedical imaging, and an in-depth treatment of specific modalities. The latter includes imaging based on interactions of tissue with ionizing radiation (x-ray, CT, single-photon emission-computed tomography [SPECT], and positron emission tomography [PET]) or with acoustic energy (ultrasound imaging). [In depth treatment of the physical and mathematical considerations specific to magnetic resonance imaging (MRI) is taken up in the second half of the course: Biomedical Imaging II.]

A single 3-hour lecture session takes place once a week in the evening. Sets of homework problems are assigned every other week for evaluating students' comprehension of lecture topics on an ongoing basis, and also for determining a fraction of the students' final course grades.

The recommended textbook is *Foundations of Medical Imaging*, Z.H. Cho, J. P. Jones, and M. Singh, (1993, John Wiley & Sons, Inc). Lecture topics and sequence closely follow the order of presentation of material in the text. Supplemental readings are supplied by the instructors as needed. *Offered annually in the spring semester; 3 credits.*

BME G-621 **Biomedical Imaging II**

Harry L. Graber, PhD, and Christoph H. Schmitz, PhD

This course introduces the mechanisms and concepts related to image acquisition and subsequent image processing and image formation in various biomedical imaging modalities. Building on material covered in Biomedical Imaging I, the second semester of the imaging sequence

focuses on advanced topics such as functional magnetic resonance imaging (fMRI), ultrasound imaging, biomagnetic imaging, and optical tomographic imaging (OTI).

The goals of the course are to introduce students to basic instrumentation and physical processes underlying biomedical imaging and to make them aware of data collection in basic biomedical imaging modalities and how to obtain cross-sectional images from tomographic data sets for various imaging modalities. The course demonstrates the importance of general signal-processing tools for biomedical image processing.

Recommended textbooks are *Foundations of Medical Imaging*, Z.-H. Cho, J. P. Jones, and M. Singh (1993, John Wiley & Sons, Inc); *Principles of Magnetic Resonance Imaging*, Z.P. Liang and P.C. Lauterbur (2000, IEEE Press); *Image Reconstruction in Radiology*, J.A. Parker (1990, CRC Press). *The class meets once a week for 3 hours. Offered annually in the fall semester; 3 credits.*

BME G-945 **Recombinant DNA Technology: A Practical Approach**

*Christopher A. Roman, PhD,
Donald R. Mills, PhD, and
Fredric C. Volkert, PhD*

The course consists of lectures and demonstrations given one evening a week for two hours. It covers practical aspects of recombinant DNA technology, including fundamental aspects of gene expression, restriction enzyme cleavage, plasmids, cloning, genetic transformation of bacteria, protein expression vectors, basic principles of protein purification, and manipulation of cloned genes (site-directed mutagenesis).

Laboratory demonstrations illustrate the following methodologies: digestion of DNA with restriction endonucleases and resolution of DNA fragments by gel electrophoresis; cloning vectors, genetic transformation of bacteria; screening of recombinant plasmids by protein expression; purification of recombinant fusion proteins by affinity chromatography. *Offered annually in the spring semester; 3 credits.*

BME G-950 **Principles of Biological Systems**

Randall Barbour, PhD

This introductory course in biology is designed for students with undergraduate engineering degrees who are interested in pursuing graduate training in biomedical engineering. The course is taught by clinicians and has as its goal the presentation of all the physiological systems while focusing on pathophysiological problems that may have engineering solutions.

Topics include the elementary composition of living organisms, their metabolism and methods of information transduction and communication; homeostasis and hormonal control; the cardiovascular system; muscle and respiration; the GI tract; renal function and acid-base metabolism; reproduction and growth; neurophysiology. *The class meets once a week for 2.5 hours in the evening and is offered annually in the fall semester; 3 credits.*

MCB G-101 **Advanced Virology**

The course offers an in-depth consideration of the replication and biology of the seventeen major animal virus groups. In addition to molecular aspects of viral replication, the following topics are covered: interferons, vaccines, virus-cell interactions, and host response to viral infections. *Offered in the spring semester of alternate years; 3 credits.*

MCB G-120 **Work-in-Progress Seminars**

Student participation in a work-in-progress seminar in which each student presents an annual seminar on his or her research to other students and faculty of the program. *Weekly, fall and spring semesters; 1 credit per semester.*

MICI G-105 **Seminar Series in Microbiology and Immunology**

A series of presentations by invited scientists and Downstate faculty. Ongoing research is discussed to keep the audience abreast of current developments. *Offered in the fall and spring semesters; 1 credit.*

MICI G-113 **Molecular Genetics**

Camilo Parada, PhD

Molecular Genetics is one of the designated courses that satisfies the MCB doctoral program requirement of two advanced courses. The course is comprised of three main topics. The first topic, DNA chips and microarrays, con-

cerns the development and application of DNA assays in molecular biology. After the introductory lecture, individual students present assigned papers from a list of source documents.

The second topic is an exploration of in vivo and in vitro aspects of translational control in prokaryotic cells. After an initial review of the current state of the field, subsequent lectures explore translational initiation; mRNA determinants; ribosomes and ribosomal protein S1; mRNA higher-order structure; and diverse mechanisms for translational regulation.

The third topic, in vivo and in vitro chromatin remodeling, explores aspects of the mechanisms of ATP-dependent chromatin remodeling by Snf-Swi and Snf-Swi-related complexes in yeast, *Drosophila*, and human cells. The research papers that are discussed describe in detail the genetic screens in which Snf and Swi mutants were first identified, the molecular, genetic and biochemical evidence for a direct link between Snf-Swi and alterations in chromatin structure, and the biochemistry of ATP-dependent nucleosome remodeling. *The class meets twice a week for 2 hours and is offered annually in the spring semester; 3 credits.*

MICI G-520 **Advanced Molecular Immunology**

The goal of this course is to familiarize the student with the body of research that forms the foundation of our present understanding of the molecular basis of the immune response and the cellular interactions that regulate it. The principal tool for learning this material is the reading and discussion of research papers in immunology. A small group of students is supervised by a faculty member who is active in the specific research area.

Topics to be studied include antibody structure; B-cell development; T-cell structure and development; T-cell-MHC interaction; MHC structure and antigen processing; complement chemistry; complement and Fc receptor structure and function; transplantation; immunogenetics; mucosal immunology; and allergic reactions.

Students are given research papers and complementary review articles on these topics to study for one week. The papers are then discussed in a two-hour session with the purpose of integrating the scientific findings and enhancing the students' insight into fundamental immunological processes and knowledge of research tech-

niques and experimental approaches. Students become familiar with the need to develop model systems to address certain scientific problems. The final exam, in essay form, tests students' ability to develop a research protocol for a posed problem in at least two of the topics discussed during the course.

Prerequisites for this course are completed courses in Biochemistry, Cell and Molecular Biology, and a solid knowledge of Basic Immunology. Spring semester; 3 credits.

NBSC G-102 Neural and Behavioral Science Seminars

An outstanding series of advanced research seminars that exposes students to world leaders in their respective fields from other institutions as well as to faculty who participate in the Neural and Behavioral Science Program. *Weekly, fall and spring semesters; 1 credit.*

NBSC G-120 Work-in-Progress Seminars

Faculty

Student participation in a work-in-progress seminar in which each student presents an annual seminar on his or her research to other students and faculty of the program. *Weekly, fall and spring semesters; 1 credit per semester.*

NBSC G-209 Principles of Instrumentation in Neuroscience

John Chapin, PhD

This course reviews the theory, design, and use of instruments for neuroscience research (emphasis on neurophysiology). Instruments for recording electrical activity from single neurons and populations, stimulation of excitable cells, signal processing, and data reduction and analysis are covered by faculty. Also included are clinical contributions on neurobotic applications in surgery and neuroengineering aspects of orthopedics. *Spring semester, 3 credits.*

NBSC G-210 Dendritic Spines: Structure, Function, and Plasticity

Ilham Muslimov, MD, PhD; Henri Tiedge, PhD

Dendritic spines are protrusions along the surface of dendrites that receive synaptic input from axonal terminals. Although discovered over a century ago by Santiago Ramon y Cajal, it has become clear only in recent years that dendritic spines, in

their capacity as postsynaptic microcompartments, are focal points for long-term structural and functional modulations of synaptic transmission.

With tens of thousands of spines per dendritic arbor of a typical principal neuron (e.g., a pyramidal cell), the potential for input-specific modulation is immense. Novel experimental approaches, using techniques ranging from molecular to imaging, have now provided remarkable insights into structural and functional spine plasticity. The goal of this advanced course is that the student develops an in-depth understanding of the mechanisms as well as the biological relevance of such plasticity.

The course begins with introductory lectures and subsequently moves on to discussions of specific recent papers on the subject matter. Successful participation will be evaluated based on the presentation of papers, active participation in the discussions, and completion of a mini-review of a selected topic that was discussed in the course. *The course is held every other week on Tuesdays, 12:00 noon – 1:30 p.m. 2 credits.*

NBSC G-220 Mathematical Modeling in Life Sciences: Computational Neuroscience

William Lytton, PhD

This course offers an introduction to mathematical modeling of the nervous system. Basic concepts in computer science, linear algebra, and numerical analysis are reviewed for insights they can bring to the understanding of the brain. Central concepts are presented from computer science (pointer manipulation, software/hardware dichotomy), artificial neural networks (Hopfield networks, error learning, back-propagation), and realistic neuron modeling (compartment modeling, Hodgkin-Huxley equations).

A goal of the course is to teach students how to use linear algebra and differential equations to model neural activity, and how to use the neural modeling software NEURON. The course should enable students to read and understand basic literature concerning neural modeling. *Annually; 3 credits.*

NBSC G-230 Reverse Genetics for Neuroscientists

Ellen Hsu, PhD

This course introduces students to the applications of recombinant DNA technology for gene cloning and for the study of gene structure and function. Selected papers on specific techniques or approaches are presented and discussed, beginning with gene isolation and gene characterization, followed by functional studies using transfection, transgene, and gene-replacement techniques. Some limited laboratory work is included. The course is offered when sufficient numbers of students demonstrate an interest by writing to the course director. *4 credits.*

NBSC G-240 Gross and Cellular Neuroanatomy

An advanced neuroanatomy course that reviews specific methods for fixation, staining, and imaging tissue. A particular method or small set of related methods is chosen at the course outset for review during the semester. Lectures are supplemented with text and original literature readings. Actual use of techniques and microscopy as available. *3 credits.*

NBSC G-250 Cellular Physiology and Biophysics

Faculty

This course covers the basic concepts of equilibrium thermodynamics, molecular interactions, and kinetics. Basic membrane processes, including membrane potentials, channels, active transport, and exocytosis are covered, with special emphasis on excitable cells. Ligand-receptor interactions, second messenger systems, and other signaling mechanisms are reviewed. *2 credits.*

NBSC G-504 Membrane Function and Junctional Transmission

A reading and discussion course that traces the development of the understanding of fundamental signaling mechanisms within and between cells in the nervous system. Original papers (both historic and current) are used as focal points for discussion. *2 credits.*

**NBS M-100
Neuroscience**

John Kubie, PhD

The course consists of lectures, neuroanatomy laboratory exercises, neurophysiology labs and conferences. It is taught in conjunction with the Neuroscience Block (MS 101) that is given in the first year of the medical school curriculum. Therefore, most course activities are taught to a mix of graduate and medical students.

The thirty-eight lectures survey Cellular Neuroscience, but focus on Systems and Behavioral Neuroscience. In the six sessions (18 hours) of Neuroanatomy Gross lab, students use whole brains, sections, and dissections to guide learning. In the two sessions (6 hours) of neurohistology lab, students are taught the general properties and histological appearance of nervous tissues as well as the microscopic

anatomy of the cerebral cortex, eye, and ear. In the three sessions (6 hours) of pathway review, students use myelin-stained material to review brain connectivity. There are two neurophysiology laboratory sessions, one focusing on membrane physiology and the other on reflexes.

Students are evaluated with two practical exams and a written exam. The practical exams, identical to the ones given to medical students, cover gross brain anatomy, neurohistology, and myelin-stained human brain sections. The written exam is an essay exam. *Spring semester; 6 credits.*

**PATH M-110
Human Immunology**

The objective of this course is to provide a thorough understanding of Human Immunology in the context of human disease and Clinical Laboratory

Immunology. Course material includes immunological mechanisms of disease, including allergy, atopy connective tissue diseases (rheumatoid arthritis, systemic lupus erythematosus, psoriasis), immunodeficiency states, neuroimmunology, and immune response to infections. The course also covers principles, methods, and interpretation of diagnostic immunology tests.

The course covers two weeks of intense training, with lectures and discussion sessions, student presentations, and “hands-on” experience in Clinical Laboratories.

There are daily morning sessions (2-3 hours) and afternoon lecture/discussion sessions (2-3 hours). Spring semester; 2 credits.

Joint Doctoral Program in Biomedical Engineering with Polytechnic University

INTRODUCTION

This new, interdisciplinary doctoral program is jointly administered by both SUNY Downstate's School of Graduate Studies and Polytechnic University. It is a product of the Strategic Alliance for Fostering Research and Education in Biomedicine and Bioengineering. The doctoral program builds on Polytechnic University's successful MS program in Biomedical Engineering to which Downstate faculty members contribute biomedical science courses and also mentor student research projects on their own campus. The two campuses are located only 20 minutes apart by either subway or car. According to the February, 2004, projections by the US Bureau of Labor Statistics, the number of biomedical engineering jobs will climb almost twice as fast as the overall average, making a 26% gain by the year 2012.

The following two thesis tracks are offered: i) Biomaterials and Polymer Therapeutics, and ii) Bioimaging and Neuroengineering. These tracks reflect areas of research in which the two institutions have been strong for many years. Faculty members' interdisciplinary research includes neurorobotics; neuroengineering, using wireless technology for "search and rescue" rats; optical tomography, a new method of imaging biological tissue using light at near infrared wavelengths; computational neurobiology and brain modeling; bioresorbable material synthesis and processing for applications in tissue engineering, drug delivery, bone screws and more; biosensors for rapid detection and analysis of biological markers; liposome and polymeric drug delivery systems; and new glycolipids that function as effective modulators of the immune response, anticancer agents and adjuvants in vaccine formulations.

PHD DEGREE

The PhD Biomedical Engineering (BME) program accommodates students from diverse academic backgrounds by offering three entry-level pathways that ensure a solid foundation in both biology and engineering. Advanced PhD BME students select one of the two thesis tracks: i) Biomaterials and Polymer Therapeutics, or ii) Bioimaging and Neuroengineering.

Students are required to take at least one Management of Technology course and to participate in a short course called Responsible Conduct in Research. Also, students are obliged to participate in Journal Clubs, and to attend a BME Seminar Series. A total of 46 course credits is required. Thesis research is conducted under the supervision of a member of the PhD BME program faculty, who are drawn from both institutions. Also, students are broadly trained, including opportunities for exposure to various potential career paths through laboratory rotations at industrial sites in i) Downstate's new Advanced Biotechnology Park, located adjacent to the campus; and ii) Polytechnic's Center for Biocatalysis & Bioprocessing of Macromolecules, a National Science Foundation Industrial/University Cooperative Research and Education Program, located on that campus.

Full tuition fellowships and stipends are available.

MD/PHD DEGREES

In the case of students who are candidates for both the MD in the College of Medicine, and the PhD in Biomedical Engineering, requirements for the PhD are similar to those for students who are candidates for the PhD in Biomedical Engineering only. In the first two years of the program, students

follow the standard curriculum of the College of Medicine. They then usually spend three to four years in the School of Graduate Studies taking required courses and pursuing research leading to a PhD thesis. Upon completion of the PhD degree, students return to the College of Medicine to complete their clinical training. As in all SUNY degree-granting programs, academic credits for courses taken in the College of Medicine are transferable up to a maximum of 24 credits toward the PhD Degree.

All MD/PhD students are expected to work in research laboratories during the first two summers of their medical school tenure. Members of the MD/PhD committee as well as individual faculty members are available to discuss these options and offer constructive advice to help students select a sponsor. Students may complete their PhD work in either of the two tracks.

In general, MD/PhD students are supported with both a stipend and a tuition scholarship throughout the medical and graduate school years.

ADMISSIONS

PhD BME program applications are reviewed by an admissions committee composed of faculty from both the SUNY Downstate School of Graduate Studies and Polytechnic University. Course requirements for admission to the PhD BME program are the following: at least two appropriate level courses in mathematics, physics, chemistry, biology and/or computer science that are consistent with the candidate's intended research area. In general, other admissions policies and procedures are similar to those for the other two doctoral programs administered by the School of Graduate Studies.

BIOMEDICAL ENGINEERING: PROGRAM OF STUDY

A. Bridge Courses

Biomedical Science:

| | | |
|-----------------|--|-----|
| BME G 650 | Biomedical Instrumentation | 3.0 |
| BME G 945 | Recombinant DNA Technology: A Practical Approach | 3.0 |
| BME G 950 | Principles of Biological Systems | 3.0 |

Computer Science Engineering:

| | | |
|--------------|--|-----|
| CS 530 | Introduction to Computer Science | 3.0 |
| CS 580 | Computer Architecture and Organization | 3.0 |

Chemical Engineering:

| | | |
|--------------|---|----------|
| CH 900 | Selected Topics in Chemical Engineering I | variable |
| | <i>(formerly Principles of Chemical Engineering I)</i> | |
| CH 901 | Selected Topics in Chemical Engineering II | variable |
| | <i>(formerly Principles of Chemical Engineering II)</i> | |

Electrical Engineering:

| | | |
|--------------|--|-----|
| EL 536 | Principles of Communication Networks | 3.0 |
| EL 547 | Introduction to VLSI System Design | 3.0 |
| EL 641 | Analog & High Frequency Amplifier Design | 3.0 |

B. Core Engineering Courses:

Biomaterials and Polymer Therapeutics Track:

| | | |
|--------------|---|-----|
| BE 670 | Materials in Medicine | 3.0 |
| BE 952 | Natural Polymers and Materials | 3.0 |
| CM 771 | Introduction to Polymer Science | 3.0 |
| CM 782 | Macromolecules in the Solid State | 3.0 |
| MT 600 | Structure-Property Relationships in Materials | 3.0 |
| MT 620 | Plastic Deformation and Fracture | 3.0 |
| BE 660 | Drug Delivery | 3.0 |
| BE 650 | Tissue Engineering | 3.0 |
| CH 633 | Transport Phenomena | 3.0 |
| CH 773 | Thermodynamics I | 3.0 |
| CH 781 | Chemical Reactor Analysis and Design | 3.0 |

Bioimaging and Neuroengineering Track:

| | | |
|-----------------|---|-----|
| CS 667 | Neural Network Computing | 3.0 |
| EL 501 | Wireless Personal Communication Systems | 3.0 |
| EL 536 | Principles of Communication Networks | 3.0 |
| EL 512 | Image Processing | 3.0 |
| EL 522 | Sensor Based Robotics | 3.0 |
| BME G 220 | Mathematical Modeling in Life Sciences: | 3.0 |
| | Computational Neuroscience | |
| BME G 620 | Biomedical Imaging I | 3.0 |
| BME G 621 | Biomedical Imaging II | 3.0 |

C. Core Biomedical Science Courses:

Biomaterials and Polymer Therapeutics Track:

| | | |
|------------------|--|-----------|
| MCIM G 105 | Seminar Series in Microbiology and Immunology | 1.0 |
| ANCB G 109 | Seminar Series in Lipid and Vascular Biology | 1.0 |
| MCB G 113 | Molecular Genetics | 4.0 |
| MCB G 120 | Work in Progress Seminars | 0.0 |
| MCB G 201 | Molecular and Cellular Biology I | 6.0 |
| MCB G 203 | Molecular and Cellular Biology Seminar Series | 1.0 |
| BIOC G 203 | Graduate Biochemistry | 4.0 |
| CM 941 | Biochemistry I (graduate level) | 3.0 |
| CM 942 | Biochemistry II (graduate level) | 3.0 |
| CORE G 300 | Research Techniques (laboratory rotations) | 3.0 |
| MCB G 500 | Directed Readings in Molecular and Cellular Biology | 1.0 – 3.0 |
| MCB G 510 | Current Topics in Cellular and Developmental Biology | 1.0 |

| | | |
|-----------------|--|-----|
| MCB G 512 | Developmental Biology | 3.0 |
| BME G 518 | Genomics and Proteomics | 3.0 |
| BME G 945 | Recombinant DNA Technology: A Practical Approach | 3.0 |

Bioimaging and Neuroengineering Track:

| | | |
|-------------------|---|-----|
| NBSC M 100-N..... | Neuroscience | 6.0 |
| NBSC G 100 | Journal Club in Neural and Behavioral Science | 1.0 |
| NBSC G 102 | Neural and Behavioral Science Seminar Series | 1.0 |
| NBSC G 105 | Journal Club Molecular and Cellular Neuroscience | 1.0 |
| BME G 610 | Cellular and Molecular Neuroscience | 3.0 |
| NBSC G 120 | Work in Progress Seminars | 0.0 |
| NBSC G 200 | Discussions in Behavioral Neuroscience..... | 2.0 |
| NBSC G 202 | Selected Topics in the Limbic System | 3.0 |
| NBSC G 210 | Dendritic Spines: Structure, Function, Plasticity | 2.0 |
| CORE G 300 | Research Techniques (laboratory rotations) | 3.0 |
| NBSC G 500 | Directed Readings in Neuroscience | 3.0 |
| MCB G 520 | Advanced Immunology | 3.0 |
| BME G 620 | Biomedical Imaging I | 3.0 |
| BME G 621 | Biomedical Imaging II | 3.0 |

D. Other Courses

| | | |
|------------------|---|-----|
| CORE G 500..... | Responsible Conduct in Research | 1.0 |
| CORE G 301 | Advanced Topics in Responsible Conduct in Research..... | 3.0 |
| _____ | SUNY/Poly BME Seminars | 1.0 |

E. Elective Courses

| | | |
|------------------|---|-----|
| PATH G 103 | Current Topics in Experimental Pathology | 1.0 |
| PATH G 106 | Immunological Aspects of Atopic and Related Diseases..... | 3.0 |
| PHRM G 106 | Current Topics in Neuropharmacology | 1.0 |
| CM 753 | Bioinformatics I: Sequence Analysis..... | 3.0 |
| CM 754 | Bioinformatics II: Protein Structure..... | 3.0 |
| MCB G 202 | Molecular and Cellular Biology II | 6.0 |
| MCB G 203 | Molecular and Cellular Biology Seminar Series | 1.0 |
| BE 601 | Molecular Immunology | 3.0 |
| BE 630 | Transport Phenomena in Biological Systems | 3.0 |
| CM 905 | Enzyme Catalysis in Organic Synthesis | 3.0 |
| CM 906 | Combinatorial Chemistry | 3.0 |
| CORE G 520 | Entrepreneurship in Academia..... | 1.0 |
| PATH G 508 | Immunopathology of Virus Infections | 2.0 |
| PATH M 110 | Human Immunology..... | 2.0 |
| PHRM G 100 | Pharmacology Methods and Exp. Pharmacology | 2.0 |
| BME G 640 | Modern Drug Discovery | 3.0 |
| BME G 650 | Biomedical Instrumentation | 3.0 |

F. Management of Technology Courses

| | | |
|--------------|---|-----|
| MG 865 | Managing Innovation | 3.0 |
| MG 603 | Organizational Behav. and Mgmt. Processes in Innovative Corps. | 3.0 |
| MG 693 | Information Technologies, Systems and Mgmt. in Organizations | 3.0 |
| MG 786 | High-Technology Entrepreneurship..... | 3.0 |
| MG 775 | Operations Mgmt. for Knowledge-based Enterprises (1/2 semester) .. | 3.0 |
| MG 795 | Global Innovation (1/2 semester) | 3.0 |
| MG 820 | Project Management and Assessment for Technology Managers | 3.0 |
| MG 785 | High-Technology Leadership | 3.0 |
| MG 784 | Negotiation in Technology-Intensive Sectors | 3.0 |
| MG 787 | Intellectual Property for Technology and Information Managers | 3.0 |
| MG 797 | Financing the Value Creation | 3.0 |

G. Thesis Research

| | | |
|-------------|--|------|
| G999 | Ph.D. Thesis Research in Biomedical Engineering @ Downstate..... | 0.0 |
| _____ | Ph.D. Thesis Research in Biomedical Engineering @ Polytechnic | 44.0 |

STUDENT COMPUTING

The Scientific/Academic Computing Center

The Scientific Computing Center (SCC) is an in-house consulting group providing research support for faculty, staff, and students. Services include access to specialized computer equipment and software, instruction in the use of programs for analysis and presentation. Staffed by career scientists with expertise in experimental design, bio-statistics, mathematical modeling, signal analysis and bio-informatics, the Center is designed as a one stop location for the researcher's needs.

The main office of the SCC is located in the Health Sciences Education Building, room EB-51 (adjacent to the Learning Resources Center on the lower level of the library). The Faculty Resource Room is in EB-59. Hours of operation are 9:00 a.m. to 5:00 p.m., Monday through Friday. The main telephone number is 270-7424.

Research Support

Students and faculty engaged in research are urged to make an appointment with an SACC consultant during the initial planning stage of their studies. SACC consultants have a wide-range of expertise. Help and support are available at all stages of research; in designing studies, setting up databases, carrying out statistical analyses, utilizing advanced scientific programs (or writing special purpose programs) and helping the researcher present his or her findings in the clearest way possible (by means of either text or graphics).

Typical consultation services which the SACC provides for researchers are:

- Determining proper sample sizes for statistical significance.
- Formulating appropriate hypotheses.
- Utilizing mark-sense scan forms for data input.
- Using appropriate techniques for acquiring and organizing data.
- Reorganizing, transforming, simplifying, and summarizing complex data.
- Using software for graphing and displaying data.
- Modifying and enhancing image files.
- Modeling procedures for fitting curves to data.
- Scanning images and data into computer files.
- Assisting the researcher in interpreting and writing up results of data analysis.
- Utilizing advanced scientific programs
- Writing special purpose programs for modeling and analysis

The Faculty Resource Room (FRR)

The facilities of the FRR (Health Sciences Education Building, room EB-59) are available to faculty, staff, and graduate students for research and courseware development. Some of the software available for data analysis, presentation graphics, and courseware include: SPSS, SAS, Word, Excel, PowerPoint, Access, PhotoShop, Photo Editor, and Omnipage. The FRR also contains equipment for producing 35mm slides, and scanning pictures, x-rays or slides into graphic files for presentations.

University Resources

Facilities for Instruction

University Services

Student Life

Student Organizations

Facilities for Instruction

BASIC SCIENCES BUILDING

The Basic Sciences Building houses the School of Graduate Studies, with space for research, education, and administrative functions. The facility supports basic and clinical research and is used by students in both the School of Graduate Studies and the College of Medicine.

The 541,000-square-foot facility has laboratories for both basic and clinical research, as well as offices for faculty and four lecture halls. The Basic Sciences Building gives students and faculty access to highly specialized research equipment, including, for example, a DNA sequencing facility, electron microscopy, computer-based gel documentation and image analysis, phosphorimaging, and a protein-sequencing center.

HEALTH SCIENCE EDUCATION BUILDING

The campus's Health Science Education Building (HSEB) houses state-of-the-art classrooms, laboratories, a 500-seat auditorium, and the Medical Research Library of Brooklyn. Included in the HSEB are two floors of study carrels with lockable storage, which serve as "home base" for medical students during their first two years. The carrels are located in multidisciplinary laboratory sites. This arrangement fosters small-group learning. The carrels are equipped with power and data lines, which enable students to connect computers to the library's computerized data bases.

MEDICAL RESEARCH LIBRARY OF BROOKLYN

Library Hours:

Monday-Thursday: 8:30 am to midnight

Friday: 8:30 am to 9:00 pm

Saturday : 9:00 am to 9:00 pm

Sunday: noon to midnight

Holiday closings and summer hours are posted.

Downstate's library occupies three floors of the Health Science Education Building and is accessible from the 395 Lenox Road entrance.

Resources

The nucleus of the library was formed when the Academy of Medicine of Brooklyn and SUNY Downstate merged in the 1960s.

The collections date from the early eighteenth century, and include an archive of historical materials relating to the history of medicine in Kings County and at the Long Island College Hospital, SUNY Downstate's predecessor institution. These materials are cataloged and the holdings may be searched on the publicly accessible website: library.downstate.edu.

The library's website also provides access, both local and remote, to many other resources, including a significant number of electronic journals in full-text. Other resources include FirstSearch, CINAHL (Cumulative Index to Nursing and Allied Health Literature), PubMed, InfoShare, NetLibrary, Info-Trac, and Lexis-Nexis. Remote access is validated through a proxy server.

All computers within the library are connected to the Internet. The library supports wireless connectivity to the Internet, and appropriately configured laptops may be checked out at the Access Services desk for two hours of in-house use.

Access Services requires that students register in the library's management system in order to borrow materials from the library's collections. This unit maintains the General Reserve collection as well as the Special Reserve, which is course-specific and is available electronically as an e-Reserve item on the library web page. Wireless laptops and group-study rooms are available from this unit.

Inter-Library Loan will obtain materials unavailable in the library. These materials may be requested through Request Forms, which are found in the library and on the library's web page. Articles may be delivered in .pdf format to clients' desktops.

Reference Unit conducts generic orientations or customized orientations on request. Course- or program-specific orientations and classes may be arranged. Librarians are on duty seven days a week, and an on-line reference chat room that allows a real-time chat with a librarian is available, along with e-mail reference. Print reference resources are also available.

Institute of Evidence-Based Practice serves all the colleges, as well as residency programs, through curriculum-integrated sessions. The library has created internationally recognized EBM tutorials, which are available on the library's web pages. Customized instruction is available on request.

The Library Collection

The library's vast collection contains material relevant to undergraduate and graduate education in medicine, nursing, and the allied health professions. It includes 258,324 bound volumes, 3,354 audiovisual items, 44,716 monographs, and 3,818 journal titles, including 1,531 that are current. The Archives and Special Collections Department houses material documenting Downstate's history, achievements, and activities, as well as health care and medical education in Brooklyn and manuscript collections of prominent Brooklyn physicians.

Services

Resource materials within and outside the library's holdings can be accessed through library terminals or PC stations throughout Downstate. Tutorials on using the system are available.

- **OPAC (Online Public Access Catalog)** is a computerized catalog of the library's holdings. OPAC terminals are located on all three levels of the library.
- **Online Search Utility.** The library has a number of databases available on its computers: MEDLINE (complete to 1966), CINAHL (Cumulative Index to Nursing and Allied Health Literature), PsycINFO (psychological abstracts), Health Planning and Administration, AIDS Line, Cancer Lit, ERIC (education), and Current Contents. These are accessed via the user-friendly interface called OVID.

Public-access terminals are located near the reference desk on the first floor and are available for searching whenever the library is open. Searching is free to those with library privileges. Dial-in access is also available. The searching program is menu-driven and provides on-screen help. General tutorials are offered on a regular basis.

The library has access to a great number of additional databases in medicine, health sciences, and almost any other field of knowledge through a number of commercial vendors. These searches are done on a fee-for-service basis.

Library-Based Computing Services

The library offers a number of services to help students with their computing needs. Resources include the Learning Resource Center and Scientific/Academic Computing Center; two training rooms with MAC and PC computers; a word processing center for students (open 24 hours, seven days a week); 24-hour dial-in network library access system for OPAC, literature searching, Internet, and e-mail; and Internet access through designated terminals in the library.

- **Learning Resource Center (LRC).** This facility is configured to meet independent and small-group learning needs. A wide array of computer software and audiovisual programs is available. The LRC has over 200 seats configured into carrels, group study rooms, computer training rooms, and a word-processing center. There are over 1,800 audiovisual and microcomputer programs available for curriculum-based study and continuing education needs (see "Student Computing," below).
- **Scientific/Academic Computing Center.** Aids students, faculty, and staff through informal instruction and individual consultations on a wide range of computer applications, including mainframe/microcomputing to research.

STUDENT COMPUTING

Learning Resource Center

Students have full computer usage privileges in the Learning Resource Center (LRC), located in the lower level of the library. Ninety computer workstations are assigned on a first-come, first-served basis, except for special booking arrangements negotiated between faculty and LRC full-time staff. An array of medical and general application computer software is directly accessible from the LRC microcomputing workstation menu. In addition, many other scientific/medical computer programs are available by special arrangements with LRC microcomputer specialists.

Four distinct computing areas within the LRC have been designed to provide a student-centered, interactive learning environment:

- *Multipurpose Media Area.* Seventeen open-access computer workstations, including both Mac and DOS computers, are configured into two-seat carrels. There are five high performance multimedia stations with CD-ROM drives and laser videodisc players. Available programs include clinical simulations and interactive tutorials; online health sciences references; and Internet service that includes Telnet, Gopher, and anonymous file transfer protocols (FTP).
- *All-Macintosh Teaching Laboratory.* Features 25 four-seat teaching carrels for small-group computer-assisted instruction. Faculty and students have authored some of the courseware used as study materials in this lab.
- *Microcomputer Training Room.* This space may be booked for formal training sessions. Supervised groups of up to 12 students on Windows or Macintosh machines can be accommodated. Shared printing, full-color

data projection, and other ancillary equipment services are available upon request.

- *Open-Access Computing Room.* A 24-hour, open-access, document-processing room. Widely used programs, including WordPerfect, Excel, and many more, are available in DOS, Windows, and Macintosh versions.

In addition, the LRC has an extensive collection of manuals, reference books, templates, and instructional videotapes on many software applications. Every computer in the LRC is connected to the campus's central computer network and the library's online databases and public catalog.

Computer Labs

See "Student Computing, General Information" in the *Student Handbook*.

Fifth- and Sixth-Floor Carrels

Each multidisciplinary teaching laboratory on the fifth and sixth floors of the Health Science Education Building contains either a Quadra 700 or Power Macintosh computer. The computer lab located on the 6th floor has a combination of Power Macintosh and Windows NT Pentium class computers. All of the computers are connected to the local area network as well as to the Internet and have the most up-to-date Internet software. The computer lab also contains a full complement of desktop publishing equipment and software for use by students.

Each student carrel has a 10BaseT connection port, which allows students with the appropriate computer (Mac or Windows laptop), adapter, and networking software to attach to both the local network and the Internet. A request must be made to the Office of Educational Computing and Technology (located on the 6th floor) in order to activate the port.

The teaching labs are equipped with several large monitors and videodecks for viewing videotapes or connecting to the computers in the labs. The monitors are also used in conjunction with several video microscopes for use in the histology and neuroscience courses. The labs are connected to the central video/satellite dish distribution system for use with the large monitors.

Personal Computers

Each student carrel has a 10BaseT connection port that allows students with the appropriate adapter, computer (Macintosh or IBM notebook), and/or software to attach to the network. A request must be made to activate the port in order to use it.

Audiovisual Resources

Teaching labs are equipped with several large monitors and videodecks for viewing videotapes or connecting to computer equipment. The monitors can also be connected to the video microscopes used by the Histology and Neuroanatomy courses. The labs have recently been connected to a central video/satellite dish distribution system that can be accessed through the data monitors.

School of Graduate Studies

Course directors in the School of Graduate Studies maintain their own individual policies and procedures for accessing departmental computer resources. Contact program directors for further information. Graduate students involved in research projects may also use the facilities of the Scientific/Academic Computing Center's Faculty Development Room.

University Services

Current and more detailed information appears annually in the *Student Handbook*.

BOOKSTORE

The University Bookstore, located on the first floor of the Student Center, stocks all required and recommended texts and reference books at discounted prices. Special orders are accepted for books not stocked—these are also obtained at discounted rates. In addition to books, the bookstore offers stationery, sundry items, medical instruments, lab coats and jackets, school rings and pins, microscope sale and rentals, drug items, swimming supplies, master locks, batteries, film, stamps, and casual school clothing.

Additional information, including return policies and hours, is published annually in the *Student Handbook*.

BURSAR'S OFFICE

The Bursar's Office is responsible for reporting and dispersing to the state comptroller all monies received at SUNY Downstate, except hospital patient receipts. These collections include tuition, dormitory rents, registration deposits, library fines and fees, and dormitory damage fees. The office also disperses all checks made available through all federal loan and scholarship programs, state scholarships and TAP awards, local Center loans and scholarships, and guaranteed loans.

The Bursar's Office accepts Visa, MasterCard, and the Discover cards for payment of tuition, fees, and dormitory-rent charges. The deadline for registration (to avoid late charges) and tuition payment (to avoid late charges) is *generally the last business day before the first day of classes in that semester*.

Returning or continuing students who wish to change their out-of-state residency status to in-state residency for tuition purposes must file the appropriate application and supporting documentation with the Registrar's Office two weeks prior to the mailing of the

subsequent semester's registration packet (approximately one month prior to the start of the semester). Therefore, change of status from out-of-state to in-state must be initiated six weeks prior to the date of registration for the next term. Registration dates are indicated on the academic calendars.

CAFETERIA

Downstate operates a cafeteria open to students, faculty, staff, and visitors. It is located on the first floor between the Basic Sciences Building and University Hospital.

The Faculty Student Association runs Cafe 101 in the Student Center. The cafe has indoor and outdoor seating and is open Monday through Friday.

CHAPLAIN SERVICES

The Office of Pastoral Care of University Hospital of Brooklyn offers religious and other support services to patients, families, staff, and members of the Downstate community. The Interfaith Chapel (Room A1-347, University Hospital) is open 24 hours a day for use by all. Times and dates of religious services are posted on the chapel bulletin board. For more information, call (718) 270-2594; in an emergency, (718) 270-2121.

CHILDREN'S CENTER

Located at 440 Lenox Road, this is an on-site day-care center that offers developmentally appropriate early-childhood education for children from age eight weeks to five years. Its director and staff are fully qualified to teach young children. The Children's Center has a sliding fee scale, and there is a \$10 nonrefundable application fee. Center hours are 7:30 a.m. to 5:30 p.m. For more information call the Children's Center, (718) 221-6165.

OFFICE OF OPPORTUNITY AND DIVERSITY

Compliance with the equal opportunity laws and regulations listed below is within the scope of responsibilities of this office.

- Title VI of the Civil Rights Act of 1964 as amended. Prohibits discrimination on the basis of race, color, or national origin in admissions, access to courses of programs, and student policies.
- Title IX of the Educational Amendments of 1972. Prohibits exclusion from participation in, or denial of benefits, or subjection to discrimination on the basis of sex in any education program or activity receiving federal financial assistance.
- Section 504 of the Vocational Rehabilitation Act of 1973. Prohibits discrimination on the basis of physical or mental handicap in any federally assisted program or activity.
- Age Discrimination Act of 1975. Prohibits discrimination on the basis of age in programs or activities receiving federal financial assistance.
- Americans with Disabilities Act of 1990 (Titles II-V). Prohibits discrimination on the basis of disability in public service and public transportation, public accommodations, telecommunications, and miscellaneous provisions.

Students are invited and encouraged to consult with the Office of Opportunity and Diversity informally when situations or problems relating to perceived discriminatory treatment or behavior occur. The SUNY Grievance Procedure for Review of Allegations of Discrimination is available in the *Student Handbook*.

UNIVERSITY POLICE

The University Police Department maintains a proactive approach to reduction and suppression of crime on campus. More detailed information is published annually by University Police and in the *Student Handbook*.

Officers are assigned to:

- Entrances in each building
- Patrol each building
- Booths that are located in areas of high pedestrian traffic
- Radio-equipped motor vehicles

Identification/Facility Access

There are systems in place that are designed to ensure that persons entering Downstate are authorized to do so. I.D. must be worn on campus.

Phones/Alarms

A network of emergency (red) telephones is located throughout Downstate. In addition, a network of panic alarms is located in various places, including the corridors, laboratories, rest rooms, and on-call rooms. Both the red phones and panic alarms are linked directly with the University Police Department and are monitored 24 hours a day to ensure a quick response to any emergency.

Shuttle Service

To enable personnel who commute by public transportation to get to their points of departure safely, the University Police Department provides transportation to subway stations and bus stops. There is also a shuttle service to and from the off-campus parking facilities and Downstate.

Escort Service

An unscheduled service designed to move faculty, staff, and students at off-peak hours to local destinations (e.g., dorms to Kings County, University Hospital to garage).

Closed Circuit Television System

A CCTV system monitoring the interior and exterior of the Downstate campus is monitored 24 hours a day by the University Police Department.

Perimeter Lighting

Additional high-intensity lighting has been installed on exterior areas of the campus in addition to that already provided by the City of New York.

Student Responsibilities

Isolation can occur almost anywhere on campus, depending on the time of day, day of the week, or specific building. To avoid isolation, students should:

- Walk and travel in groups, when possible
- Use University Police escort and shuttle services
- Be aware that University Police monitors its telephone switchboard (x2626) 24 hours a day, and that red telephones have direct contact with University Police without dialing
- Be aware that University Police has emergency alarm buttons throughout University Hospital, the Basic Sciences Building, the Health Science Education Building, the Student Center, and dormitories which, if activated, University Police staff are dispatched to investigate

Residence Hall Security

Downstate has two residential buildings available for students. The following security and safety systems are currently in place:

- 24-hour coverage by University Police officers at each main entrance
- 17.5 hour (8:30 a.m. to midnight) service-desk coverage by professional and student staff
- Electronically locked main entrance doors. I.D. cards are swiped for access
- A panic alarm system on each floor (common areas) and in all public basement areas
- Surveillance cameras in common areas, laundry rooms, and outside entrances

University Police Annual Report

The Downstate Medical Center University Police / Public Safety Department prepares and publishes an annual security report which complies with the Crime Awareness on Campus Security Act, better known as the Clery Act. This report is available on line at www.downstate.edu/police/report.html. Printed copies are available upon request from University Police Administrative Office, 450 Clarkson Ave, Box 1201, Brooklyn, NY 11203 or call 718-270-3161.

REGISTRAR'S OFFICE

The Registrar's Office is part of the Division of Student Affairs and is located on the first floor of the Basic Sciences Building in Room 112. The office is responsible for class schedules, registration, course selection, course adds/drops, grades, transcripts, certification of student status, certification of academic good standing, loan deferments, veterans' affairs, and the maintenance of all academic records. Additional information regarding fees, charges, and records policies can be found in the appendix of the *Student Handbook*.

Current students may review their academic folders by requesting to do so and providing proper identification. It is usually possible to review the folder immediately upon request; however, on occasion it may be necessary to make an appointment and return the following day.

Students receive progress reports at the end of the academic year.

A minimum of two weeks should be allowed when requesting transcripts, completion of licensure forms, and certification. Overnight or express mail is only at student expense. Arrangements for an overnight mail envelope and repayment of associated charges may be made through the Bursar's Office and the SUNY Downstate mailroom.

Changes in local mailing address, including phone number, must be reported promptly to the Registrar's Office.

RESIDENCE LIFE

Upon acceptance to SUNY Downstate, students are sent housing information and application forms by the Office of Admissions. For additional information concerning housing, write or telephone:

Residential Life and Services
SUNY Downstate Medical Center
811 New York Avenue
Brooklyn, NY 11203
Telephone: (718) 270-1466
Fax: (718) 270-1467
Website: www.downstate.edu/residential-life

Email: residentiallife@downstate.edu

A residence hall is a continually changing environment in which resident students can explore the varied relationships and lifestyles in the process of their development as well-rounded individuals. The residence hall is a place where students live, learn, and relax in an environment that emphasizes both individual freedom and community responsibility. Downstate's Residence Life Program is designed to enhance these experiences.

Two residence halls, located at 811 and 825 New York Avenue, accommodate approximately 400 students. Assignments for the academic year are made each summer on the basis of computerized lotteries. Students may upgrade their assignment as space becomes available during the course of the year. Upgrades are decided based on lottery number.

Dormitory Rooms

A unit for two individuals. Each dormitory room contains a bed, desk, dresser, closet, and lamp for each occupant. Toilet facilities are shared with students in the adjoining room. Community shower rooms are provided for the occupants of the floor. Community kitchens are provided for dormitory occupants in various locations. Single units may be available based on demand and availability.

Studio Apartments

A unit for two individuals or a married couple. Each studio apartment contains a bed, desk, dresser, and closet for each occupant, plus a standing floor lamp. Each apartment contains a complete compact kitchen and private bathroom. Single units may be available based on demand and single availability.

One-Bedroom Apartments

A unit for two individuals, with a separate bedroom for each student. Each one-bedroom apartment contains a bed, desk, dresser, and closet, plus a standing floor lamp. The apartment also contains a complete compact kitchen unit and private bath. Assignments to one-bedroom apartments are based on a lottery held for students in the Medical School (Years 2, 3) and senior CHRP and Nursing students.

Off-Campus Housing

The Off-Campus Housing Office provides interested students with information on available housing options outside of the residence halls. An off-campus housing list is maintained by the Housing Office as a service to Downstate students and staff.

Downstate employees do not inspect, approve or supervise any off-campus premises. Downstate does not become a party to any private landlord-tenant matters.

OFFICE OF STUDENT AFFAIRS

The Office of Student Affairs serves as a general help and information office to students in all four colleges. Student health-insurance information, international students' immigration forms, and Commencement are only a few of the areas handled through this office. The Office also serves as the Dean of Students' Office for the College of Medicine. More information is in the *Student Handbook* and on the institutional website.

International Student Services

Assistance is provided only for immigration forms, and only for matriculated F-1 students. J-1 students are assisted in the Department of Human Resources. Additional information is in the *Student Handbook*.

Jury Duty

Students who are summoned for jury duty may come to the Office of Student Affairs to request a letter stating their student status and request to have jury duty postponed. There is no guarantee that the student will have his or her jury duty postponed. If the court imposes service, the student must serve. Students should notify course directors/instructors should this occur.

After two excused absences, students are generally required to serve on the third summons. It is recommended that the student identify a time period when he or she can serve (e.g., during a vacation period), and notify the court of those dates at the time of the first and no later than at the third excused absence.

Students with Disabilities

Students with disabilities who wish to request accommodations for their academic program are required to complete the appropriate form prior to matriculation. The Office of Student Affairs coordinates arrangements for students with disabilities.

Students who wish to request accommodation(s) after they have matriculated into the college are required to complete the appropriate form available from the Office of Student Affairs. Accommodations may require time to process or to put in place. Technical standards are posted on the SUNY Downstate website and are also distributed to matriculated students annually.

Student Life

Detailed information is published annually in the *Student Handbook*.

Downstate offers a friendly environment. Students enjoy an easy camaraderie with professors and each other, on a campus that takes pride in its culturally diverse population.

On campus, the Student Center Governing Board plans a busy calendar of events year-round, including feature films, an intramural sports program, cookouts, and minicourses. Admission to most events is free. In addition, the Student Center houses a ticket office, where students can find discount tickets for the theater and other cultural events throughout New York. The campus is a short subway ride from Manhattan and its vibrant fusion of theater, restaurants, music, and museums.

Living in Brooklyn

A stimulating part of the school experience is life in Brooklyn, a borough of the City of New York that has enjoyed a renaissance during the last decade and is home to a new generation of young professionals and artists. It is also a place where multiple generations of families live and a port of entry for new immigrants.

Downstate is located in the geographic center of Brooklyn, with easy access to the borough's diverse cultural and recreational opportunities. The Brooklyn Museum houses one of the largest Egyptian collections outside of Cairo and London, as well as works by American and European masters. The Brooklyn Academy of Music is the nation's oldest symphony hall and home to the Brooklyn Philharmonic Orchestra. The Brooklyn Botanic Garden is internationally renowned for its fifty acres of landscaped plantings that include a Japanese garden, 600 varieties of roses, and a cherry esplanade.

The world's first floating performance hall was created when a long-time Brooklynite docked a coffee barge in the East River and adapted it for audiences; with its spectacular view of the lower Manhattan skyline, Bargemusic has become one of the most popular places in the city to hear chamber music. The Brooklyn Center for the Performing Arts offers a variety of programs ranging from classical music, ballet, and modern dance, to popular entertainers.

Prospect Park is also close by. Designed in the 1860s, the 526-acre park is considered the finest work of Calvert Vaux and Frederick Law Olmstead, who are regarded as the greatest landscape architects America has produced. During the summer, outdoor concerts and opera are performed. Sheepshead Bay with its famous fishing fleet, and Coney Island, Manhattan Beach, and Brighton Beach, are a short trip away.

The borough also offers a variety of eating adventures. Russian, Middle Eastern, Kosher, Chinese, Korean, Thai, Italian, French, Spanish, German, Scandinavian, Jamaican, and West Indian are just some of the types of restaurants located in the borough.

There is an equally wide selection of housing from which to choose. Brooklyn has large apartment houses, architecturally interesting brownstones, one-and two-family attached and semi-attached houses, old mansions, and new developments—something for every taste and budget.

STUDENT CENTER

The Student Center, located at 394 Lenox Road, is the focal point of campus social, cultural, and recreational activities. The Student Center was established to further the educational mission and goals of SUNY Downstate by offering programs and services that provide for the personal, professional, social, and cultural development of students, staff, faculty, and alumni. Students are automatically members. Spouses and children may be included for an additional fee.

Recreational facilities include a gymnasium, swimming pool, sauna, hot tub, squash courts, an outdoor tennis court, billiards, and table tennis. Fitness equipment includes a Universal gym, barbells, and an array of bodybuilding and aerobic-exercise machines. The Student Center provides rooms for meetings and small lounges for reading or relaxing. Two pianos are available as well as cable TV with VCR and DVD.

Student Activities Office

The Student Activities Office is located in the Student Center. Questions concerning activities and programs of the Student Center Governing Board should be directed to this office. Within its area of responsibility are: methods and procedures for organizing an event, event registration on the Student Center calendar, alcohol policy, and facility capabilities as they relate to student events and activities, as well as any inquiries regarding the Mini-Course Program or Intramural Activities.

Theater Ticket Service

This office provides tickets to Broadway and off-Broadway shows, operas, ballets, concerts, sporting events, and other cultural activities at greatly reduced prices—often 50 percent or more off the established rate.

Cafe 101

The Faculty-Student Association runs Cafe 101 in the Student Center. The cafe has indoor and outdoor seating and is open daily.

Student Organizations

The structure and activities of student organizations may change from year to year, depending on student interests. The following is a representative sampling of clubs and organizations that were active at the time this publication was prepared. For more current information, please see the Student Life section of the website, sls.downstate.edu.

For further information on any organization, please utilize its mailbox at the Student Center.

STUDENT COUNCILS

Student Center Governing Board

The Student Center is the heart of social and community activity on the Downstate campus. Working hand-in-hand with all other student councils, the Faculty-Student Association, and school administrative bodies, the members of the Student Center Governing Board (SCGB) have a crucial and highly influential role in shaping the social, recreational, and athletic affairs of the University student body. The SCGB is open to all SUNY Downstate students. The board meets on alternate Tuesdays at 6:00 p.m. in the Student Center reading room, and its meetings are open to all those who wish to attend. The ten voting members are elected in the spring of the preceding year, but all attendees are encouraged to participate. The Student Center Governing Board sponsors many of the campus activities, including monthly Coffeehouses, weekly Movie Nights, weekly Happy Hours, Basketball Intramurals, Mini Courses, and Spring Fling—the annual semi-formal dance. Participating on the Student Center Governing Board is not only a great way to get connected with all the people, activities, events, and policy-making of the campus, but a wonderful experience as well. The business of the board is always brief and productive, with a significant percentage of time devoted to the purpose of improving student life on campus.

University Council

The purpose of University Council (UC) is to promote the interests and welfare of all the students at SUNY Downstate as related to campus-wide activities. The University Council is open to all SUNY Downstate students. University Council funds various clubs and organizations at Downstate and meets monthly. The Council deals with university-wide issues such as SUNY budget cuts and tuition increases, and has an affiliation with the Student Assembly of the SUNY. UC also co-sponsors activities such as Spring Fling, the annual semi-formal dance, and the annual Holiday Toy Distribution at Kings County Hospital.

College of Health Related Professions (CHRP) Council

CHRP Council undertakes and supports projects and activities that are in the general interest of the CHRP student body. This is achieved by interacting with other student organizations. The council fundraises to help send students to professional conferences, oversees clubs within CHRP, and develops the yearbook. The club also acts as an advocate for the students. The CHRP Council is open to all CHRP students.

Graduate School Council

Most often referred to as the “Grad Council,” its purpose is to promote the interest and welfare of the students in the School of Graduate Studies. Currently the council provides funding for orientation activities, luncheon meetings, travel for guest lecturers, a graduate student lounge, and various social events.

Master of Public Health Student Council

Most often referred to as “MPH Council,” it is concerned with the promotion of the interests and welfare of the students in the Master of Public Health Program.

Medical Student Council

The purpose of Medical Student Council (Med Council) is to promote the interest and welfare of the students of the College of Medicine. There are 24 members on the council, six from

each class. The first-year class elects six students to represent the class for a one-year term. Towards the end of the first year, there is a second election where the first year class will elect six students for a three-year term. Med Council meetings are open to all COM students. Each class has a class president. These representatives attend monthly meetings of Med Council, oversee the class budget and coordinate recreational, educational, and fund-raising events for the class.

Nursing Student Council

Most often referred to as “Nursing Council,” it is concerned with the promotion of the interests and welfare of the students in the College of Nursing. Currently, the council provides funding for orientation activities, Convocation, Nursing Yearbook, and Career Day as well as a host of social and educational activities.

Residence Hall Council

The purpose of the Residence Hall Council is to make a safe, comfortable, and convenient environment for students residing in the residence halls. It is also the purpose of the Residence Hall Council to use the student activity fee to hold events for students in the residence halls. The Residence Hall Council is open to all resident students. The Residence Hall Council holds monthly meetings, as well as study breaks, decorating parties, social events, and picnics. The Residence Hall Council is also a forum for students to give their suggestions for improvements in the residence halls.

STUDENT ORGANIZATIONS

AOA - Alpha Omega Alpha

Alpha Omega Alpha (AOA) is the only national medical honor society. The society was created to honor students, residents, and alumni who have shown excellence in their field. The AOA at SUNY Downstate is the Eta chapter for New York. The AOA is open to all COM students. Commensurate with its goal of elevating academics, students are allowed to present their research findings and one student from the MD and one from MD/PhD category are

selected to go on to the statewide competition. Each winner also receives a monetary award.

Other events sponsored by the AOA are the Journal Club, Subspecialty Information Forum, and the annual AOA guest lecture and dinner. The Subspecialty Information Forum is held with the respective chairman of the specialty department. The annual lecture precedes the dinner and is given by a distinguished guest on a pertinent topic.

AMA - American Medical Association

The American Medical Association (AMA) Medical Student Section is dedicated to representing medical students, improving medical education, developing leadership and promoting activism for the health of America. Organized in 1972, the AMA-MSS has over 44,000 members nationwide and represents students from 144 accredited schools. The AMA-MSS strives to be the medical students' leading voice for improving medical education. Its four core values are advocacy, leadership, excellence, and integrity. AMA is open to all COM students.

AMSA - American Medical Student Association

The American Medical Student Association (AMSA) is a national and local organization of medical and pre-medical students. It is the nation's oldest independent medical student organization run by and for medical students. There are over 28,000 members nationally. The organization is dedicated to giving medical students a voice in public policy as well as providing medical, social and community service oriented programs. AMSA is open to all COM students.

AMWA - American Medical Women's Association

The American Medical Women's Association is an organization that functions at the local, national, and international level to advance women in medicine and improve women's health by providing and developing leadership, advocacy, education, expertise, mentoring, and strategic alliances. The American Medical

Women's Association (AMWA) is an organization of 10,000 women physicians and medical students dedicated to serving as the unique voice for women's health and the advancement of women in medicine. AMWA was founded at a time when women physicians were an under-represented minority. As women in medicine increase in numbers, new problems and issues arise that were not anticipated. AMWA has been addressing these issues for almost 90 years.

APAMSA - Asian Pacific American Medical Student Association

The Asian Pacific American Medical Student Association is Downstate's chapter of the national organization that aims to address those issues important to Asian-American medical students.

One part of their mission is to bring together Asians and others interested in the health issues that affect Asians so that they may have a strong, collective, public and political voice. They are interested in both directly promoting the health and well-being of the Asian community as well as in helping all health care workers who work with these communities understand how to care for the Asian patient in a culturally sensitive manner. Finally, APAMSA provides an important forum for APA medical students to meet, exchange information and experiences, and develop personally and professionally.

Cardiology Club

The Cardiology Club at SUNY Downstate is open to all students and is designed to support student learning and expose interested students to the field of cardiology. They sponsor regular lectures and events, which present different aspects of the field. The group actively encourages student-faculty interaction outside of the classroom setting.

Chess Club

The Chess Club at SUNY Downstate is open to all students and is for everyone from the novice to the expert player. The group meets regularly and sponsors tournaments throughout the year.

Cooking Club

The Cooking Club at SUNY Downstate is open to all students and exists to promote cooking and celebrate the diverse community of Brooklyn.

CSSA - Chinese Students and Scholars Association

The CSSA works to enhance academic and social communication between Chinese students and scholars on campus, and with other CSSA and Chinese associations in the Tri-state area. Furthermore, the group enhances the academic and cultural communication between Chinese students/scholars with other ethnic groups on campus. In addition the group provides orientations for new Chinese students and scholars. The CSSA is open to all SUNY Downstate students. The benefits for group members include being more informed and connected with academic, social and cultural events in Chinese communities throughout the tri-state area, building connections with Chinese professionals in various fields, and being represented by the CSSA both on and off campus.

Daniel Hale Williams Society

The Daniel Hale Williams Society (DHWS) is SUNY Downstate's chapter of the Student National Medical Association (SNMA); an organization dedicated to healthcare education, leadership development, networking, and community outreach with a special call to implement solutions to insensitivity and inequality. To give expression to the needs of the Black and Latino medical students, Daniel Hale Williams members: 1) help one another through formal and informal tutoring sessions, 2) attempt to be a voice for positive change, and 3) reach out into the community to promote health care during health fairs.

Downstate Badminton Club

The Downstate Badminton Club is designed to promote mental and physical health through the physical exercise of badminton. Additionally, the group seeks to foster social interaction within the Downstate community. The Downstate Badminton Club is open to all SUNY Downstate students.

Downstate Christian Fellowship

The Downstate Christian Fellowship (DCF) is SUNY Downstate's chapter of the Christian Medical and Dental Associations (CMDA), the national associations of Christian physicians and dentists. It is a nondenominational, student- and faculty-led organization dedicated to supporting fellow Christian students, staff, and faculty of the Downstate community.

Downstate Performing Arts Society

The Performing Arts Society exists to increase the awareness of performance and visual arts and to offer opportunities for participation and expression in the arts.

Downstate Softball Club

The Downstate Softball Club promotes mental and physical health through the physical exercise of softball. Additionally, the group seeks to foster social interaction within the Downstate community. The Downstate Softball Club is open to all SUNY Downstate students.

Downstate Urology Club

The Downstate Urology Club is designed to promote awareness of the field of urology and men's health issues to students. The Downstate Urology Club is open to all Downstate students.

DOCS - Downstate OB/GYN Care Society

The purpose of DOCS is to introduce the specialty of obstetrics and gynecology to medical students; to encourage students considering OB/GYN; and to create a forum for students to learn about and discuss issues related to the field of OB/GYN. Membership is open to all SUNY Downstate students.

Emergency Medicine Club

The Emergency Medicine club exists to expose students to the field of emergency medicine and to provide fellow students with opportunities to meet ER physicians and residents and learn about their profession and lifestyle. The club seeks to provide students with the opportunity to relate academic knowledge to clinical experience. To encourage interest in research projects dealing with emergency medicine and its subspecialties and to facilitate enrollment

in such research projects. Membership is open to all SUNY Downstate students.

Ethics Society

The Ethics Society was established to expose students of the health professions to issues concerning morality, honesty and the ethics of medicine, which are encountered daily. The Ethics Society is open to all SUNY Downstate students. The Ethics Society seeks to provide a means through which students can express their concerns regarding these issues, and a forum in which these concerns can be further pursued and brought to the attention of the greater community.

Family Practice Club

The Family Practice Club provides a forum for exposure to this generalist specialty and issues pertinent to family medicine. Through club-sponsored speakers and activities students can learn about topics not addressed in other parts of their medical education.

Foosball Club

The Downstate Foosball Club promotes mental and physical health through the physical exercise of foosball. Additionally, the group seeks to foster social interaction within the Downstate community.

Geriatrics Club

The Geriatrics Club is designed to promote awareness of the field of geriatrics specialty as well as to organize events and activities to serve the geriatric population. The Geriatrics Club is open to all SUNY Downstate students.

Health Information Management Society

The Health Information Management Society (HIMS) encourages members to apply their knowledge to various institutions and affiliations and to share their knowledge and experience with classmates and the University community. This organization also promotes the Health Information Management profession

Iatros, College of Medicine Yearbook

Iatros is the College of Medicine yearbook. Iatros is open to all COM students.

Integrative Medicine Society

The Integrative Medicine Society aims to inform students and faculty of the current therapies practiced by health professionals outside the realm of traditional (allopathic) medical care. The IMS is open to all COM students. Speakers experienced in their respective fields are encouraged to share the philosophy behind their treatments, their practical applications, as well as the drawbacks that have been encountered in practice.

Lesbian, Gay And Bisexual People at Downstate

This organization's goal is to provide a healthy, open, and tolerant atmosphere on campus and to reduce the sense of isolation felt by many lesbian, gay, and bisexual people because of homophobia. The LGBP is open to all SUNY Downstate students, faculty, and staff.

The Maimonides Society

The Maimonides Society is a student run organization whose purpose is to promote Jewish life at SUNY Downstate. It is intended to increase awareness and education about various Jewish events throughout the year and to provide programs to enhance Jewish life on campus. The organization is open to all students and faculty.

Medical Artists' Guild (MAG)

The Guild's main purpose is to have a club that allows students and other members of the Downstate community to express their ideas or thoughts through writing, poetry, and art. With its monthly publications/online magazine, the Guild seeks to foster an environment that includes poetry readings and art exhibitions on campus.

Medical Students for Choice

This organization's purpose is education and activism surrounding the full range of reproductive-rights issues. These include abortion rights and access, sterilization abuse, access to prenatal care and birth-control information, as well as high-quality comprehensive women's health care.

Muslim Student Association

The Muslim Student Association is designed to support Muslim students of SUNY Downstate and to present Islam to the Downstate community as a comprehensive way of life. It also provides an educational forum regarding its creed. Meetings are discussions on Islamic topics of interest and are open to all members of the Downstate community. The MSA is open to all SUNY Downstate students.

Occupational Therapy Club

The Occupational Therapy (OT) Club is comprised of the junior and senior classes of the Occupational Therapy program. Its purpose is to organize social activities in order to facilitate camaraderie and peer support between the junior and senior classes and to provide recreational activities to balance the demands of the academic workload. The OT Club is open to all OT students.

Organization of Student Representatives

As part of the Association of American Medical Colleges, the Organization of Student Representatives provides all United States allopathic medical students with voting representation to the nation's largest association dedicated solely to the advancement of academic medicine. The OSR also seeks to assure that students actively participate in directing their education, preserving their rights, and delineating their professional responsibilities. To this end, the OSR provides medical students with a voice in academic medicine at a national level and strives to foster student involvement in this arena at a local level. For more information, contact Student Affairs.

Operation Smile

The Downstate chapter of Operation Smile provides education and training to physicians, healthcare professionals, and students concerning reconstructive surgery and related healthcare of indigent children and young adults in developing countries and the United States. Operation Smile provides voluntary care to improve the quality of life for the children, families, and communities that share in the Operation Smile

experience through overseas missions. Operation Smile is open to all SUNY Downstate students.

Ophthalmology Club

The Ophthalmology Club is designed to educate and expose members of the Downstate community to the various issues and opportunities in Ophthalmology. The Ophthalmology Club is open to all SUNY Downstate students.

Orthopaedic Surgery Club

The Orthopaedics Club is designed to educate and expose members of the Downstate community to the various issues and opportunities in Orthopaedics. The Orthopaedics Club is open to all SUNY Downstate students.

PANDA

PANDA is an all-inclusive Asian-American organization that promotes Asian-American awareness to the campus at large. It serves to unite all those interested in participating and learning about Asian culture, teachings and ideologies. Activities include quarterly meetings, special speakers and a New Year's dinner. PANDA is open to all SUNY Downstate students.

Peds R Us

Downstate's pediatrics club is a forum for all university students to learn about and contribute to children's healthcare and wellness issues through educational and recreational activities.

Academically, from lectures and panels by professionals, members hope to gain useful knowledge that can be applied in clinical and other interactive settings with children. Other activities include a reading hour in the pediatrics ward, conducting health education in neighborhood schools, and sponsoring a cooperative community fair with other organizations. Meetings take place every month with events scheduled three times a semester. All university students are invited to participate.

Physical Therapy Club

The Physical Therapy (PT) Club promotes awareness of the physical therapy profession within Downstate and its general community. Its primary goals are to involve its members in: 1) serving the community, 2) supporting the physical therapy profession, and 3) providing a social atmosphere for its members to interact with other future health care professionals. The PT Club is open to all CHRP students.

Physician Assistant Club

The Physician Assistant (PA) Club was established in the spring of 1997 on behalf of the PA class of '98 and future PA classes. The club promotes PAs, does fund raising, arranges National PA Day activities, and participates in University activities as one of the programs in the College of Health Related Professions. The PA club has organized monthly meetings and discussions on present and future practices. Its goal is to unify the students in the PA program as well as establish more of an understanding of the PA program as well as the PA profession. The PA Club is open to PA students.

PNHP - Physicians for a National Healthcare Program

The Downstate chapter of the Physicians for a National Healthcare Program (PNHP) is designed to educate physicians, healthcare workers, students, and the general public on the need for a comprehensive, high-quality, publicly-funded healthcare program, equitably accessible to all residents of the United States. The PNHP is open to all Downstate students.

Psychiatry Society

The Psychiatry Society is designed to educate and expose members of the Downstate community to the various issues and opportunities in Psychiatry. The Psychiatry Society is open to all SUNY Downstate students.

Public Health in Medicine

The Public Health in Medicine Club is designed to educate and expose members of the Downstate community to the various issues of Public Health within medicine and to foster student involvement in public health initiatives at SUNY Downstate. Living and studying in Brooklyn provides students with unparalleled access to its diverse communities and their associated health issues. As health professionals in training, it is of the utmost importance that students are cognizant of these public health issues and are proactive in addressing them.

Radiology Society

The Radiology Society is designed to educate and expose members of the Downstate community to the various issues and opportunities in Radiology. The Radiology Society is open to all SUNY Downstate students.

Running Club

The Downstate Running Club promotes mental and physical health through the physical exercise of running. Additionally, the group seeks to foster social interaction within the Downstate community.

SALUD

SALUD is the Downstate chapter of the National Boricua Latino Health Organization (NBLHO), a Latino student group representing health professions students from the northeast region of the United States. Its mission is to recruit Latinos into higher education, educate the public and one another about Latino health issues, advocate for increased Latino representation in health related areas, and promote awareness about social, political, and economic issues as they relate to Latino health. It also serves to create a support network for Latino students.

SAAB - South Asian Association at Brooklyn

The South Asian Association at Brooklyn (SAAB) provides an atmosphere in which the South Asian students may partake in social and cultural collaboration due to the plethora of cultures that make up the South Asian region. SAAB is open to all SUNY Downstate students.

Sports Medicine Club

The purpose of the Sports Medicine Club is to provide future health care professionals with exposure, experience, and education in sports medicine and musculoskeletal problems. Students will be encouraged to attend workshops and discussions led by sports medicine professionals, participate in physicians' office hours, and observe operating room procedures in order to gain insight into this rapidly expanding field. A secondary purpose is to provide community service. This will include conducting physicals for local high school and college athletic teams, as well as medical coverage of athletic events. Membership and participation in the Sports Medicine Club is open to all Downstate students.

Student Medical Informatics Society

The Student Medical Informatics Society exists to promote the interests of the Medical Informatics field among its students and the Downstate community.

Student Notetaking Service (Transcript Service)

The Student Notetaking Service is responsible for course transcripts.

Students for Social Responsibility

The Students for Social Responsibility (SSR) is a student run organization committed solely to community service activities. SSR promotes healthcare, reduction of violence, and education within the Brooklyn Community. Major activities include visits to homeless shelter clinics, health education programs, and a high-school anti-violence program. SSR is open to all SUNY Downstate students.

SIGN - Student Interest Group in Neurology

SIGN is the American Academy of Neurology's Student Interest Group in Neurology. SIGN's purpose is to introduce medical students to the field of neurology through discussions by neurologists, seminars, learning materials, and other relevant activities. SIGN will help students become aware of opportunities and activities related to the field of neurology.

Surgery Club

The purpose of the Surgery Club is to provide students early exposure to the field of surgery. Students have the opportunity to take part in workshops and group discussion with specialists in the field of surgery. The Surgery Club is open to all SUNY Downstate students. Talks are planned at which surgeons will explain new advances in the field. Surgeons will benefit by discussing their work with interested students. Students will be encouraged to scrub in on cases.

The Surgery Club continues to explore avenues through which students can gain a greater awareness of issues facing surgery in the 21st century.

Tharos, College of Health Related Professions Yearbook

Tharos is the College of Health Related Professions yearbook. Tharos is open to all CHRP students. For more information, please contact the CHRP Council.

Trothos, College of Nursing Yearbook

Trothos is the College of Nursing yearbook. Trothos is open to all CON students. For more information, please contact the Nursing Council.

Unite for Sight

This is the Downstate chapter of Unite for Sight, a nonprofit organization that works nationally and internationally to develop sustainable solutions to reduce health disparities. The SUNY Downstate chapter works with campus and local community infrastruc-

Faculty

College of Medicine
School of Graduate Studies
Alphabetical Listing

College of Medicine

Dean
Eugene B. Feigelson

Anatomy and Cell Biology

Professor and Chair

M.A.Q. Siddiqui

Distinguished Teaching Professor

Mimi Halpern

Professor

Paulette Bernd, Eva B. Cramer, Diana L. Dow-Edwards, Stanley E. Fisher, Stanley Friedman, M. Mahmood Hussain, John Anthony Lewis, Allen J. Norin, Sheldon P. Rothenberg, Franklin R. Scalia, Gladys Teitelman

Associate Professor

Satykam Bhagavati, William J. Chirico, Jacqueline S. Jakway, Xian-Cheng Jiang, Elizabeth Kornecki, John L. Kubie, George K. Ojakian

Research Associate Professor

Edward Quadros

Assistant Professor

Anna Babinska, Stacy W. Blain, Angel Cinelli, Martin Levine, Samuel Marquez, Sybill Petra Patan

Research Assistant Professor

Stephen M. Carleton, Brahim Chaqour, Shirley Eisner, Eduardo Mascareno, Michael Armand Wagner

Estimated Voluntary Faculty: 9

Anesthesiology

Distinguished Service Professor and Chair

James E. Cottrell

Professor

Ira Kass

Professor of Clinical

Audree Bendo, Rebecca S. Twersky

Clinical Professor

Constance H. Hill, Marilyn A. Resurreccion

Associate Professor

John D. Hartung

Clinical Associate Professor

Elie Fried, Banu Lokhandwala, Michael Mendeszoon, David Wlody

Assistant Professor

Ramesh Kodavatiganti

Clinical Assistant Professor

Lourdes Abrigo, Lisa Amendolia, Azad A. Amin, Evelyn Ansa, Muhammad Anwar, Alexandru Apostol, Waseem Ashraf, Juan Botero, Pamela Bowen, Irina Butoi, Jean Charchaflieh, Chung Chee, Allen Coopersmith, Paul John Dadie, Omotola Dawodu, Batul Deesawala, Dennis P. Dimaculangan, Adwoa Essuman, John Fiadjoe, David S. Fishman, Shanta Ganesan, Aziz Ghobriel, Kalyani Govindan, Joshua L. Greenspan, Lawrence Holtzin, Y.V. Janardhan, Bienvenido Jao, Gerardo Labasan, Jeffrey Lampert, Helen Lauro, Craig Lazar, Myung Lee, Shin Ok Lee, Peter Lipps, Kate Maciejka, Gina Matei, Andrew McCammon, Abshalom Meiri, Khosrow Modjehi, Mary Nalbandian, Vahe Naljian, Nabendu Pandey, Gwen C. Parker, Craig Passmore, Andre Radianu, Aleksandr Rozenberg, Evan Salant, Wilfredo Santos, Susan Spaulding, Marina Syvats, Curtis Thornhill, Olga Tyuleneva, Gloria Valdez, Leena Varghese, Tara Vazirani, Guillermo Velasquez, Lance Warren Wagner, Lela D. Weems, Betka Zeleny

Estimated Voluntary Faculty: 110

Biochemistry

Distinguished Professor and Chair

Alfred Stracher

Professor

Richard Feinman, Alan Gintzler, Richard M. Kream, Julie I. Rushbrook

Associate Professor

Robert P. Carty, Miriam Feuerman, Gregory Gick

Assistant Professor

Joseph R. McPhee III

Research Assistant Professor

Sumita Chakrabarti, Mary Makowska

Research Instructor

Jimmy R. Calaycay

Estimated Voluntary Faculty: 8

Computer Center

Clinical Assistant Professor

Matthew J. Avitable, Hans vonGizycki, Jeremy Weedon

Dentistry and Oral Medicine

Professor and Chair

Julius R. Berger

Professor

Stewart Lazow

Clinical Professor

Marshall P. Solomon

Clinical Assistant Professor

Homayoun Shah Aminyar

Estimated Voluntary Faculty: 8

Lists as of 1/18/05

Dermatology

Distinguished Teaching Professor and Chair
Alan R. Shalita

Associate Professor of Clinical
Hilary Baldwin

Clinical Associate Professor
Edward R. Heilman, Daniel Siegel, Steven I. Simon

Assistant Professor
Usha Alapati, Sharon A. Glick

Clinical Assistant Professor
Dina N. Anderson, Michael E. Jackson, Jessica J. Krant, Amy Beth Lewis, Eve Lowenstein

Research Assistant Professor
Wei-Li S. Lee

Adjunct Clinical Assistant Professor
Erika Michelle Balfour

Estimated Voluntary Faculty: 43

Division of Laboratory Animal Resources

Clinical Professor
Samuel Adams

Clinical Assistant Professor
Bruce Scharf

Emergency Medicine

Associate Professor and Chair
Michael Lucchesi

Professor of Clinical
Binita R. Shah

Associate Professor
Bonny Baron, Jamil Ibrahim, Richard Sinert

Assistant Professor
Orlando Adamson, Charlene An, Bonnie Arquilla, Reinaldo Austin, Gerard Casey, Joseph Chirayil, Ian S. Desouza, Christopher I. Doty, Mert Eroglu, Yusra Farooqui, David Finkelstein, Rachel Koshy George, Brian Gillette, Aleksandr Gleyzer, Barry Hahn, Antonia Hipp, Oren Hirsch, Jeffrey Hom, Elma J. Johnson, Bradley Kaufman, Ambreen Khan, Nizar Kifaieh, Jeffrey H. Levine, Evan Mahl, Seth Michael Manoach, Lorenzo Paladino, Eunhae Park, Peter Peacock, Matthew Pius, Stephan Rinnert-Gongora, Adam Rubin, Ashraf Salem, Kristine Samson, Prakash Shetty, Mark A. Silverberg, Mark Spektor, Karen Stavile, Jessica Stetz, Mark Su, Nooruddin R. Tejani, Kareen Thompson-Holcomb, David D. Tran, Jonathan S. Wasserman, Selwyn Waterton, Sage Wiener, Renee Wilson, Sigrid Wolfram, Shahriar Zehtabchi

Clinical Assistant Professor
Ernst Gustave, Kaiser Islam, Jose Jule, Manoj Kumar Mittal, Dilip Sen

Instructor
Michael K. Hockstein

Clinical Instructor
Roger P. Holt, Mohammed Rahman

Estimated Voluntary Faculty: 94

Family Practice

Professor and Chair
Miriam T. Vincent

Associate Professor
Joseph J. De Rose, Richard Sadovsky

Associate Professor of Clinical
Pamela D. Sass

Assistant Professor
Gloria Achara, Hanna Aghabi, Daisy Arcee, Richard Crummer, Kevin T. Custis, Margaret Donat, Eve Faber, Aneela Hussain, Tempitope Jose

Clinical Assistant Professor
Alla Akivis, Dennis Castillo, Sanford A. Herman, Steven Liverpool, Gloria Mtomboti, Joseph Quist

Estimated Voluntary Faculty: 106

Medical Humanities

Clinical Assistant Professor
Alice Herb, Kathleen Powderly

Medical Library

Director of Libraries
Richard M. Winart

Senior Assistant Librarian
Mary C. Doherty, Mohamed F. Hussain, Ross Ljungquist, Andrea B. Markinson, David R. Solomonoff,

Assistant Librarian
Violet O. Price, Bharathi Subramanian, Qihao Wang,

Medicine

Professor and Chair
J. Edmund Bourke

Distinguished Professor
Eli A. Friedman

Professor
Albert S. Braverman, Steven Cohn, Michael Cutaia, Jack A. DeHovitz, Barbara G. Delano, Paul Dreizen, Nabil El-Sherif, Donald Gerber, Ellen M. Ginzler, Paul Harris, John C. LaRosa, Sheldon H. Landesman, Harold E. Lebovitz, Larry Lutwick, William McCormack, Allen J. Norin, Man Seok Oh, T. K. Sreepada Rao, Ronald Frederic Rieder, Sheldon P. Rothenberg, Emanuel Silverstein, Vlado Simko, Richard A. Stein, Nathaniel Winer

Visiting Professor
Judith Ahronheim, Nora Bergasa

Professor of Clinical
Kenneth Bromberg, Luther T. Clark, Alan Feit

Clinical Professor
Howard Bruckner, Thomas McGinn

Associate Professor
Andrew Adler, Michael Akerman, Michael Augenbraun, Mary Ann Banerji, Olcay A. Batuman, Helen G. Durkin, Edward Fishkin, Albert E. Heurich, A. Ross Hill, Onyekachi Ifudu, Tak Kwan, David Landman, Marianna Markell, Jonathan D. Marmur, Samy McFarlane,

Foroozan Mokhtarian, John M. Quale, Sadhana S. Sathe, William B. Solomon

Visiting Associate Professor
Jason M. Lazar, Hiren Muzumdar, Kaumudi Somnay

Associate Professor of Clinical
Robert Barth, Hal Chadow, Charles Hyman, Martin Kramer, Carol Anne Luhrs, Rauno Joks, Steven Weiss

Clinical Associate Professor
Robert G. Cheron, Spiro Demetis, Cherif M. El-Younis, Geraldo Fruchter, Marcia G. Gerber, Swaminath K. Iyer, Walfredo J. Leon, Robert Nacht, Ovidiu Platica, George C. Schussler, Harry A. Winters

Research Associate Professor
Edward Quadros

Adjunct Associate Professor
David I. Wollner

Assistant Professor
Elfatih I. Abter, Nabil Al-Adhamy, Mahmood Alam, Sridevi Aravabhumi, Reinaldo Austin, Ayse Aytaman, Lincoln Bartholomew, David Blumenthal, Sheldon Breitbart, Daniel Buff, Jack Burton, Erdal Cavusoglu, Paul H. Cohen, Samir Fahmy, Peter N. Gillette, Lawrence Glaubiger, Eddie S. Go, Philip Goldwasser, Barry Goozner, Helen A. Guber, Paul Hansard, Anthony Joseph, Vivekanand Kalanadhabatta, Anne S. Kastor, Jatinder Khokar, Deana Lazaro, Andrea Leaf, Jeanne MacRae, Archana Maini, Eddy Manuchian, Judith E. McLoughlen, Ravindra Mehta, Dawn Mellish, Judith Mitchell, Anne Motta-Yamins, Selvanavagam Niranjam, Vincent Notar-Francesco, William Ntim, Sanjeev Paltra, Keith E. Pearlman, Ronald Pedalino, Morana Poljak-Varenika, Eduard Porosnicu, Jayashree Ravishankar, Safak Reka, Dionyssios Robotis, Andrew Rohen, Kathie Rones, Louis Salciccioli, Moro O. Salieu, Ronald Scheff, Richard Sidlow, Edward Toseland, Frieda Wolf, Yalemzewd Woredekal, Yusuf Yazici, Peggy Yih

Assistant Professor of Clinical
Sanjay Chawla, Jin Choi, Conrad Fischer, Halim Ghali, Lawrence Mancino, Deborah Moran, Robert Moran, Allison Rathan, Eric Sessions

Clinical Assistant Professor
Muhammad Abdullah, Purna Atluri, Clifford Bassett, Alice Beal, Asquith Best, Taweh Beysolow, Clinton D. Brown, Yaroslav Bukharovich, Edward Carbonell, Gangacharan Dubey, Olga Dvorkina, Sarah Egan, Carol Encarnacion, Amal Farag, Ernest Phillip Garnier, Salwa Gerges, Lisa Gualberti-Girgis, Rom M. Gupta, Henry Hom, Gardith Joseph, Mohana Karlekar, Ruth Kleinman, Jean-Robert Leonides, Steven Liverpool, Jan I. Maby, James A. Mahoney, Julie Mason Morgan, Lalta Mudgil, Ranganath Muniyappa, Mohammed Nurhussein, Christine Pasquariello, Marina Perlova, Dora Pita-Acevedo, Marlene L. Price, Michele Proscia-Lieto, Joseph Quist, Daniel D. Ricciardi, Arshad Mahmood Safi, Prahdeep Sandhu, Douglas Sepkowitz, Florence Shai, Nancy Simon, Sigrid Ulrich, Lavonne Valembrun, Reba M. Williams

Research Assistant Professor
John Nicassio, Raj Wadgaonkar

Instructor

Sally Ann Gibilaro, Rattanjit Kohli, Salini Kumar, Henry Paul, Howard Stark, Emmanuel Valery

Clinical Instructor

Osaf Ahmed, Aaron H. Berger, Stephen Coppa, John De Lury, Sandeep Dham, Aaron Leo Gottesman, Joann Gualberti, Reuven E. Lapin, Kathy H. Lee, John McCarthy, Yun Namkung, Ruthven A. Noel, Walter Pascou, Mafuzur Rahman, Jesi A. Ramone, Bartholomew Savino, Audanis Vertus, Rob V. Wetz, Joseph T. Williams

Estimated Voluntary Faculty: 823

Microbiology and Immunology

Associate Professor and Interim Chair

Brehon Laurent

Professor

Donald Mills

Associate Professor

Christopher Hellen, Maureen McLeod, Faroozan Mokhtarian, William B. Solomon

Assistant Professor

Camilo Parada, Christopher J. Roman, Frederic Volkert

Research Assistant Professor

Tatyana Pestova

Estimated Voluntary Faculty: 14

Neurology

Professor and Chair

Roger Cracco

Distinguished Teaching Professor

Mahendra Somasundaram, Arthur H. Wolintz

Professor

Ivan G. Bodis-Wollner, Joan Cracco, Howard A. Crystal, Lisa Merlin, Arthur L. Rose, Todd Sacktor, Susan Schwartz-Giblin, Roger Traub, George Vas, Kristina Wisniewski

Associate Professor

Brian J. Anziska, Satyakam Bhagavati, Arnold Eggers, William Lytton, Paul J. Maccabee, Saiyid Shafiq

Assistant Professor

Chun Bai, Geetha Chari, Radha Giridharan, Alan Jacobs, Mi-Young Jo, Tresa McSween, Zaitoon Memon, Sophia Sharfstein, Marketa Vyskocilova, Ravi Yangala

Clinical Assistant Professor

Helen Anna Valsamis

Estimated Voluntary Faculty: 57

Neurosurgery

Professor and Chair

Stephen T. Onesti

Visiting Associate Professor

Sundeep Mangla

Assistant Professor

Ethan Benardete, Ali Sadr, Mark K. Thompson, D. Roxanne Todor

Clinical Assistant Professor

Roland Torres

Clinical Instructor

Erin A. Wagner

Estimated Voluntary Faculty: 13

Obstetrics and Gynecology

Professor and Chair

Ovadia Abulafia

Distinguished Service Professor

Howard Minkoff

Professor

William McCormack, David Sherer

Visiting Clinical Professor and Vice Chair

Joseph Osho

Visiting Associate Professor

Peter Hong

Associate Professor of Clinical

Ozgul Muneyirici-Delale

Visiting Clinical Associate Professor

Tudor Gavrilescu

Assistant Professor

Mark Borowsky

Clinical Assistant Professor

Diane Ashton, Fady Collado, Mudar Dalloul, Guy Etienne, Pierre Eugene, Nagaraj Gabbur, Sandra Glasgow, Carol Glowacki, Jennifer Huang, Jean Joseph, Madeline Lamarque, Yi-Chun Lee, Catherine J. Lee-McBrien, Mauro Leo, Nicola Mertsaris, Carla Petterkin-Caldwell, Raphael Stimphil, Mary Toussaint-Milord, Susan Zilkha

Clinical Instructor

Kelly Brennan, Wen-Ching Lee

Estimated Voluntary Faculty: 256

Ophthalmology

Professor and Chair

Kevin C. Greenidge

Distinguished Teaching Professor

Arthur H. Wolintz

Professor

Jeffrey Freedman, Maria Antoinette Musarella

Associate Professor of Clinical

Douglas R. Lazzaro

Assistant Professor

Irma Ahmed, Teresa Brevetti, Daniel Chechik, Emil Chynn, Wayne March, Eric Shrier

Clinical Assistant Professor

Tammy Chu, Monica Dweck, Anthony Girardi, Oneca S. Heath-Phillip, Emanuel Lazzaro, Bradley Phillips, Janine Smith, Jean Yang

Instructor

Marc E. Wietschner

Estimated Voluntary Faculty: 86

Orthopedic Surgery and Rehabilitation Medicine

Associate Professor and Chair

William Urban

Professor

Stanley L. Gordon

Associate Professor

Enrique Monsanto

Clinical Associate Professor

Charles R. Spero

Assistant Professor

Daniel Caligiuri, Kevin T. Custis, Raymond Girnys, Pamela Levine, Andrew Merola, Paul Pipia, Vijay J. Rasquinha, Ivan Rubel, Claude Scott

Clinical Assistant Professor

Marcel Bayol, Dennis Castillo, Barbara Freeman, Getahun Kifle, Ibrahim M. Nasser, Seung Ja Park, Soon M. Rho

Estimated Voluntary Faculty: 73

Otolaryngology

Professor and Chair

Frank Lucente

Professor

Paulette Bernd, Gady Har-El, Richard Rosenfeld

Associate Professor of Clinical

Neil Sperling

Clinical Associate Professor

Michael H. Weiss

Assistant Professor

Boris Bentsianov, Ari Goldsmith, Nira A. Goldstein, Jessica Wong Lim, Joseph R. McPhee III, Michael Mendelsohn, Christopher Song, Jon Turk

Clinical Assistant Professor

Ramez Habib

Estimated Voluntary Faculty: 40

Pathology

Professor and Chair

Suzanne Samuels Mirra

Distinguished Service Professor

Martin J. Salwen

Professor

Constantine Axiotis, Randall L. Barbour, Howard A. Crystal, Susan R. Schwartz Gottesman, Anthony Nicastrì, Matthew R. Pincus

Clinical Professor

Patrick Chen, Joan Holohan Howanitz, Peter J. Howanitz, Marshall P. Solomon

Associate Professor

Virginia M. Anderson, Thomas J. Athanassiades, Helen G. Durkin, Elizabeth S. Gloster, Josef Michl

Clinical Associate Professor

Therese Martin-DiMaio, Maja Nowakowski, Chandrakant Rao, Janet Schneller

Assistant Professor

Charles Shao, Carl Vinciguerra, Carolyn Webber

Clinical Assistant Professor

Khaled Abu-Lawi, Yong Doo Kim, Andrew Seymour

Research Assistant Professor

Harry Graber, Christoph H. Schmitz

Adjunct Clinical Assistant Professor

Erika Michelle Balfour

Research Instructor

Linda McGuire, Lynette G. Sheffield

Estimated Voluntary Faculty: 58

Pediatrics**Professor and Chair**

Stanley E. Fisher

Professor

Angela A. Bennett, Salvador Castells, Margaret Hammerschlag, M. Mahmood Hussain, Sreedhar P. Rao

Professor of Clinical

Paul Harris, Robert Karp, Scott Miller, Madu Rao, Morris Schoeneman, Binita Shah

Clinical Professor

Sheela Gobind Laungani, Venkatesalu Rajagopal, Gloria Valencia

Associate Professor

Gilbert Goldman

Visiting Associate Professor

Shahina Quershi

Clinical Associate Professor

Margaret Clark Golden, Stephen Julian Wadowski

Visiting Clinical Associate Professor

Jayendra Sharma

Associate Professor of Clinical

Rauno Joks

Assistant Professor

Letitia Acosta, Asma Ahmad, Galia Austin-Leon, Francis Banfro, Stacy Blain, Laura Bruno, Elvira Dapul, Laura Dattner, Ninad Desai, Eugene Dinkevich, Madgy El-Hennaway, Robin K. Frankel-Ovitsh, Matthew Gesner, Sharon A. Glick, Abha Kaistha, Mudit Mathur, Hamid Moallem, Anil Mongia, Gratiias Mundakel, Dinesh Patel, Agnes Perenyi, Jose Quintos, Sukhvinder S. Ranu, Sarah Anne Rawstron, Dalan Reed, Ella-Jean L. Richards, Tzipporah Sklar, Amy L. Suss, Hiren Trivedi, Diana Weaver

Clinical Assistant Professor

Usha Bansal, Jeffrey Birnbaum, Richard Di Pasquale, Jaung Hwang, Asha Jain, Olivia Luib, Swatia Mehta, Radha Nathan, Sudha M. Rao, Yogendra Saxena, Karen B. Tizer

Research Assistant Professor

Andrei Kutlin

Instructor

Mahood Gheissary

Clinical Instructor

Lalu George, Edward Handelsman, Patricia A. Mullen, Gloria Payoma, Jamuna Reddy, Lee M. Waldman

Estimated Voluntary Faculty: 475

Physiology and Pharmacology**Professor and Chair**

Robert K.S. Wong

Professor and Vice-Chair

Steven E. Fox

Distinguished Professor Emeritus

Robert F. Furchgott

Professor

Burton M. Altura, Vahe E. Amassian, Mohammed Boutjir, John K. Chapin, Diana Dow-Edwards, David J. Erlj, Stanley Friedman, Ira Kass, Kiyomi Koizumi, Lisa Merlin, Robert Muller, James B. Ranck, Jr., Todd Sacktor, Bertrum Sheid, Henri Tiedge, Roger Traub, Mario Vassalle

Visiting Professor

Anthony L. Sica

Research Professor

Bella Altura

Associate Professor

Peter J. Bergold, Anthony S. Gidari, Ellen Hsu, William Lytton, Hillary B. Michelson-Law, Nicholas Penington, Sheryl Smith, Armin Stelzer, Mark G. Stewart, Keith Williams

Research Associate Professor

Nandor Ludvig, Alan Rudell

Assistant Professor

Andre Fenton, Douglas Ling

Research Assistant Professor

Riccardo Bianchi, Andrea Bibbig, Katherine Perkins, Hui Shen, Lie Yang

Research Instructor

Shih-Chieh Chaung, Xiaofu Liang, Steven Young

Adjunct Instructor

Ki Kim

Estimated Voluntary Faculty: 40

Preventive Medicine and Community Health**Distinguished Service Professor and Chair**

Pascal James Imperato

Professor

Jack A. DeHovitz, Joseph Feldman, Judith H. LaRosa, Allen Spiegel

Assistant Professor

Karen Benker, Mary E. Lutz, Edmond Malka, Scyatta Wallace, Tracey Wilson

Research Assistant Professor

Gerald W. Deas

Estimated Voluntary Faculty: 23

Psychiatry**Professor and Chair**

Stephen Goldfinger

Distinguished Service Professor

Eugene Feigelson

Professor

Henri Begleiter, Carl Cohen, Jeremy Coplan, Steven Friedman, Ali A. Kawi, Martin Kesselman, Leonard Rosenblum, Peter J. Weiden

Associate Professor

Bernice Porjesz, Michael A. Selzer, Ramaswamy Viswanathan

Visiting Associate Professor

Miranda H. Chakos, Nyapati Rao

Associate Professor of Clinical

Jorge Steinberg

Clinical Associate Professor

Marian E. Dunn, Joan H. Hittelman, Thomas O'Rourke

Visiting Clinical Associate Professor

Deborah Cross, Michael D. Garrett

Assistant Professor

Kevin Jones, Maydar Sengal

Clinical Assistant Professor

Pierre Arty, Morgana M. Benabe, Scott Berger, Ellen Berkowitz, Michael Berzofsky, Dasen Brajkovic, Martha Burkholder, Ooangkarjit Buttar, Joseph A. Charlot, Ross Clinchy, David Dailey, Mark Desantis, Lenore Engel, David Estes, Nancy Forman, Gerald Fried, Daniel Friedman, Joseph Gallo, Kenneth Garcia, Hillel Glover, Norma R. Green, William Gross, Jean-Robert Jacques, Vinayendra Jain, Thulasiram Janardhanan, Marek D. Karpinski, Nisar A. Khwaja, Tomasz W. Kowacz, Edward M. Laski, Tovia A. Lent, Narasimhan Narasimhan, Bizhan M. Nia, Tin Tin Oo, Alla Ostrovskaya, Josephine Pedron-Santiago, Moise Leslie Plantin, Lev Pobersky, Dinko Podrug, Steven Rubel, Mian Siddique, Chandra Singh, Ellen Tabor, Jeffrey Taveres, Elder Francois Thebaud, Jean Tropnas, Alan L. Tusher

Clinical Instructor

Hyacinth Charles, Beatrice Spinelli

Clinical Assistant Instructor

Tania Lao Arthur

Estimated Voluntary Faculty: 585

Radiation Oncology**Distinguished Service Professor and Chair**

Marvin Rotman

Professor

Christopher S. Lange

Clinical Professor

Hassan Aziz, Kwang N. Choi

Clinical Associate Professor

Alan Schulsinger

Clinical Assistant Professor

Irene Alexandropoulos, Isamettin Aral, Simon Baron, George R. Collins, Fazal Hussain, David L. Schwartz, Michael Schwartz, Camilo G. Torres

Estimated Voluntary Faculty: 12

Radiology**Professor and Interim Chair**

Salvatore Sclafani

Professor

Arnold M. Strashun

Associate Professor

Eddy Dunn

Visiting Associate Professor

William Fischer, Sundeep Mangla

Assistant Professor

Maria Corsaro, Brian Gale, Michael Hershkowitz, Alan M. Kantor, Catherine J. Mason, Jaya Nath, Steven Ostrow, Amiran Samin, Daniel L. Zinn, Harry Zinn

Assistant Professor of Clinical

Oded Greenberg, Raisa Katz

Clinical Assistant Professor

Theresa Aquino, Jai Choi, Arie Franco, Arash Gohari, Claire E. Hanley, Nalini Kanth, Dogan Kizilay, Jacob S. Lee, Huntz Liu, Gerard W. Moskowitz, Tsz Ng, Loc Nguyen, Arthur Olson, Daphne Roitberg

Estimated Voluntary Faculty: 61

Surgery**Professor and Chair**

Michael E. Zenilman

Professor

Antonio E. Alfonso, Bimal Ghosh, Joon Ho Hong, John Kral, Allen J. Norin, James J. Reilly, Jr.

Professor of Clinical

Nicholas Shorter

Clinical Professor

Robert Lowery

Associate Professor

David Abramson, Lisa Dresner, Nabil Sumrani

Visiting Associate Professor

Eugene Garrow

Associate Professor of Clinical

Patricia O'Neill

Visiting Associate Professor of Clinical

Robert Kurtz

Clinical Associate Professor

Joshua Burack, Cherif M. El-Younis, Theophilus Lewis, Alexander Schwartzman

Assistant Professor

Martin Bluth, Gregory Brevetti, Jonathan Deitch, Dale Distant, Mark H. Genovesi, Frederick Gulmi, Gary Gwertzman, Harvey Gordon Moore, Robert Schulze, Sandeep Sirsi, Huelidine Webb

Clinical Assistant Professor

Frank Folk, Afshin Parhiscar, Rubin Toribid

Clinical Instructor

Bill Dienstag, Deirdre McGagh, Karen Zmudzynski

Estimated Voluntary Faculty: 379

Urology**Distinguished Teaching Professor and Chair**

Richard J. Macchia

Professor

Ciril Godec, Peter Scardino

Associate Professor

Gobind Laungani

Clinical Associate Professor

Azid I. Hashmat

Assistant Professor

Ivan Colon

Clinical Assistant Professor

Wellman Cheung, Baruch Grob, Llewellyn Hyacinthe, Nabet Kasabian, Nachum Katlowitz

Clinical Instructor

Yuly N. Chalik, Joel Sherman

Estimated Voluntary Faculty: 76

School of Graduate Studies

Dean

Susan Schwartz-Giblin

Molecular and Cellular Biology**Associate Professor and Program Director**

Brehon C. Laurent

Faculty

Bella Altura
Burton Altura
Randall L. Barbour
Olcay Batuman
Henri Begleiter
Peter J. Bergold
Paulette Bernd
Stacy W. Blain
Martin Bluth
Mohamed Boutjdir
Stephen Carleton
Robert Carty
Brahim Chaqour
William J. Chirico
Angel Cinelli
Eva B. Cramer
Helen G. Durkin
Nabil El-Sherif
Richard Feinman
Miriam Feuerman
Stanley Fisher
Stanley E. Friedman
Gregory Gick
Alan Gintzler
Harry Graber
Christopher Hellen
Ellen Hsu
M. Mahmood Hussain
Xian-Cheng Jiang
Ira S. Kass

Elizabeth H. Kornecki
Richard M. Kream
Christopher S. Lange
John Anthony Lewis
Nandur Ludvig
Mary Makowske
Maureen McLeod
Josef Michl
Donald Mills
Foroozan Mokhtarian
Allen J. Norin
Maja Nowakowski
George K. Ojakian
Camilo Parada
Sybill Petra Patan
Taryana Pestova
Matthew R. Pincus
Edward Quadros
Christopher J. Roman
Sheldon P. Rothenberg
Julie I. Rushbrook
Todd Sacktor
Franklin R. Scalia
Christoph H. Schmitz
M.A.Q. Siddiqui
Sheryl Smith
Kaumudi Somnay
Alfred Stracher
Gladys Teitelman
Henri Tiedge
Mario Vassalle
Fredric Volkert
Michael Armand Wagner
Dalton Wang
Michael E. Zenilman

Neural and Behavioral Science**Associate Professor and Program Director**

Mark Stewart

Faculty

Bella Altura
Burton Altura

Vahe E. Amassian
Randall L. Barbour
Henri Begleiter
Peter J. Bergold
Paulette Bernd
Riccardo Bianchi
Ivan G. Bodis-Wollner
Mohamed Boutjdir
John K. Chapin
Angel Cinelli
Ross Clinchy
Howard A. Crystal
Diana Dow-Edwards
Andre Fenton
Steven E. Fox
Alan Gintzler
Harry Graber
Mimi Halpern
Ira Kass
Richard M. Kream
John L. Kubie
Douglas Ling
William Lytton
Mary Makowske
Lisa Merlin
Hillary B. Michelson-Law
Suzanne Samuels Mirra
Robert Muller
Nicholas Penington
Katherine L. Perkins
James B. Ranck, Jr.
Leonard Rosenblum
Todd Sacktor
Franklin R. Scalia
Christoph H. Schmitz
Sheryl Smith
Armin Stelzer
Gladys Teitelman
Henri Tiedge
Roger Traub
Raj Wadgaonkar
Michael Armand Wagner
Keith Williams
Robert K.S. Wong

Alphabetical Listing

SUNY Downstate has attempted to verify the accuracy of the following faculty information, as of January 18, 2005.

Abdullah, Muhammad, MD, Clinical Assistant Professor of Medicine
(Degree: *Burdwan University, India*)

Abramson, David, MD, Associate Professor of Surgery
(Degree: *NYU School of Medicine*)

Abriego, Lourdes, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of Santo Tomas*)

Abter, Elfatih I., MD, Assistant Professor of Medicine
(Degree: *Cervenko Medical Institute, Sofia, Bulgaria*)

Abulafia, Ovadia, MD, Professor and Chair of Obstetrics and Gynecology
(Degree: *Sackler School of Medicine, Tel Aviv University, Israel*)

Abu-Lawi, Khaled I., PhD, Clinical Assistant Professor of Pathology
(Degree: *SUNY Downstate College of Medicine*)

Achara, Gloria, MD, Assistant Professor of Family Practice
(Degree: *University of Lagos, Nigeria*)

Acosta, Letitia, MD, Assistant Professor of Pediatrics
(Degree: *Eastern University College of Medicine, Philippines*)

Adams, Samuel R., DVM, Clinical Professor, Division of Laboratory Animal Resources
(Degree: *University of Georgia*)

Adamson, Orlando, MD, Assistant Professor of Emergency Medicine
(Degree: *SUNY Downstate College of Medicine*)

Adler, Andrew, MD, Associate Professor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

Aghabi, Hanna, MD, Assistant Professor of Family Practice
(Degree: *Ross University School of Medicine*)

Ahmad, Asma, MD, Assistant Professor of Pediatrics
(Degree: *University of Punjab, Lahore, Pakistan*)

Ahmed, Irma, MD, Assistant Professor of Ophthalmology
(Degree: *University of Saskatchewan, Canada*)

Ahmed, Osaf, MBBS, Clinical Instructor of Medicine
(Degree: *University of Punjab, Lahore, Pakistan*)

Ahronheim, Judith, MD, Visiting Professor of Medicine
(Degree: *Abraham Lincoln School of Medicine, University of Illinois*)

Akerman, Michael, MD, Associate Professor of Medicine
(Degree: *University of Rochester School of Medicine and Dentistry*)

Akivis, Alla, MD, Clinical Assistant Professor of Family Practice
(Degree: *Russian State Medical University, Moscow, Russia*)

Al-Adhamy, Nabil, MBChB, Assistant Professor of Medicine
(Degree: *University of Baghdad, Iraq*)

Alam, Mahmood, MBBS, Assistant Professor of Medicine
(Degree: *University of Pakistan*)

Alapati, Usha, MD, Assistant Professor of Dermatology
(Degree: *University of Health Science, Guntur, India*)

Alexandropoulos, Irene, MS, Clinical Assistant Professor of Radiation Oncology
(Degree: *Athens University, Greece*)

Alfonso, Antonio E., MD, Professor of Surgery
(Degree: *University of the Philippines*)

Altura, Bella T., PhD, Research Professor of Physiology and Pharmacology
(Degree: *Hunter College, CUNY*)

Altura, Burton M., PhD, Professor of Physiology and Pharmacology
(Degree: *New York University*)

Amassian, Vahe E., MBChB, Professor of Physiology and Pharmacology
(Degree: *Cambridge University, UK*)

Amendolia, Lisa, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *SUNY Downstate College of Medicine*)

Amin, Azad A., MD, Clinical Assistant Professor of Anesthesiology
(Degree: *Dhaka University, Bangladesh*)

Aminyar, Homayoun Shah, DDS, Clinical Assistant Professor of Dentistry and Oral Medicine
(Degree: *New York University*)

An, Charlene, MD, Assistant Professor of Emergency Medicine
(Degree: *University of Michigan Medical School*)

Anderson, Dina N., MD, Clinical Assistant Professor of Dermatology
(Degree: *Tulane University School of Medicine*)

Anderson, Virginia M., MD, Associate Professor of Pathology
(Degree: *Medical University of South Carolina*)

Ansa, Evelyn, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of Science & Technology, Ghana*)

Anwar, Muhammad, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of Medicine and Pharmacy, Romania*)

Anziska, Brian J., MBChB, Associate Professor of Neurology
(Degree: *University of Cape Town, South Africa*)

Apostol, Alexandru, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of Bucharest, Romania*)

Aquino, Theresa, MD, Clinical Assistant Professor of Radiology
(Degree: *University of Medicine and Dentistry of New Jersey*)

Aral, Isamettin, MD, Clinical Assistant Professor of Radiation Oncology
(Degree: *SUNY Downstate College of Medicine*)

Aravabhumi, Sridevi, MD, Assistant Professor of Medicine
(Degree: *Gandhi Medical College, Hyderabad, India*)

Arce, Daisy, MD, Assistant Professor of Family Practice
(Degree: *University of Panama*)

Arquilla, Bonnie, DO, Assistant Professor of Emergency Medicine
(Degree: *New York College of Osteopathic Medicine*)

Arthur, Tania Lao, MA, Clinical Assistant Instructor of Psychiatry
(Degree: *New York University*)

Arty, Pierre, MD, Clinical Assistant Professor of Psychiatry
(Degree: *SUNY Downstate College of Medicine*)

Ashraf, Waseem, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *Rawalpindi Medical College*)

Ashton, Diane, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: *Weill Medical College, Cornell University*)

Athanassiades, Thomas J., MD, Associate Professor of Pathology
(Degree: *Tulane University School of Medicine*)

Atluri, Purna, MD, Clinical Assistant Professor of Medicine
(Degree: *Gandhi Medical College, Hyderabad, India*)

Augenbraun, Michael, MD, Associate Professor of Medicine
(Degree: *University of Rochester School of Medicine and Dentistry*)

Austin, Reinaldo, MD, Assistant Professor of Emergency Medicine and Medicine
(Degree: *SUNY Downstate College of Medicine*)

Austin-Leon, Galia, MD, Assistant Professor of Pediatrics
(Degree: *SUNY Downstate*)

Avitable, Matthew J., PhD, Clinical Assistant Professor, Computer Center
(Degree: *SUNY Stony Brook*)

Axiotis, Constantine, MD, Professor of Pathology
(Degree: *University of Athens, Greece*)

Aytaman, Ayse, MD, Assistant Professor of Medicine
(Degree: *University of Vienna, Austria*)

Aziz, Hassan, MBBS, Clinical Professor of Radiation Oncology
(Degree: *University of Karachi, Pakistan*)

Babinska, Anna, PhD, Assistant Professor of Anatomy and Cell Biology
(Degree: *University of Lodz, Poland*)

Bai, Chun, MD, Assistant Professor of Neurology
(Degree: *Inner Mongolia Medical College, Hohhot City, China*)

Baldwin, Hilary, MD, Associate Professor of Clinical Dermatology
(Degree: *Boston University School of Medicine*)

Balfour, Erika Michelle, MD, Adjunct Clinical Assistant Professor of Pathology and Dermatology
(Degree: *SUNY Stony Brook Medical School*)

Banerji, Mary Ann, MD, Associate Professor of Medicine
(Degree: *Temple University School of Medicine*)

Banfro, Francis, MD, Assistant Professor of Pediatrics
(Degree: *University of Ghana*)

Bansal, Usha, MBBS, Clinical Assistant Professor of Pediatrics
(Degree: *Andhra Medical College, India*)

Barbour, Randall L., PhD, Professor of Pathology
(Degree: *Syracuse University*)

Baron, Bonny, MD, Associate Professor of Emergency Medicine
(Degree: *SUNY Downstate College of Medicine*)

Baron, Simon, PhD, Clinical Assistant Professor of Radiation Oncology
(Degree: *Marine Physics Institute*)

Barth, Robert, MD, Associate Professor of Clinical Medicine
(Degree: *University of Bologna, Italy*)

Bartholomew, Lincoln, MD, Assistant Professor of Medicine
(Degree: *University of Pennsylvania School of Medicine*)

Bassett, Clifford, MD, Clinical Assistant Professor of Medicine
(Degree: *University of Guadalajara, Mexico*)

Batuman, Olcay A., MD, Associate Professor of Medicine
(Degree: *University of Turkey*)

Bayol, Marcel, MD, Clinical Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine
(Degree: *University of Haiti*)

Beal, Alice, MD, Clinical Assistant Professor of Medicine
(Degree: *Tufts University School of Medicine*)

Begleiter, Henri, PhD, Professor of Psychiatry
(Degree: *New School for Social Research*)

Benabe, Morgana M., MD, Clinical Assistant Professor of Psychiatry
(Degree: *Medical College of Pennsylvania*)

Benardete, Ethan A., MD, PhD, Assistant Professor of Neurosurgery
(Degree: *Weill Medical College, Cornell University*)

Bendo, Audree A., MD, Professor of Clinical Anesthesiology
(Degree: *Finch University of Health Sciences*)

Benker, Karen, MD, Assistant Professor of Preventive Medicine
(Degree: *Keck School of Medicine, University of Southern California*)

Bennett, Angela A., MD, Professor of Pediatrics
(Degree: *SUNY Downstate College of Medicine*)

Bentsianov, Boris, MD, Assistant Professor of Otolaryngology
(Degree: *SUNY Downstate*)

Bergasa, Nora, MD, Visiting Professor of Medicine
(Degree: *Universidad Central del Este, Dominican Republic*)

Berger, Aaron H., MD, Clinical Instructor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

Berger, Julius R., DDS, Professor and Chair of Dentistry and Oral Medicine
(Degree: *SUNY Buffalo School of Medicine and Biomedical Sciences*)

Berger, Scott, MD, Clinical Assistant Professor of Psychiatry
(Degree: *SUNY HSCB*)

Bergold, Peter J., PhD, Associate Professor of Physiology and Pharmacology
(Degree: *Cornell University*)

Berkowitz, Ellen, MD, Clinical Assistant Professor of Psychiatry
(Degree: *University of the Northeast, Tampico, Mexico*)

Bernd, Paulette, PhD, Professor of Anatomy and Cell Biology and Otolaryngology
(Degree: *Columbia University*)

Berzofsky, Michael, PhD, Clinical Assistant Professor of Psychiatry
(Degree: *New School for Social Research*)

Best, Asquith, MD, Clinical Assistant Professor of Medicine
(Degree: *SUNY Stony Brook College of Medicine*)

Beysolow, Taweh, MD, Clinical Assistant Professor of Medicine
(Degree: *Dartmouth Medical School*)

Bhagavati, Satyakam, MBBS, Associate Professor of Neurology and Anatomy and Cell Biology
(Degree: *All-India Institute of Medical Science, New Delhi, India*)

Bianchi, Riccardo, PhD, Research Assistant Professor of Physiology and Pharmacology
(Degree: *University of Pisa, Italy*)

Bibbig, Andrea, PhD, Research Assistant Professor of Physiology and Pharmacology
(Degree: *University of Ulm, Germany*)

Birnbaum, Jeffrey, MD, Clinical Assistant Professor of Pediatrics
(Degree: *SUNY Downstate College of Medicine*)

Blain, Stacy W., PhD, Assistant Professor of Pediatrics and Anatomy and Cell Biology
(Degree: *Columbia University College of Physicians and Surgeons*)

Blumenthal, David, MD, Assistant Professor of Medicine
(Degree: *NYU School of Medicine*)

Bluth, Martin, MD, Assistant Professor of Surgery
(Degree: *SUNY Downstate College of Medicine*)

Bodis-Wollner, Ivan G., MD, Professor of Neurology
(Degree: *University of Vienna, Austria*)

Borowsky, Mark, MD, Assistant Professor of Obstetrics and Gynecology
(Degree: *University of Pennsylvania*)

Botero, Juan, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of the North, Colombia*)

Bourke, J. Edmund, MD, Professor and Chair of Medicine
(Degree: *University of Ireland*)

Boutjir, Mohammed, PhD, Professor of Physiology and Pharmacology
(Degree: *University of Paris, France*)

Bowen, Pamela, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *SUNY Downstate College of Medicine*)

Brajkovic, Dasen, MD, Clinical Assistant Professor of Psychiatry
(Degree: *University of Zagreb*)

Braverman, Albert S., MD, Professor of Medicine
(Degree: *University of Pittsburgh School of Medicine*)

Breitbart, Sheldon, MD, Assistant Professor of Medicine
(Degree: *Albany Medical College*)

Brennan, Kelly, MS, Clinical Instructor of Obstetrics and Gynecology
(Degree: *Sarah Lawrence College*)

Brevetti, Gregory, MD, Assistant Professor of Surgery
(Degree: SUNY Downstate College of Medicine)

Brevetti, Teresa, MD, Assistant Professor of Ophthalmology
(Degree: SUNY Downstate College of Medicine)

Bromberg, Kenneth, MD, Professor of Clinical Medicine
(Degree: SUNY Buffalo School of Medicine and Biomedical Sciences)

Brown, Clinton D., MD, Clinical Assistant Professor of Medicine
(Degree: Tufts University School of Medicine)

Bruckner, Howard, MD, Clinical Professor of Medicine
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Bruno, Laura, MD, Assistant Professor of Pediatrics
(Degree: SUNY Downstate College of Medicine)

Buff, Daniel, MD, Assistant Professor of Medicine
(Degree: NYU School of Medicine)

Bukharovich, Yaroslav, MD, Clinical Assistant Professor of Medicine
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Burack, Joshua H., MD, Clinical Associate Professor of Surgery
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Burkholder, Martha, MD, Clinical Assistant Professor of Psychiatry
(Degree: University of Arizona College of Medicine)

Burton, Jack, MD, Assistant Professor of Medicine
(Degree: University of Minnesota)

Butoi, Irina, MD, Clinical Assistant Professor of Anesthesiology
(Degree: Carol Davila Medical School)

Buttar, Oanghkarjit, MBBS, Clinical Assistant Professor of Psychiatry
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Calaycay, Jimmy R., MS, Research Instructor of Biochemistry
(Degree: University of Texas)

Caligiuri, Daniel, MD, Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine
(Degree: SUNY Downstate College of Medicine)

Carbonell, Edward, MD, Clinical Assistant Professor of Medicine
(Degree: SUNY Downstate College of Medicine)

Carleton, Stephen M., PhD, Research Assistant Professor of Anatomy and Cell Biology
(Degree: SUNY Oneonta)

Carty, Robert P., PhD, Associate Professor of Biochemistry
(Degree: SUNY Downstate College of Medicine)

Casey, Gerard, MD, Assistant Professor of Emergency Medicine
(Degree: Sackler School of Medicine, Tel Aviv University, Israel)

Castells, Salvador, MD, Professor of Pediatrics
(Degree: University of Barcelona, Spain)

Castillo, Dennis, DPM, Clinical Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine and Family Practice
(Degree: New York College of Podiatric Medicine)

Cavusoglu, Erdal, MD, Assistant Professor of Medicine
(Degree: Mount Sinai School of Medicine)

Chadow, Hal, MD, Associate Professor of Clinical Medicine
(Degree: University of Guadalajara, Mexico)

Chakos, Miranda H., MD, Visiting Associate Professor of Psychiatry
(Degree: SUNY Upstate Medical University)

Chakrabarti, Sumita, PhD, Research Assistant Professor of Biochemistry
(Degree: University of Calcutta, India)

Chalik, Yuly N., MD, Clinical Instructor of Urology
(Degree: Mount Sinai School of Medicine)

Chapin, John K., PhD, Professor of Physiology and Pharmacology
(Degree: University of Rochester)

Chaour, Brahim, PhD, Research Assistant Professor of Anatomy and Cell Biology
(Degree: University of Reims-Champagne-et-Ardennes)

Charchafieh, Jean, MD, Clinical Assistant Professor of Anesthesiology
(Degree: University of Aleppo, Syria)

Chari, Geetha, MBBS, Assistant Professor of Neurology
(Degree: University of Bombay, India)

Charles, Hyacinth, MS, Clinical Instructor of Psychiatry
(Degree: Hunter College, CUNY)

Charlot, Joseph A., MD, Clinical Assistant Professor of Psychiatry
(Degree: University of Haiti)

Chaug, Shih-Chieh, PhD, Research Instructor of Physiology and Pharmacology
(Degree: SUNY Downstate College of Medicine)

Chawla, Sanjay, MD, Assistant Professor of Clinical Medicine
(Degree: SUNY Downstate College of Medicine)

Chechik, Daniel, MD, Assistant Professor of Ophthalmology
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Chee, Chung, MD, Clinical Assistant Professor of Anesthesiology
(Degree: College of Medicine, National Taiwan University)

Chen, Patrick, MD, PhD, Clinical Professor of Pathology
(Degree: College of Medicine, National Taiwan University)

Cheron, Robert G., MD, Clinical Associate Professor of Medicine
(Degree: SUNY Downstate College of Medicine)

Cheung, Wellman, MD, Clinical Assistant Professor of Urology
(Degree: SUNY Downstate College of Medicine)

Chirayil, Joseph, MD, Assistant Professor of Emergency Medicine
(Degree: Wake Forest University School of Medicine)

Chirico, William J., PhD, Associate Professor of Anatomy and Cell Biology
(Degree: University of Florida)

Choi, Jai, Clinical Assistant Professor of Radiology
(Degree: SUNY Downstate College of Medicine)

Choi, Jin M., MD, Assistant Professor of Clinical Medicine
(Degree: NYU School of Medicine)

Choi, Kwang N., MD, Clinical Professor of Radiation Oncology
(Degree: Catholic Medical College, Seoul, South Korea)

Chu, Tammy, MD, Clinical Assistant Professor of Ophthalmology
(Degree: SUNY Downstate College of Medicine)

Chynn, Emil, MD, Assistant Professor of Ophthalmology
(Degree: Columbia University College of Physicians and Surgeons)

Cinelli, Angel, MD, PhD, Assistant Professor of Anatomy and Cell Biology
(Degree: National University of Cordoba, Argentina)

Clark, Luther T., MD, Professor of Clinical Medicine
(Degree: Harvard Medical School)

Clinchy, Ross, PhD, Clinical Assistant Professor of Psychiatry
(Degree: The Graduate Center, CUNY)

Cohen, Carl I., MD, Professor of Psychiatry
(Degree: SUNY Buffalo School of Medicine and Biomedical Sciences)

Cohen, Paul H., MD, Assistant Professor of Medicine
(Degree: St. George's School of Medicine, Grenada)

Cohn, Steven, MD, Professor of Medicine
(Degree: University of Mexico)

Collado, Fady, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: Saint Joseph University)

Collins, George R., MPH, Clinical Assistant Professor of Radiation Oncology
(Degree: University of Michigan Medical School)

Colon, Ivan, MD, Assistant Professor of Urology
(Degree: *University of Wisconsin College of Medicine*)

Coplan, Jeremy, MD, Professor of Psychiatry
(Degree: *University of the Witwatersrand Medical School, Johannesburg, South Africa*)

Coppa, Stephen, DO, Clinical Instructor of Medicine
(Degree: *New York College of Osteopathic Medicine*)

Coopersmith, Allen, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of Guadalajara, Mexico*)

Corsaro, Maria C., MD, Assistant Professor of Radiology
(Degree: *Albert Einstein College of Medicine, Yeshiva University*)

Cottrell, James E., MD, Distinguished Service Professor and Chair of Anesthesiology
(Degree: *West Virginia University School of Medicine*)

Cracco, Joan, MD, Professor of Neurology
(Degree: *University of Medicine and Dentistry of New Jersey*)

Cracco, Roger Q., MD, Professor and Chair of Neurology
(Degree: *University of Medicine and Dentistry of New Jersey*)

Cramer, Eva B., PhD, Professor of Anatomy and Cell Biology and Vice President for Biotechnology and Scientific Affairs
(Degree: *Jefferson Medical College, Thomas Jefferson University*)

Cross, Coquilla, Visiting Clinical Associate Professor of Psychiatry
(Degree: *Albert Einstein College of Medicine*)

Crummer, Richard, MD, Assistant Professor of Family Practice
(Degree: *University of the Dominican Republic*)

Crystal, Howard A., MD, Professor of Neurology and Pathology
(Degree: *University of Pennsylvania School of Medicine*)

Custis, Kevin T., MD, Assistant Professor of Family Practice and Orthopedics
(Degree: *SUNY Downstate College of Medicine*)

Cutaia, Michael, MD, Professor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

Dadic, Paul John, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *SUNY Downstate College of Medicine*)

Dailey, David, MD, Clinical Assistant Professor of Psychiatry
(Degree: *Loyola University School of Medicine*)

Dalloul, Mudar, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: *Damascus University*)

Dapul, Elvira, MD, Assistant Professor of Pediatrics
(Degree: *University of Santo Tomas, Philippines*)

Dattner, Laura, MD, Assistant Professor of Pediatrics
(Degree: *SUNY Syracuse*)

Dawodu, Omotola, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *University of Ibadan, Nigeria*)

De Lury, John, MD, Clinical Instructor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

De Rose, Joseph J., MD, Associate Professor of Family Practice
(Degree: *SUNY Downstate College of Medicine*)

Deas, Gerald W., MD, Research Assistant Professor of Preventive Medicine and Community Health
(Degree: *SUNY Downstate College of Medicine*)

Deesawala, Batul, MD, Clinical Assistant Professor of Anesthesia
(Degree: *Dr. Sampurnand Medical College, Jodhpur, India*)

DeHovitz, Jack A., MD, Professor of Preventive Medicine and Community Health and Medicine
(Degree: *University of Texas at Galveston*)

Deitch, Jonathan, MD, Assistant Professor of Surgery
(Degree: *New York Medical College*)

Delano, Barbara G., MD, Professor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

Demetis, Spiro, MD, Clinical Associate Professor of Medicine
(Degree: *National University of Mexico*)

Desai, Ninad, MD, Assistant Professor of Pediatrics
(Degree: *All-India Institute of Medical Sciences*)

DeSantis, Mark, DO, Clinical Assistant Professor of Psychiatry
(Degree: *Kirkville College of Osteopathic Medicine*)

Desouza, Ian S., MD, Assistant Professor of Emergency Medicine
(Degree: *NYU School of Medicine*)

Dham, Sandeep, MD, Clinical Instructor of Medicine
(Degree: *Armed Forces Medical College*)

Dienstag, Bill, PA, Clinical Instructor of Surgery
(Degree: *Kings College*)

Dimaculangan, Dennis P., MD, Clinical Assistant Professor of Anesthesiology
(Degree: *Afable College of Medicine, Manila, Philippines*)

Dinkevich, Eugene, MD, Assistant Professor of Pediatrics
(Degree: *University of Medicine and Dentistry of New Jersey*)

Di Pasquale, Richard, MD, Clinical Assistant Professor of Pediatrics
(Degree: *SUNY Downstate College of Medicine*)

Distant, Dale, MD, Assistant Professor of Surgery
(Degree: *SUNY Downstate College of Medicine*)

Doherty, Mary C., MLS, Senior Assistant Librarian
(Degree: *Pratt Institute*)

Donat, Margaret, MD, Assistant Professor of Family Practice
(Degree: *University of the Northeast, Tampico, Mexico*)

Doty, Christopher I., MD, Assistant Professor of Emergency Medicine
(Degree: *Jefferson Medical College, Thomas Jefferson University*)

Dow-Edwards, Diana L., PhD, Professor of Physiology and Pharmacology and Anatomy and Cell Biology
(Degree: *New York University*)

Dreizen, Paul, MD, Professor of Medicine
(Degree: *NYU School of Medicine*)

Dresner, Lisa, MD, Associate Professor of Surgery
(Degree: *SUNY Downstate College of Medicine*)

Dubey, Gangacharan, MBBS, Clinical Assistant Professor of Medicine
(Degree: *Government Medical College, India*)

Dunn, Eddy, MBBS, Associate Professor of Radiology
(Degree: *University of Hong Kong, China*)

Dunn, Marian E., PhD, Clinical Associate Professor of Psychiatry
(Degree: *San Francisco Institute for the Advanced Study of Sex*)

Durkin, Helen G., PhD, Associate Professor of Pathology and Medicine
(Degree: *New York University School of Medicine and Yale University School of Medicine*)

Dvorkina, Olga, MD, Clinical Assistant Professor of Medicine
(Degree: *Kaunas Medical Institute, Lithuania*)

Dweck, Monica, MD, Clinical Assistant Professor of Ophthalmology
(Degree: *SUNY Downstate College of Medicine*)

Egan, Sarah, MD, Clinical Assistant Professor of Medicine
(Degree: *SUNY Downstate*)

Eggers, Arnold, MD, Associate Professor of Neurology
(Degree: *Columbia University College of Physicians and Surgeons*)

Eisner, Shirley, PhD, Research Assistant Professor of Anatomy and Cell Biology
(Degree: *New York University*)

El-Hennaway, Madgy, MD, Assistant Professor of Pediatrics
(Degree: *Cairo University School of Medicine*)

El-Sherif, Nabil, MBBS, Professor of Medicine
(Degree: *University of Cairo, Egypt*)

El-Younis, Cherif M., MBBS, Clinical Associate Professor of Medicine and Surgery
(Degree: *University of Cairo, Egypt*)

Encarnacion, Carol, MD, Clinical Assistant Professor of Medicine
(Degree: *University of Santo Tomas, Philippines*)

Engel, Lenore, MD, Clinical Assistant Professor of Psychiatry
(Degree: SUNY Downstate College of Medicine)

Erlj, David J., MD, PhD, Professor of Physiology and Pharmacology
(Degree: National University of Mexico)

Erogul, Mert H., MD, Assistant Professor of Emergency Medicine
(Degree: University of Michigan Medical School)

Essuman, Adwoa G., MD, Clinical Assistant Professor of Anesthesiology
(Degree: University of Ghana Medical School)

Estes, David S., MD, Clinical Assistant Professor of Psychiatry
(Degree: University of Bologna, Italy)

Etienne, Guy, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: SUNY Upstate Medical University)

Eugene, Pierre, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: Fac De Medicine, Port-au-Prince, Haiti)

Faber, Eve S., MD, Assistant Professor of Family Practice
(Degree: SUNY Downstate College of Medicine)

Fahmy, Samir, MBBS, Assistant Professor of Medicine
(Degree: University of Alexandria, Egypt)

Farag, Amal, MBBCh.B, Clinical Assistant Professor of Medicine
(Degree: Ain Shams University, Cairo, Egypt)

Farooqui, Yusra, MD, Assistant Professor of Emergency Medicine
(Degree: Robert Wood Johnson UNJ)

Feigelson, Eugene B., MD, Senior V.P. for Biomedical Education and Research, Dean of the College of Medicine, and Distinguished Professor of Psychiatry
(Degree: Washington University School of Medicine)

Feinman, Richard, PhD, Professor of Biochemistry
(Degree: University of Oregon)

Feit, Alan S., MD, Professor of Clinical Medicine
(Degree: Columbia University College of Physicians and Surgeons)

Feldman, Joseph G., PhD, Professor of Preventive Medicine and Community Health
(Degree: University of North Carolina)

Fenton, Andre, PhD, Assistant Professor of Physiology and Pharmacology
(Degree: SUNY Downstate College of Medicine)

Feurman, Miriam, PhD, Associate Professor of Biochemistry
(Degree: University of California at Irvine)

Fiadjoe, John, MD, Clinical Assistant Professor of Anesthesiology
(Degree: Northwestern University)

Finkelstein, David, MD, Assistant Professor of Emergency Medicine
(Degree: SUNY Downstate)

Fischer, Conrad, MD, Assistant Professor of Clinical Medicine
(Degree: Albany Medical College)

Fischer, William, MD, Visiting Associate Professor of Radiology
(Degree: Finch University of Health Sciences)

Fisher, Stanley E., MD, Professor and Chair of Pediatrics and Professor of Anatomy and Cell Biology
(Degree: Johns Hopkins University School of Medicine)

Fishkin, Edward, MD, Associate Professor of Medicine
(Degree: SUNY Downstate College of Medicine)

Fishman, David S., MD, Clinical Assistant Professor of Anesthesiology
(Degree: SUNY Downstate College of Medicine)

Folk, Frank, MD, Clinical Assistant Professor of Surgery
(Degree: Howard University College of Medicine)

Forman, Nancy, MD, Clinical Assistant Professor of Psychiatry
(Degree: Albert Einstein College of Medicine)

Fox, Steven E., PhD, Professor and Vice Chair of Physiology and Pharmacology
(Degree: University of Michigan)

Franco, Arie, MD, Clinical Assistant Professor of Radiology
(Degree: University of Montpellier, France)

Frankel-Ovitsh, Robin K., MD, Assistant Professor of Pediatrics
(Degree: Mount Sinai School of Medicine)

Freedman, Jeffrey, MBChB, Professor of Ophthalmology
(Degree: University of the Witwatersrand Medical School, Johannesburg, South Africa)

Freeman, Barbara, MD, Clinical Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine
(Degree: Mount Sinai School of Medicine)

Fried, Elie, MD, Clinical Associate Professor of Anesthesiology
(Degree: SUNY Downstate College of Medicine)

Fried, Gerald, DO, Clinical Assistant Professor of Psychiatry
(Degree: Chicago College of Osteopathic Medicine, Midwestern University)

Friedman, Daniel, MD, Clinical Assistant Professor of Psychiatry
(Degree: The Medical College of Pennsylvania)

Friedman, Eli A., MD, Distinguished Professor of Medicine
(Degree: SUNY Downstate College of Medicine)

Friedman, Stanley, MD, Professor of Physiology and Pharmacology and Anatomy and Cell Biology [include Dean title?]
(Degree: NYU School of Medicine)

Friedman, Steven, PhD, Professor of Psychiatry
(Degree: SUNY Stony Brook College of Medicine)

Fruchter, Geraldo, MD, Clinical Associate Professor of Medicine
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Furchgott, Robert F., PhD, Distinguished Professor Emeritus of Physiology and Pharmacology
(Degree: Northwestern University)

Gabbur, Nagaraj, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: Mount Sinai School of Medicine)

Gale, Brian, MD, Assistant Professor of Radiology
(Degree: SUNY Buffalo School of Medicine and Biomedical Sciences)

Gallo, Joseph, MD, Clinical Assistant Professor of Psychiatry
(Degree: University of Rome, Italy)

Ganesan, Shanta, MD, Clinical Assistant Professor of Anesthesiology
(Degree: University of Colombo, Sri Lanka)

Garcia, Kenneth, MD, Clinical Assistant Professor of Psychiatry
(Degree: SUNY Downstate)

Garnier, Ernest Phillip, MD, Clinical Assistant Professor of Medicine
(Degree: SUNY HSCB)

Garrett, Michael D., MD, Visiting Clinical Associate Professor of Psychiatry
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Garrow, Eugene, MD, Visiting Associate Professor of Surgery
(Degree: Children's Hospital of Michigan)

Gavrilescu, Tudor, MD, PhD, Visiting Clinical Associate Professor of Obstetrics and Gynecology
(Degree: Hatieganu University of Medicine at CLUJ)

Genovesi, Mark H., MD, Assistant Professor of Surgery
(Degree: SUNY Downstate College of Medicine)

George, Lalu, MD, Clinical Instructor of Pediatrics
(Degree: NRS Medical College, Calcutta, India)

George, Rachel Koshy, MBBS, Assistant Professor of Emergency Medicine
(Degree: Christian Medical School, Vellore, India)

Gerber, Donald, MD, Professor of Medicine
(Degree: Columbia University College of Physicians and Surgeons)

Gerber, Marcia G., MD, Clinical Associate Professor of Medicine
(Degree: Columbia University College of Physicians and Surgeons)

Gerges, Salwa, MD, Clinical Assistant Professor of Medicine
(Degree: University of Alexandria, Egypt)

Gesner, Matthew, MD, Assistant Professor of Pediatrics
(Degree: SUNY Downstate Medical College of Medicine)

Ghali, Halim, MD, Assistant Professor of Clinical Medicine
(Degree: Cairo University Faculty of Sciences)

Gheissary, Mahmood, MD, Instructor of Pediatrics
(Degree: Isfahan Medical School, Iran)

Ghobriel, Aziz, MD, Clinical Assistant Professor of Anesthesiology
(Degree: Cairo University)

Ghosh, Bimal C., MBBS, Professor of Surgery
(Degree: Calcutta University, India)

Gibilaro, Sally Ann, MD, Instructor of Medicine
(Degree: SUNY Downstate College of Medicine)

Gick, Gregory, PhD, Associate Professor of Biochemistry
(Degree: Duke University)

Gidari, Anthony S., PhD, Associate Professor of Physiology and Pharmacology
(Degree: New York University)

Gillett, Brian, MD, Assistant Professor of Emergency Medicine
(Degree: McGill University, Montreal, Canada)

Gillette, Peter N., MD, Assistant Professor of Medicine
(Degree: Pritzker School of Medicine, University of Chicago)

Gintzler, Alan, PhD, Professor of Biochemistry
(Degree: New York University)

Ginzler, Ellen M., MD, Professor of Medicine
(Degree: Case Western Reserve University School of Medicine)

Girardi, Anthony, MD, Clinical Assistant Professor of Ophthalmology
(Degree: SUNY Stony Brook College of Medicine)

Giridharan, Radha, MD, Assistant Professor of Neurology
(Degree: Sri Venkateswara University, India)

Girnys, Raymond, MD, Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine
(Degree: St. George's University School of Medicine, Grenada)

Glasgow, Sandra, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: SUNY HSCB)

Glaubiger, Lawrence, MD, Assistant Professor of Medicine
(Degree: Sackler School of Medicine, Tel Aviv University, Israel)

Gleyzer, Aleksandr, MD, Assistant Professor of Emergency Medicine
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Glick, Sharon A., MD, Assistant Professor of Dermatology and Pediatrics
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Gloster, Elizabeth S., MD, Associate Professor of Pathology
(Degree: University of Colorado School of Medicine)

Glover, Hillel, MD, Clinical Assistant Professor of Psychiatry
(Degree: University of Miami, Florida)

Glowacki, Carol, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: UCLA Medical Center)

Go, Eddie S., MD, Assistant Professor of Medicine
(Degree: University of Santo Tomas, Philippines)

Godec, Ciril J., MD, Professor of Urology
(Degree: University of Ljubljana, Slovenia)

Gohari, Arash, MD, Clinical Assistant Professor of Radiology
(Degree: Albert Einstein College of Medicine)

Golden, Margaret Clark, MD, Clinical Associate Professor of Pediatrics
(Degree: Duke University School of Medicine)

Goldfinger, Stephen, MD, Clinical Professor and Chair of Psychiatry
(Degree: Yale University School of Medicine)

Goldman, Gilbert, MD, Associate Professor of Pediatrics
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Goldsmith, Ari, MD, Assistant Professor of Otolaryngology
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Goldstein, Nira A., MD, Assistant Professor of Otolaryngology
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Goldwasser, Philip, MD, Assistant Professor of Medicine
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Goozner, Barry, MD, Assistant Professor of Medicine
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Gottesman, Aaron Leo, MD, Clinical Instructor of Medicine
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Gottesman, Susan R. Schwartz, MD, PhD, Professor of Pathology
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Govindan, Kalyani, MD, Clinical Assistant Professor of Anesthesiology
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Graber, Harry, PhD, Research Assistant Professor of Pathology
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Green, Norma R., MD, Clinical Assistant Professor of Psychiatry
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Greenidge, Kevin C., MD, Professor and Chair of Ophthalmology
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Greenspan, Joshua L., MD, Clinical Assistant Professor of Anesthesiology
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Grob, Baruch, MD, Clinical Assistant Professor of Urology
(Degree: Eastern Virginia Medical School)

Gross, William, MD, Clinical Assistant Professor of Psychiatry
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Gualberti-Girgis, Lisa, MD, Clinical Assistant Professor of Medicine
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Guber, Helen A., MD, Assistant Professor of Medicine
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Gulmi, Frederick, MD, Assistant Professor of Surgery
(Degree: Central University of the Caribbean, Puerto Rico)

Gupta, Rom M., MBBS, Clinical Assistant Professor of Medicine
(Degree: Milpauk Medical College, India)

Gustave, Ernst, MD, Clinical Assistant Professor of Emergency Medicine
(Degree: University of Haiti)

Gwertzman, Gary, MD, Assistant Professor of Surgery
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Habib, Ramez, MD, Clinical Assistant Professor of Otolaryngology
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Hahn, Barry, MD, Assistant Professor of Emergency Medicine
(Degree: SUNY Downstate)

Halpern, Mimi, PhD, Distinguished Teaching Professor of Anatomy and Cell Biology
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Hammerschlag, Margaret R., MD, Professor of Pediatrics
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Handelsman, Edward, MD, Clinical Instructor of Pediatrics
(Degree: SUNY Stony Brook)

Hanley, Claire E., MD, Clinical Assistant Professor of Radiology
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Hansard, Paul, MD, Assistant Professor of Medicine
(Degree: Baylor College of Medicine)

Har-El, Gady, MD, Professor Otolaryngology
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Harris, Paul, MD, Professor of Clinical Pediatrics and Medicine
(Degree: NYU School of Medicine)

Hartung, John D., PhD, Associate Professor of Anesthesiology
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Hashmat, Aizid I., MBBS, Clinical Associate Professor of Urology
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Heath-Phillip, Oneca S., MD, Clinical Assistant Professor of Ophthalmology
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Heilman, Edward R., MD, Clinical Associate Professor of Dermatology
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Hellen, Christopher, PhD, Associate Professor of Microbiology and Immunology
(Degree: Oxford University, UK)

Herb, Alice, LLD, Clinical Assistant Professor of Medical Humanities
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Herman, Sanford A., MD, Clinical Assistant Professor of Family Practice
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Hershkowitz, Michael, MD, Assistant Professor of Radiology
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Heurich, Albert E., MD, Associate Professor of Medicine
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Hill, Constance H., MD, Clinical Professor of Anesthesiology
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Hirsch, Oren, MD, Assistant Professor of Emergency Medicine
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Hittelman, Joan H., PhD, Clinical Associate Professor of Psychiatry
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Hockstein, Michael K., MD, Instructor of Emergency Medicine
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Holt, Roger P., MD, Clinical Instructor of Emergency Medicine
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Holtzin, Lawrence, MD, Clinical Assistant Professor of Anesthesiology
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Hom, Henry, MD, Clinical Assistant Professor of Medicine
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Hom, Jeffrey, MD, Assistant Professor of Emergency Medicine
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Hong, Joon Ho, MD, Professor of Surgery
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Hong, Peter, MD, Visiting Associate Professor of Obstetrics and Gynecology
(Degree: New York University School of Medicine)

Howanitz, Joan Holohan, MD, Clinical Professor of Pathology
(Degree: Medical College of Pennsylvania)

Howanitz, Peter J., MD, Clinical Professor of Pathology
(Degree: SUNY Upstate Medical University)

Hsu, Ellen, PhD, Associate Professor of Physiology and Pharmacology
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Hussain, Fazal, MBBS, Clinical Assistant Professor of Radiation Oncology
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Hussain, M. Mahmood, PhD, Professor of Anatomy and Cell Biology and Pediatrics
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Joseph, Anthony, MD, Assistant Professor of Medicine
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Joseph, Gardith, MD, Clinical Assistant Professor of Medicine
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Jule, Jose, MD, Clinical Assistant Professor of Emergency Medicine
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(Degree: Ladera Gandhi College, Simla, India)

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Karlekar, Mohana, MD, Clinical Assistant Professor of Medicine
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(Degree: Jefferson Medical College, Thomas Jefferson University)

Karpinski, Marek D., MD, Clinical Assistant Professor of Psychiatry
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Kasabian, Nabet, MD, Clinical Assistant Professor of Urology
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Kastor, Anne S., MD, Assistant Professor of Medicine
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Kawi, Ali A., MBBS, Professor of Psychiatry
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Kesselman, Martin, MD, Professor of Psychiatry
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Khan, Ambreen, MBBS, Assistant Professor of Emergency Medicine
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Khokhar, Jatinder, MBBS, Assistant Professor of Medicine
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Khwaja, Nisar A., MBBS, Clinical Assistant Professor of Psychiatry
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Kifaieh, Nizar, MD, Assistant Professor of Emergency Medicine
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Kifle, Getahun, MD, Clinical Assistant Professor of Orthopedics Surgery and Rehabilitation Medicine
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Kim, Ki, PhD, Adjunct Instructor of Physiology and Pharmacology
(Degree: University of Kansas)

Kim, Yong Doo, MD, Clinical Assistant Professor of Pathology
(Degree: Seoul National University, South Korea)

Kizilay, Dogan, MD, Clinical Assistant Professor of Radiology
(Degree: Istanbul University)

Kleinman, Ruth, MD, Clinical Assistant Professor of Medicine
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Kohli, Rattanjit, MBBS, Instructor of Medicine
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Koizumi, Kiyomi, MD, Professor of Physiology and Pharmacology
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Kornecki, Elizabeth H., PhD, Associate Professor of Anatomy and Cell Biology
(Degree: University of Illinois)

Kowacz, Tomasz W., MD, Clinical Assistant Professor of Psychiatry
(Degree: Medical Academy of Warsaw, Poland)

Kral, John, MD, PhD, Professor of Surgery
(Degree: University of Goteborg, Sweden)

Kramer, Martin, MD, Associate Professor of Clinical Medicine
(Degree: SUNY Downstate College of Medicine)

Krant, Jessica J., MD, Clinical Assistant Professor of Dermatology
(Degree: Columbia University College of Physicians and Surgeons)

Kream, Richard M., PhD, Professor of Biochemistry
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Kubie, John L., PhD, Associate Professor of Anatomy and Cell Biology
(Degree: SUNY Downstate College of Medicine)

Kumar, Salini, MD, Instructor of Medicine
(Degree: University of Kerala, India)

Kurtz, Robert S., MD, Visiting Associate Professor of Clinical Surgery
(Degree: Albert Einstein College of Medicine, Yeshiva University)

Kutlin, Andrei, PhD, Research Assistant Professor of Pediatrics
(Degree: Research Institute Epidemiology and Microbiology USSR Academy)

Kwan, Tak W., MD, Associate Professor of Medicine
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Labasan, Gerardo, MD, Clinical Assistant Professor of Anesthesiology
(Degree: East Ramon Magsaysay)

Lamarque, Madeline, MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: University of Haiti)

Lampert, Jeffrey, MD, Clinical Assistant Professor of Anesthesiology
(Degree: Michigan State University College of Human Medicine)

Landesman, Sheldon H., MD, Professor of Medicine
(Degree: SUNY Downstate College of Medicine)

Landman, David, MD, Associate Professor of Medicine
(Degree: SUNY Downstate College of Medicine)

Lange, Christopher S., PhD, Professor of Radiation Oncology
(Degree: Oxford University, UK)

Lapin, Reuven E., BS, Clinical Instructor of Medicine
(Degree: Touro College)

LaRosa, John C., MD, Professor of Medicine
(Degree: University of Pittsburgh School of Medicine)

LaRosa, Judith H., PhD, Professor of Preventive Medicine and Community Health
(Degree: University of Maryland)

Laski, Edward M., MD, PhD, Clinical Assistant Professor of Psychiatry
(Degree: SUNY Downstate College of Medicine)

Laungani, Gobind B., MBBS, Associate Professor of Urology
(Degree: University of Bombay, India)

Laungani, Sheela Gobind, MBBS, Clinical Professor of Pediatrics
(Degree: University of Bombay, India)

Laurent, Brehon C., PhD, Associate Professor and Interim Chair of Microbiology and Immunology
(Degree: Massachusetts Institute of Technology)

Lauro, Helen, MD, Clinical Assistant Professor of Anesthesiology
(Degree: SUNY Downstate College of Medicine)

Lazar, Craig S., MD, Clinical Assistant Professor of Anesthesiology
(Degree: *National University of Mexico*)

Lazar, Jason M., MD, Visiting Associate Professor of Medicine
(Degree: *SUNY Upstate Medical University*)

Lazaro, Deana, MD, Assistant Professor of Medicine
(Degree: *NYU School of Medicine*)

Lazow, Stewart, MD, Professor of Dentistry and Oral Medicine
(Degree: *SUNY Downstate College of Medicine*)

Lazzaro, Douglas R., MD, Associate Professor of Clinical Ophthalmology
(Degree: *SUNY Downstate College of Medicine*)

Lazzaro, Emanuel, MD, Clinical Assistant Professor of Ophthalmology
(Degree: *SUNY Downstate College of Medicine*)

Leaf, Andrea Nadine, MD, Assistant Professor of Medicine
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Lebovitz, Harold E., MD, Professor of Medicine
(Degree: *University of Pittsburgh School of Medicine*)

Lee, Jacob S., MD, Clinical Assistant Professor of Radiology
(Degree: *Albert Einstein College of Medicine*)

Lee, Kathy H., MD, Clinical Instructor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

Lee, Myung, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *EWHA Woman's University*)

Lee, Shin Ok, MD, Clinical Assistant Professor of Anesthesiology
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Lee, Wei-Li S., PhD, Research Assistant Professor of Dermatology
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Lee, Wen-Ching, PhD, Clinical Instructor of Obstetrics and Gynecology
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Lee, Yi-Chun, MD, Clinical Assistant Professor of Obstetrics and Gynecology
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Lee-McBrien, Catherine J., MD, Clinical Assistant Professor of Obstetrics and Gynecology
(Degree: *SUNY Downstate College of Medicine*)

Lent, Tovia A., MD, Clinical Assistant Professor of Psychiatry
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Leo, Mauro, MD, Clinical Assistant Professor of Obstetrics and Gynecology
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Leon, Walfredo J., MD, Clinical Associate Professor of Medicine
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Leonidas, Jean-Robert, MD, Clinical Assistant Professor of Medicine
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Levine, Jeffrey H., MD, Assistant Professor of Emergency Medicine
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Levine, Martin, PhD, Assistant Professor of Anatomy and Cell Biology
(Degree: *George Washington University*)

Levine, Pamela, MD, Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine
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Lewis, Amy Beth, MD, Clinical Assistant Professor of Dermatology
(Degree: *Yale University School of Medicine*)

Lewis, John Anthony, PhD, Professor of Anatomy and Cell Biology
(Degree: *National Institute for Medical Research, UK*)

Lewis, Theophilus, MD, Clinical Associate Professor of Surgery
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Liang, Xiaofu, MD, Research Instructor of Physiology and Pharmacology
(Degree: *Jilin School of Medicine, China*)

Lim, Jessica Wong, MD, Assistant Professor of Otolaryngology
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Ling, Douglas, PhD, Assistant Professor of Physiology and Pharmacology
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Lipps, Peter, MD, Clinical Assistant Professor of Anesthesiology
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(Degree: *NYU School of Medicine*)

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(Degree: *University of California at San Francisco School of Medicine*)

Lucchesi, Michael, MD, Associate Professor and Chair of Emergency Medicine
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Lucente, Frank E., MD, Professor and Chair of Otolaryngology
(Degree: *Yale University School of Medicine*)

Ludvig, Nandor, PhD, Research Associate Professor of Physiology and Pharmacology
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Luhrs, Carol Anne, MD, Associate Professor of Clinical Medicine
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Luib, Olivia, MD, Clinical Assistant Professor of Pediatrics
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Lutwick, Larry, MD, Professor of Medicine
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Lutz, Mary E., MPH, Assistant Professor of Preventive Medicine
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Lytton, William, MD, PhD, Associate Professor of Physiology and Pharmacology and Neurology
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Maby, Jan I., DO, Clinical Assistant Professor of Medicine
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Maccabee, Paul J., MD, Associate Professor of Neurology
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Macchia, Richard J., MD, Distinguished Teaching Professor and Chair of Urology
(Degree: *New York Medical College*)

Maciejka, Kate, MD, Clinical Assistant Professor of Anesthesiology
(Degree: *Marcinkowski University*)

MacRae, Jeanne, MD, Assistant Professor of Medicine
(Degree: *University of Connecticut School of Medicine*)

Mahl, Evan, MD, Assistant Professor of Emergency Medicine
(Degree: *New York University*)

Mahoney, James A., MD, Clinical Assistant Professor of Medicine
(Degree: *SUNY Downstate College of Medicine*)

Maini, Archana, MD, Assistant Professor of Medicine
(Degree: *University of Delhi, India*)

Makowske, Mary, PhD, Research Assistant Professor of Biochemistry
(Degree: *University of Michigan*)

Malka, Edmond S., MPH, Assistant Professor of Preventive Medicine and Community Health
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Mancino, Lawrence A., DO, Assistant Professor of Clinical Medicine
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Mangla, Sundeep, MD, Visiting Associate Professor of Radiology and Neurosurgery
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Manoach, Seth Michael, MD, Assistant Professor of Emergency Medicine
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Manuchian, Eddy, MD, Assistant Professor of Medicine
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March, Wayne, MD, Assistant Professor of Ophthalmology
(Degree: Northwestern University)

Markell, Marianna, MD, Associate Professor of Medicine
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Markinson, Andrea B., MLS, Senior Assistant Librarian
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Marmur, Jonathan D., MD, Associate Professor of Medicine
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Marquez, Samuel, PhD, Assistant Professor of Anatomy and Cell Biology
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Martin-Di Maio, Therese, MD, Clinical Associate Professor of Pathology
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Mascareno, Eduardo, PhD, Research Assistant Professor of Anatomy and Cell Biology
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Mason, Catherine J., MD, Assistant Professor of Radiology
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Matei, Gina, MD, Clinical Assistant Professor of Anesthesiology
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Mathur, Mudit, MD, Assistant Professor of Pediatrics
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McCammom, Andrew T., MD, Clinical Assistant Professor of Anesthesiology
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McCarthy, John, DO, Clinical Instructor of Medicine
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McCormack, William, MD, Professor of Medicine and Obstetrics and Gynecology
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McFarlane, Samy I., MBBS, Associate Professor of Medicine
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McGagh, Deirdre A., PA, Clinical Instructor of Surgery
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McGinn, Thomas G., MD, Clinical Professor of Medicine
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McGuire, Linda, BS, Research Instructor of Pathology
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McLeod, Maureen, PhD, Associate Professor of Microbiology and Immunology
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McLoughlen, Judith E., MD, Assistant Professor of Medicine
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McPhee, Joseph R., III, PhD, Assistant Professor of Otolaryngology and Biochemistry
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Meiri, Abshalom, MD, Clinical Assistant Professor of Anesthesiology
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Mendelsohn, Michael, MD, Assistant Professor of Otolaryngology
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Mendezsoon, Michael, MD, Clinical Associate Professor of Anesthesiology
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Merlin, Lisa, MD, Professor of Neurology and Physiology and Pharmacology
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Merola, Andrew, MD, Assistant Professor of Orthopedic Surgery and Rehabilitation Medicine
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Mertsaris, Nicola, MD, Clinical Assistant Professor of Obstetrics and Gynecology
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Michelson-Law, Hillary B., PhD, Associate Professor of Physiology and Pharmacology
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Monsanto, Enrique, MD, Associate Professor of Orthopedic Surgery and Rehabilitation Medicine
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Moore, Harvey Gordon, MD, Assistant Professor of Surgery
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Rubin, Adam, MD, Assistant Professor of Emergency Medicine
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(Degree: Rutgers University)

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Sadovsky, Richard, MD, Associate Professor of Family Practice
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Sadr, Ali, MD, Assistant Professor of Neurosurgery
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Salant, Evan, MD, Clinical Assistant Professor of Anesthesiology
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Saliccioli, Louis, MD, Assistant Professor of Medicine
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Salem, Ashraf, MD, Assistant Professor of Emergency Medicine
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Salieu, Moro O., MD, Assistant Professor of Medicine
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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 its total enrollment of nearly 410,000 (full-time and part-time) is approximately 37 percent of the state's entire higher education student population.

SUNY students represent the society that surrounds them. In fall 2003, 18.6 percent of all students were minorities. In fall 2003, full-time minority faculty

members made up more than 12 percent of all full-time SUNY faculty.

As of fall 2003, SUNY numbers more than 2.4 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

State University of New York at Albany
State University of New York at Binghamton
State University of New York at Buffalo
State University of New York at Stony Brook

University Colleges

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

Health Science Centers

Health Science Center at Brooklyne (SUNY Downstate)
Health Science Center at Syracuse
Health Science Center, State University at Buffalo*
Health Science Center, State University at Stony Brook*

Colleges of Technology

State University College of Technology at Alfred
State University College of Technology at Canton
State University College of Agriculture and Technology at Cobleskill
State University College of Technology at Delhi
State University College of Agriculture and Technology at Morrisville

Specialized Colleges

State University College of Environmental Science and Forestry
State University Maritime College
State University College of Optometry
State University College of Technology at Farmingdale
State University College of Agriculture and Technology at Utica/Rome

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 Williamsville, Buffalo and Orchard Park
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 Selden, Riverhead, and Brentwood
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.

**While authorized to offer such baccalaureate and master's degree programs as may be approved pursuant to the provisions of the Master Plan, in addition to the associate degree, the Fashion Institute of Technology is financed and administered in the manner provided for community colleges.

***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 nonconsensual 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, campus and home address, telephone numbers, dates of attendance
- Previous institutions, major field of study, degrees conferred
- Past and present participation in sports activities, physical dimensions (height, weight), 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.

EDUCATION LAW

224-a. Students unable because of religious beliefs to attend classes on certain days.

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to 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 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 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 religious beliefs an equivalent opportunity to make up an examination, study, or work requirements that he 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 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 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 held on other days.
5. In effectuating the provisions of this section, it shall be the duty of the faculty and the administration 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 availing himself 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 rights under this section.

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SUNY Downstate reserves the right to alter the existing rules and regulations, and academic programs, as deemed necessary by the institution. SUNY Downstate 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.



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