The minimum requirements for admission to medical schools in the United States must include:

- general physics with laboratories,
- organic chemistry with laboratories

Also recommended are:

- at least one year of advanced mathematics, including calculus
- one or more advanced courses in science, sociology, and psychology

All applicants to medical schools in the United States must take the Medical College Admission Test (MCAT). The three areas tested are: verbal reasoning, physical sciences, and biological sciences.

Most medical schools use the MCAT scores, evaluated in conjunction with college grades, as predictors of performance in medical school. MCAT scores and college transcripts are the most important determinants of admission to medical school. Also strongly considered are a letter of recommendation from the College’s pre-medical advisory committee, research experience, extracurricular activities, work-related experience, required essay, and a personal interview.

Pre-Medical Advisory Committee

Students interested in pursuing a career in medicine or dentistry should consult with the Pre-Medical Advisory Committee as soon as possible, as the Committee is there to assist students in planning a route for success. The Committee’s mission is to help students achieve the dream of becoming doctors, and it is happy to advise students about course selection as early as the freshman year.

Professional School Affiliations

- SUNY College of Optometry (New York, NY)

The College of Staten Island is listed with the above professional graduate school as one of 25 colleges offering an affiliation program whereby highly qualified students may complete a joint BS or BA degree and OD degree in just seven years instead of the usual eight.

Selected academically talented high school seniors and college freshmen can be admitted to an approved joint degree track at CSI and, simultaneously, to candidacy for admission to the professional OD program at SUNY Optometry. After three years of undergraduate work at CSI, upon maintaining the required academic standing, the qualified student is admitted to the SUNY College of Optometry. After the first year at SUNY Optometry, the student receives his or her baccalaureate degree from CSI. The OD degree is awarded after completing the four years at SUNY Optometry. Learn more about this program: sunyopt.edu/education/admissions/od_program/joint_degree

**Pre-Professional Preparation: Medicine, Dentistry, Chiropractic, Optometry, and Podiatry**

**Undergraduate Programs**

**The College of Staten Island** is proud to serve as a springboard for students interested in professional graduate training. Many of our graduates go on to rewarding careers in health professions such as medicine and dentistry after having received thorough preparation during their undergraduate years.

**Pre-Medicine Preparation**

To become a medical doctor, students most often complete their undergraduate bachelor’s degree, followed by graduate study at an accredited medical school, and then several years of a residency in a medical facility under the guidance of an experienced physician.

Most medical schools in the United States do not require that their applicants have a specific undergraduate major. All medical schools will require that students have a strong foundation in the natural sciences (biology, chemistry, physics, and mathematics.) Many medical schools will place great emphasis on courses which teach effective communication skills to students in addition to a background in the humanities, which focus on the human condition; and a background in the social sciences which focus on human society and relationships. Students should become familiar with the specific requirements and recommendations of the medical schools to which they plan to apply.

The minimum requirements for admission to medical schools in the United States are:

- one year of English,
- general chemistry with laboratories,
- general biology with laboratories,
- organic chemistry with laboratories

Also recommended are:

- at least one year of advanced mathematics, including calculus
- one or more advanced courses in science, sociology, and psychology

**College of Staten Island Pre-Med Committee**

Dan McCloskey is Associate Professor of Psychology at the College of Staten Island/ CUNY. He has been a member of the CSI Pre-Health Advisory Committee since 2008 and is serving as Chair. His research is in behavioral neuroscience, studying brain correlates of social behavior.

Shiryan Sukhram is Assistant Professor of Biology at CSI/CUNY. Dr. Sukhram holds both MPH and PhD degrees from Florida International University. She is actively involved with several research projects that raise awareness of major public health issues. Dr. Sukhram specifically investigates how the environment affects biological processes involving human nutrition and its roles in health and disease outcomes. Her ongoing research in the clinical setting examines nutritional biomarkers that can predict severity of a disease. Biological, molecular, and social risk factors are significant variables explored in her research.

Ellen-ge Denton is a New York State licensed psychologist with postdoctoral training in pediatric psychiatry and clinical research methods at Columbia University Medical Center. She investigates the impact of neighborhood socio-cultural factors on depression and related cardiovascular-disease health outcomes. Dr. Denton’s primary research interest is to identify prevention factors associated with suicide-depression, cross-culturally, and to develop, test, and disseminate primary and secondary interventions to improve adolescent mental health outcomes in low and middle income countries (LMICs) or resource poor areas in the US. Dr. Denton offers psychological consultation to Royal Family Kids Camp and other community organizations that service resource poor and at-risk individuals.

Probhul Banerjee is a Neuroscientist and Cancer Biologist with postdoctoral training in Neurochemistry at the Department of Pediatrics, University of Chicago Medical Center. Dr. Banerjee’s research at CSI is

(continued)
Pre-Dentistry and Pre-Chiropractic Program
CSI is proud to have served as the undergraduate training ground for many alumni who have gone on to practice dentistry or chiropractic medicine.

Dentistry or chiropractic schools in the United States do not require or recommend any specific field of study as an undergraduate major for applicants. Most schools suggest that the in-depth study of any of the liberal arts and sciences is valuable preparation. Some dentistry or chiropractic schools have established admissions criteria and additional recommendations. It is important for pre-dentistry and pre-chiropractic students to choose appropriate courses to prepare for admission. Students should become familiar with the recommendations of the schools to which they intend to apply.

The minimum requirements for admission to dentistry or chiropractic schools in the United States are:

- one year of English,
- general chemistry with laboratories,
- biology with laboratories (may include a half-year of genetics and a half-year of botany),
- general physics with laboratories,
- organic chemistry with laboratories.

Also recommended are:
- at least one year of advanced mathematics,
- one or more advanced courses in science, sociology, and psychology.

Applying to Dentistry Schools
All applicants to dentistry schools in the United States must participate in the Dental College Admission Testing Program and take the Dental College Admissions Test (DAT). The four examinations that comprise the testing program cover: principles of biology, general chemistry, organic chemistry; perceptual ability; reading comprehension; and quantitative reasoning. DAT scores and college transcripts are the most important determinants of admission to dentistry school and are used as predictors of performance in dentistry school. Also considered are letters of recommendation, extracurricular activities, work-related experience, required essay, and a personal interview.

In addition to our affiliate graduate schools, in recent years, graduates of CSI have been admitted to medical schools throughout the region, including: SUNY Downstate, Upstate and Buffalo, NYU, Albert Einstein College of Medicine, as well as New England Colleges of Optometry and Osteopathy and the New York Colleges of Osteopathy and Podiatry. Graduates have been accepted to dentistry school at SUNY Buffalo, NYU, Columbia University and University of Medicine and Dentistry of New Jersey (UMDNJ). Graduates have been accepted to veterinary school at Cornell and Tufts Universities.*

Located in Building 6S, Room 006, the Advanced Imaging facility hosts an atomic force microscope, a confocal microscope, a transmission electron microscope, a scanning electron microscope, and a live cell imaging system. Instruments for tissue processing include a tissue processor, a regular ultramicrotome and a cryo-ultramicrotome. Offline image processing using Imaris is also available.

*Source: Macaulay Honors College at CSI Graduate Survey.

Pre-Dentistry and Pre-Chiropractic Imaging Facility

**Radiological Imaging**

- In vivo imaging using a positron emission tomography (PET) scanner.
- In vivo imaging using a small animal PET scanner.
- MRI imaging, including high-field and low-field.
- Digital radiography and computed radiography.
- Microscopy imaging, including light microscopy and electron microscopy.
- Micro-CT imaging.
- Ultrasound imaging.
- Diffusion-weighted imaging.
- Near-infrared spectroscopy.
- Ultrasound-guided interventions.
- Image-guided surgery.

**Software and Analysis**

- ImageJ
- Fiji
- Matlab
- Python
- R
- ImageJ
- Fiji
- Matlab
- Python
- R

**Located in Building 6S, Room 006,** the Advanced Imaging facility hosts an atomic force microscope, a confocal microscope, a transmission electron microscope, a scanning electron microscope, and a live cell imaging system. Instruments for tissue processing include a tissue processor, a regular ultramicrotome and a cryo-ultramicrotome. Offline image processing using Imaris is also available.

The Program Coordinator for Pre-Professional Preparation in Medicine is Dr. Dan McCloskey, Associate Professor, Psychology. Dr. McCloskey is available at (718) 982-4167, Building 4S, Room 230. Prospective students who would like further details about any of the Pre-Professional Programs may also contact assistants Debbie Britton or Susan Been at (718) 982-2430, Building 1A, Room 313.