

Post-Baccalaureate Certificate in Health Careers Preparation

Post-Baccalaureate Science Preparatory Track
And
Post-Baccalaureate Science Enrichment Track

Post-Baccalaureate Certificate in Health Careers Preparation

Hunter College

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HUNTERS POST-BACCALAUREATE PROGRAM

The Prehealth Program at Hunter College proposes to establish a post-baccalaureate certificate program. The program will be an academic one, registered with the New York State Department of Education. All courses that would be offered in the program are existing undergraduate-level courses offered in the departments of Biological Sciences, Chemistry, Physics and Mathematics.

Hunter has had an informal, very successful, post-baccalaureate program for several years. Students have traditionally been career-changers with a small percentage of record-enhancers. Our most recent estimate is that there are 450 students currently registered at Hunter for the purpose of completing courses needed to enter into health professions careers (medicine, dentistry, veterinary medicine, optometry, physical therapy, as well as pharmacy and physician assistant programs). Students enroll at Hunter in order to take the prerequisite courses, receive academic and career advisement and obtain a prehealth committee letter

supporting their goals when they apply to their professional programs. Students who wish to receive a letter from our Prehealth Committee must take a minimum of six science courses, plus their labs, at Hunter. The Committee is comprised of full-time faculty in the departments of Biology, Chemistry, Physics, Mathematics, Psychology, Health Sciences, and Urban Affairs.^[1] The Prehealth Director serves as Chairman of the Committee.

I. Purposes and Goals of the Proposed Program

Currently, undergraduate science students at Hunter are often forced to take courses on E-permit at other CUNY schools. The impact on full-time enrollment, on breadth of knowledge in two-semester courses, as well as the inconsistency of teaching materials/styles and books has had effects on retention and on swift academic progress towards the degree. This is troubling not only for the college as a whole, but also for the major departments as post-baccalaureate students take up many of these seats.

Registration at Hunter has consistently presented problems for all the students and for the over-subscribed courses they need in biology, physics and particularly chemistry. These courses, particularly the chemistry lectures, fill quickly and are limited based on classroom size and laboratory seats. Until recently, Hunter's policy was to allow post-baccalaureate pre-medical students registration dates that coincided with undergraduate sophomores. Thus, postbaccalaureates registered earlier than rising freshmen (entering sophomore year), incoming transfers, and freshmen who entered with college credits completed in freshman biology and chemistry. We have recently changed this policy to reflect our commitment to our undergraduate students first. This has now placed a greater burden on the post-baccalaureates. Unlike the undergraduates, post-baccalaureates must complete the majority of their work at a home institution. They cannot take courses at other colleges and be supported by the Hunter Prehealth Committee. Looking for other ways to circumvent this problem, we now have a growing number of post-baccalaureates who are entering the college as second-degree students. This creates artificially high numbers of students who will never complete the second degree.

With a post-baccalaureate certificate program we hope to minimize these admission and registration inconsistencies and continue to make it easier for undergraduate students to get the priority they deserve in obtaining courses. The certificate program would allow us to control our numbers, anticipate course enrollment in advance, and provide the college and departments with data that could help more accurately reflect, full-time enrollment, space, and tutoring services. It would also force us to guarantee seats to the post-baccalaureates, but if we are realistic about how many we can support (as we would know in advance how many would be entering), then departments should be able to accommodate this guarantee.

II. Hunter's Need for the Program

Our system allowed admission to all students who applied as premedical post-baccalaureate students. Some of these students were only here for a semester or two, taking one or two courses. They were able to register early for classes although they were not interested in the post-baccalaureate program. As we were unable to distinguish this student from one who would complete our program, these students had an unfair advantage that did not serve Hunter well. Our goal is to change this random process, admitting students who demonstrate their desire to be a part of the program. We would also like to equalize the number of career changers with record-enhancers. Record-enhancing students, who, for the most part, take upper division courses, would relieve the burden on our freshman courses, currently the courses vied for with the career changing post-baccalaureate student.

Nationally, the AAMC (Association of American Medical Colleges) ranks colleges according to the number of students entering medical school annually. Hunter could be in the upper third of this cohort but our postbaccalaureates are not credited to us. The credit for the success of these students is given to their undergraduate institutions. Thus, our statistical data regarding how many applicants we successfully send onto professional training programs is based only on our undergraduate population, approximately half of our applicants each year. We are spending an enormous amount of resources to train students that at this point do not give us anything in return. We provide the courses, the counseling, other resources (such as tutoring), and the letter of evaluation for the health professions schools. Certificate-bearing programs are able to have their students counted, thus improving their rankings as to the number of successful applicants they send to medical school each year. This is a compelling reason for our obtaining state approval for the certificate. Timely approval of a certificate program for this cohort would give Hunter the first health related state approved postbaccalaureate program in CUNY. In addition, by limiting the number of students

admitted to the certificate program, Hunter can better serve its undergraduate population.

National Need

Physicians, dentists, optometrists and doctors of podiatry are in great demand, particularly in poor, underserved areas of our nation. Hunter students are multi-cultural and many are from communities that have poor access to health care. The Association of American Medical Colleges (AAMC) has begun a new initiative to increase the number of physicians who are interested in and willing to serve an urban community. The AAMCs desire to increase these numbers will correlate well with our desire to train a cadre of students who are committed to service and whose backgrounds reflect the variety of cultures that make up Hunter.

Benefits to Hunter

Having the ability to screen these students in advance allows us to restrict our numbers so that this cohort does not overwhelm courses in the major. We should maintain strict admission deadlines, which would give us a clear picture of the number of seats needed in the science courses well in advance of the semester.

Not only would the certificate program give us the credit we deserve for bringing a large number of qualified applicants into the medical school arena, it would allow us to control the number and quality of postbaccalaureate students entering the college each year. Students entering a certificate program should show demonstration of previous scholarship. Currently, we accept any student who wishes to enter as a non-matriculated pre-medical student.

There is the issue of space. With only a finite number of seats in labs, Hunter has reached critical mass in trying to accommodate all of the students in need of science labs, including the post-baccalaureate. This situation will be exacerbated further when the organic chemistry labs are remodeled. The ability to pick our post-baccalaureate population and control their numbers would give us much needed relief in this area.

Linkage programs with various medical schools are an asset for our students. As we achieve greater prominence nationally through our ranking, we can attract more medical schools that might be interested in forming formal linkages with our entire student body. This is an important asset for our students. Linkages, such as the one we have with Cornell can also be used to attract students to Hunter for their undergraduate training. These programs identify students early in their pre-medical years and provide research support for selected applicants.

The post-baccalaureates can become an asset in other ways. They are an organized subset of Hunter students who, as certificate holders, will be Hunter alumni. We have several students who remain active. They can serve as peer advisers to undergraduate science students or even as pre-admissions counselors to aspiring post-bacc students.

Currently, there are approximately 450 post-baccalaureates enrolled at Hunter in various stages of their training. Record-enhancers tend to take upper division courses. Changing the percentages to add more students from this group could help us diffuse the overload at the introductory course level.

II. The Postbaccalaureate Student

Interest in our program is intense. Students come here looking for a way to complete their requirements without spending the \$25,000-\$35,000+ it would cost for a similar program at Columbia or NYU. Our numbers continue to rise as more students learn of the quality of our program, the linkages we have developed with medical schools (we are the only school in New York that has a linkage with Cornell) and the low tuition rates.

These students are well educated, many from Ivy League schools. The top students here at Hunter are TAs

in our basic science courses. These students are aggressive and serious about gaining the tools they need to make the transition into a new career. Undergraduate students pale in contrast, often leading to unfair comparisons. Faculty in the science departments enjoy having students who are ready for the challenges of rigorous science training but worry about the large number of undergraduates who are having trouble surviving first year courses needed to move into the major. Utilizing the post-baccalaureates as mentors, recitation leaders, and tutors could help departments encourage, support, and retain their undergraduate science majors.

It has been suggested that we begin the certificate program with a very small number of students. We anticipate enrolling no more than **80-100** students in the first year of the program. This is in line with the average numbers we bring in during **spring81- and fall113**. Admitted students will receive priority enrollment after completing their first semester. The certificate will be awarded in the spring of each year, to coincide with Hunters spring graduation.

City College is the only other school in the CUNY system that has a formalized postbaccalaureate program. They too are working on a state-approved program. They are our biggest competitor for students interested in training at CUNY.

III. Curriculum

DESCRIPTION OF PROPOSED PROGRAM

1. ***Post-Baccalaureate Science Preparatory Track*** (PBSPT) - designed for students with little or no science background in preparation for entry to health professions schools (medical, dental, optometry, osteopathy) or allied health schools (physician assistant or physical therapy)

2. ***Post-Baccalaureate Science Enrichment Track*** (PBSET) - designed for students with existing science backgrounds who are in need of further science preparation and/or improvement of science performance before making application to health professions or allied health schools. These students generally need upper division courses to strengthen their credentials.

TIME OF COMPLETION: Students must complete all of the required courses within 36 months in order to receive the certificate for either program. .

Students entering the PBSPT must demonstrate commitment to a health professions career through some previous health care experience or volunteer work and must have received their undergraduate degree from an accredited American or Canadian institution with an overall GPA of 3.00 or above. A written essay, describing previous accomplishments and future plans will be required.

Students in the PBSET must have a science GPA of at least 2.7 and 2 evaluations/letters from science faculty attesting to their abilities and/or impediments to success at the undergraduate level. A written essay, describing previous accomplishments and future plans, will be required.

Courses

. GENERAL BIOLOGY 102	Biol 100 and (9 credits)
. GENERAL CHEMISTRY Lab) (9 credits)	Chem 102/104 and 103/105 (Lecture and
. ORGANIC CHEMISTRY Lab) (9 credits)	Chem 222/224 and 223/225 (Lecture and
. PHYSICS 121	Phys 110 and 120 or 111 and (9-11 credits)

- . MATH/STAT one semester of calculus and statistics (7-8 credits)
- . ADDL SCIENCE COURSES other courses as required by particular schools/fields (6-9 credits)

EXPECTED TOTAL NUMBER OF CREDITS: 42-51

Certificate-granting programs, according to state and federal guidelines, must be completed within a specified period considered normal for such training (for pre-medical students usually two years for academic work and one year for application process and enhancement--research, volunteer work, interviewing). The schedule above, even with some variation, would accomplish this goal, in most instances, within 36 months. Exceptional students may accelerate, completing all required courses in three, rather than five, semesters. As a certificate-bearing program, designated minimum standards can be applied each semester. That is to say, we will restrict students in the post-baccalaureate program to a no-repeat policy if they fail a course or receive a D and will require that they maintain a 3.3 GPA each semester in order to continue in the program. Currently, all students who wish Prehealth Committee letters must maintain a GPA of 3.3 or above in the sciences. As this cohort is quite motivated, it is not likely that these requirements would prove burdensome.

The courses needed by the majority of current post-baccalaureate students are undergraduate, freshman-level introductory courses. Science faculties teach these courses as part of the curriculum for biology, chemistry, and physics majors. Post-baccalaureate students would take these courses along with the undergraduates of the college. The post-baccalaureate students, as a whole, would not take courses that are required for pre-nursing, although pre-physical therapy and pre-physician assistant students would need the anatomy and physiology, and microbiology courses offered currently to pre-nursing students.

Sequencing of courses for this cohort depends on their personal scheduling needs, previous preparation and Hunters course schedule. The samples below are typical for students currently enrolled as post-baccalaureate students at Hunter.

SAMPLE A

FALL I	SPRING I	SUMMER I
BIOL 100 (4.5 cr) (3cr)	BIOL 102(4.5 cr)	STAT 213
MATH 125 (4 cr)	MATH 150 (4 cr)	
CHEM 102/103 (4.5 cr)	CHEM104/105 (4.5 cr)	

FALL II	SPRING II	SUMMER II
CHEM 222/223 (4.5 cr)	CHEM 224/225 (4.5 cr)	MCAT ¹²¹
PHYS 110 (4.5 cr)	PHYS 120 (4.5 cr)	

SAMPLE B

FALL I	SPRING I	SUMMER I
BIOL 100 (4.5 cr) (4.5cr)	BIOL 102(4.5 cr)	PHYS 110
MATH 125 (4 cr)	MATH 150 (4 cr)	
CHEM 102/103 (4.5 cr)	CHEM 104/105 (4.5 cr)	

FALL II	SPRING II	SUMMER II
CHEM 222/223 (4.5 cr)	CHEM 224/225 (4.5 cr)	MCAT ²
PHYS 120 (4.5 cr)	STAT 213 (3 cr)	

SAMPLE C

<u>FALL I</u>	<u>SPRING I</u>	<u>SUMMER I</u>
BIOL 100 (4.5 cr)	BIOL 102(4.5 cr)	CHEM 105
MATH 150 (4 cr)	PHYS 110 (4 cr)	
CHEM 102/103 (4.5 cr)	CHEM 104 (4.5 cr)	

<u>FALL II</u>	<u>SPRING II</u>	<u>SUMMER II</u>
CHEM 222/223 (4.5 cr)	CHEM 224/225 (4.5 cr)	MCAT ²
PHYSICS 120 (4.5 cr)	STAT 213 (3cr)	

Service requirement:

Students entering the certificate program would have a mandatory service obligation to fulfill at Hunter, at least 14 hours per semester (approximately 1 hour per week). Students would have the option of tutoring in science courses, mentoring undergraduate students as study buddies within a class, or working as peer advisers for the undergraduates. This service obligation would provide the program with resources that would not have a cost attached. Undergraduates would receive services that are sorely needed and peer advisers could reach greater numbers of undergraduate pre-health/science students.

Faculty

As students are in these courses with our undergraduates there would be no additional faculty needed to teach this cohort. Therefore, faculty from the departments of Biological Sciences, Chemistry, Physics, Mathematics and Statistics would continue teaching this group. As the program grows, we may need additional monies for adjunct lecturers to teach additional lab sections as this cohort would be guaranteed seats.

IV. Cost Assessment

An increase in support services and computer equipment is necessary in order to implement this program.

Personnel Costs

Program Coordinator	\$31,000 + fringe
Office equipment	<u>\$ 4,000.00</u>
\$35,000.00	

Potential Revenues

Each student who completes the program will pay Hunter \$11,750 (\$250/credit for 47 credits) and for 80 students that is \$940,000 annually. This compares to \$640,000 for 80 full-time matriculated undergraduates who pay \$4000 per year. (Two years of full-time study)

Budget Justification:

We anticipate that the necessary coordination for this cohort will increase substantially due to the need to screen students for admission and certification. Our one pre-medical adviser cannot accomplish this and therefore we would require another full-time professional for this program. Other possibilities include utilization of peer advisers. City College uses two peer advisers per year to provide initial contact with students, assemble applications and help in the advising process with the post-baccalaureate students. The Student Center could house these peer advisers or a full-time professional could be added to the Admissions Office staff of Hunter or in the Office of the Dean of Arts and Sciences where the prehealth director is currently located. Office equipment would include a high-speed scanner as all letters of recommendation are sent via an electronic service.

We suggest beginning the certificate program with a very small number of students (approximately half of the number admitted annually in the past). Students will be admitted during the fall or spring semester after a review of their materials has been conducted. Once approved for admission, at the end of their first semester, student registration privileges will be enhanced and official notification of acceptance into the program will be made. The certificate will be awarded upon completion of the program.

APPENDIX

Current Prehealth Committee Members

- Adrienne Alaie Department of Biological Sciences

Alberto Baider	Department of Mathematics and Statistics
James Bergou	Department of Physics
Christopher Braun	Department of Psychology
Derrick Brazill	Department of Biological Sciences
Barry Cherkas	Department of Mathematics and Statistics
Lynn Francesconi	Department of Chemistry
Wayne Harding	Department of Chemistry
Thomas Holland	School of Health Sciences
Louis Massa	Department of Chemistry
Roger Persell	Department of Biological Sciences
Sandeep Prasada	Department of Psychology
Marilyn Rothschild	Department of Physics
Angelo Santoro	Department of Chemistry
Ezra Shahn	Department of Biological Sciences
Sigmund Shipp	Department of Urban Affairs
Lolita Wood-Hill	Prehealth Program School of Arts and Sciences

^[1] See listing of current members in the Appendix

^[2] Medical College Admission Test