



An HUHC Engineering Pre-med Schedule: The First Three Years

The chart below illustrates how HUHC's courses are integrated into the typical first three years of a curriculum leading to an engineering science degree with a pre-med biomedical option. The Honors College 12-credit sequence (Culture and Expression) fulfills University-wide social sciences and humanities requirements during the first year. Mathematics and physical science courses in biology, chemistry and physics, along with introductory and general engineering courses, constitute most of the rest of the first two years of course work. Students who enter Hofstra with advanced placement (AP) or other college credits are able to proceed more quickly to higher level courses. All skills and concepts tested by the Medical College Admission Test (MCAT) are contained in courses (*highlighted in italics*) completed by the end of the sixth semester. Therefore, the student is poised to take the MCAT before even starting the fourth and final year of the program, which consists of some general degree requirements, more advanced courses in bioengineering, and a capstone design.

Recommended Course Sequence: Semesters 1-6

| FIRST YEAR: FALL | FIRST YEAR: SPRING | SECOND YEAR: FALL | SECOND YEAR: SPRING | THIRD YEAR: FALL | THIRD YEAR: SPRING |
|----------------------------------|----------------------------------|---------------------------|------------------------------------|---------------------------|---------------------------|
| MATH 71 4 s.h. | MATH 72 4 s.h. | MATH 73 4 s.h. | | MATH 131 3 s.h. | |
| CHEM 3A 3 s.h. | CHEM 4A 3 s.h. | BIO 12 4 s.h. | BIO 11 4 s.h. | CHEM 135 4 s.h. | BCHM 163 3 s.h. |
| CHEM 3B 1 s.h. | CHEM 4B 1 s.h. | PHYS 11A 4 s.h. | PHYS 12A 4 s.h. | CHEM 137 1 s.h. | |
| ENGG 15 3 s.h. | ENGG 10 3 s.h. | PHYS 11B 1 s.h. | PHYS 12B 1 s.h. | ENGG 118 3 s.h. | ENGG 182 3 s.h. |
| HUHC 11 (HP) 3 s.h. | HUHC 12 (BH) 3 s.h. | SOC 4 3 s.h. | ENGG 81 3 s.h. | ENGG 30 3 s.h. | ENGG 113 3 s.h. |
| HUHC 13 (LT) 3 s.h. | HUHC 14 (LT) 3 s.h. | | ENGG 25 3 s.h. | ENGG 28 3 s.h. | ENGG 108 1 s.h. |
| | | | | | ENGG 185 3 s.h. |
| | | | HUHC 20 (seminar) 3 s.h. | | PSY 1 4 s.h. |



Design your future ...

Be the architect of your ambitions!

With shared goals as a foundation for advancement, engineering and HUHC make a great team at Hofstra!

As the Hofstra Department of Engineering points out:

"The broadly educated Hofstra engineering graduate will mirror the multifaceted engineer/builder envisioned in classical times by Vitruvius — the first-century Roman architect who created the original engineering handbook — and will therefore be best situated to assess the consequences of the societal changes constantly wrought by this profession."

Engineering Faculty:

- M. David Burghardt, PhD, University of Connecticut
- Mauro Caputi, PhD, Virginia Polytechnic Institute and State University
- Kevin Craig, PhD, Columbia University
- Edward Currie, PhD, University of Miami
- Roche de Guzman, PhD, Wayne State University
- Sleiman Ghorayeb, PhD, Iowa State University
- Saryn Goldberg, PhD, Stanford University
- Margaret Hunter, PhD, Rice University
- Wing Kwong, PhD, Princeton University
- Nicholas Merna, PhD, University of California, Irvine
- Manuel Miranda, PhD, Columbia University
- Alexander Pesch, PhD, Cleveland State University
- Richard Puerzer, PhD, University of Pittsburgh
- Sina Rabbany, PhD, University of Pennsylvania
- Salvador Rojas-Murillo, PhD Cand., University of Iowa
- David Rooney, PhD, North Carolina State University
- Edward Segal, PhD, Princeton University
- John C. Vaccaro, PhD, Rensselaer Polytechnic Institute
- David Weissman, PhD, Stanford University

For more information, please contact:

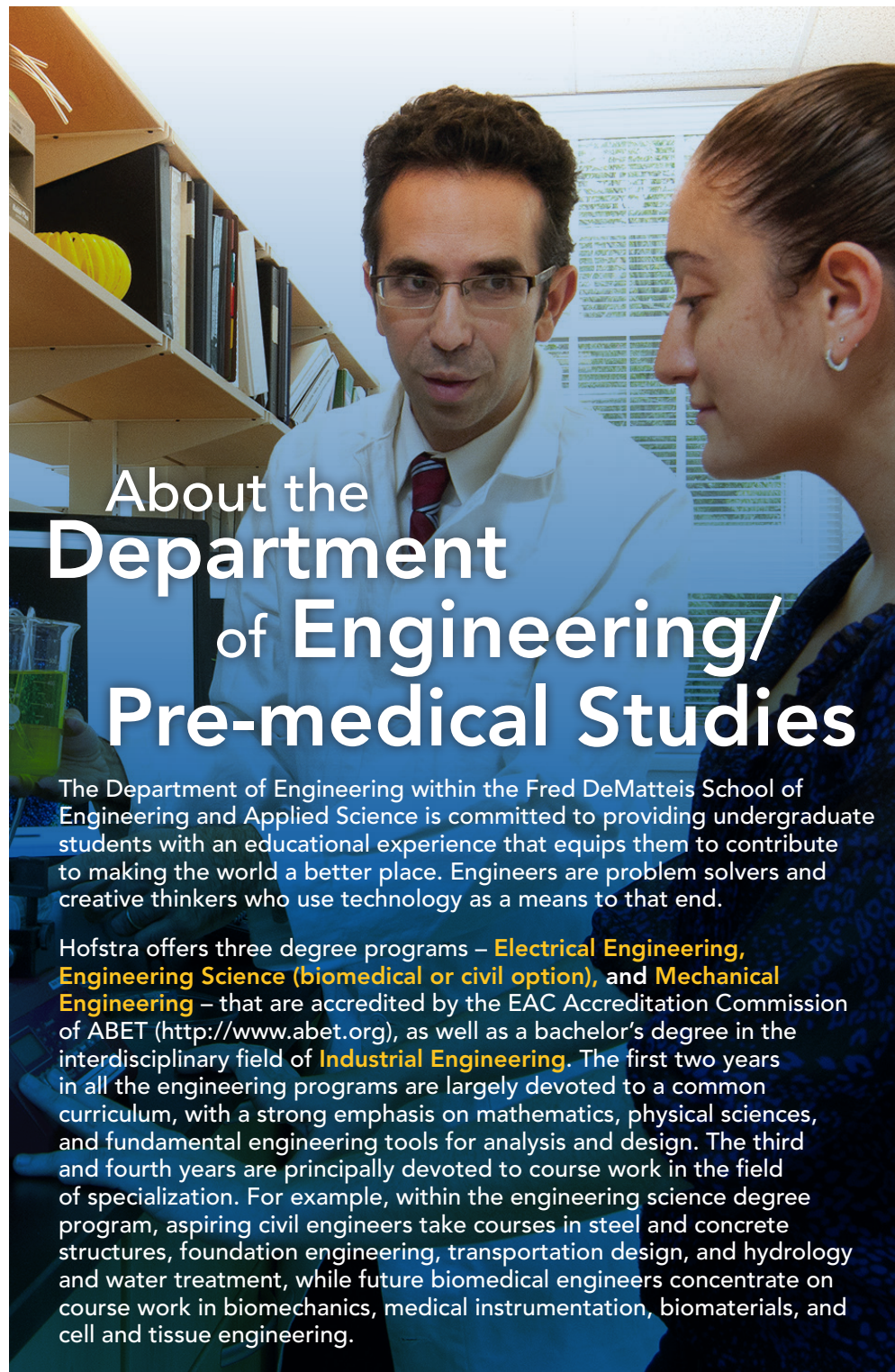
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Hofstra University Honors College and Engineering/ Pre-medical Studies



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About the Department of Engineering/Pre-medical Studies

The Department of Engineering within the Fred DeMatteis School of Engineering and Applied Science is committed to providing undergraduate students with an educational experience that equips them to contribute to making the world a better place. Engineers are problem solvers and creative thinkers who use technology as a means to that end.

Hofstra offers three degree programs – **Electrical Engineering, Engineering Science (biomedical or civil option), and Mechanical Engineering** – that are accredited by the EAC Accreditation Commission of ABET (<http://www.abet.org>), as well as a bachelor's degree in the interdisciplinary field of **Industrial Engineering**. The first two years in all the engineering programs are largely devoted to a common curriculum, with a strong emphasis on mathematics, physical sciences, and fundamental engineering tools for analysis and design. The third and fourth years are principally devoted to course work in the field of specialization. For example, within the engineering science degree program, aspiring civil engineers take courses in steel and concrete structures, foundation engineering, transportation design, and hydrology and water treatment, while future biomedical engineers concentrate on course work in biomechanics, medical instrumentation, biomaterials, and cell and tissue engineering.

Engineers of all specialties are in demand in industry and in research. Recent institutional research reports that 97 percent of DeMatteis School graduates are employed or in full-time graduate studies within a year of graduation. Employment prospects are further enhanced by the DeMatteis School Co-op Program available to third-year students seeking real-world engineering work experience for a six- to eight-month period prior to graduation. Currently more than 140 companies participate in the program, and the network is expanding rapidly. Summer internships with engineering firms are another available option.

Engineering education is a rigorous preparation for a fulfilling career in the service of human society. At Hofstra, that rigor is tempered by a congenial atmosphere where members of our faculty mentor students throughout their academic careers, in the lecture halls and in the laboratories, leading to capstone design and/or research projects that prepare them for professional success.



Hofstra University Honors College and Engineering/Pre-medical Studies

Our Mission

Hofstra University Honors College (HUHC) aims to be at the forefront of Hofstra University's pursuit of academic excellence. We promote intellectual engagement among students, faculty, and the broader Hofstra community. HUHC is compatible with all fields of study and welcomes students from all disciplines.

A History of Success with Engineering Students

From its inception, HUHC has had a large number of engineering majors among its students. This is because HUHC's curriculum is flexible and adapts to the individual interests and needs of our students, including those who are pursuing highly structured degree programs like engineering.

A Supportive Community

The HUHC community provides an extraordinary level of support to highly motivated students. With supplemented advising and carefully planned social and cocurricular programming, we ensure that HUHC students feel like part of a community that knows them personally and can respond to their needs as they arise. Along with the Engineering Department, HUHC is another home, another comfortable place with friends and peers, and another base of support for academic and social life at Hofstra.

An Extraordinary First-Year Curriculum

All entering Honors College students take a linked four-course sequence called *Culture and Expression* (two courses in the fall and two courses in the spring). Taught by some of Hofstra's best faculty, these courses give students a cross-disciplinary view of ancient (fall semester) and modern (spring semester) cultures. All four *Culture and Expression* courses fulfill University requirements in the social sciences and humanities. Thus, they are enriched versions of courses that all Hofstra students are required to take.

Earning Honors Credit in Engineering Courses

As engineering students move on to their sophomore, junior and senior years, they may pursue honors credit in regular engineering courses. In these "honors options," engineering students meet with a faculty member who develops an enriched curriculum an engineering course that the student is already planning to take. Throughout the semester, the student attends the regular course sessions, and also meets outside of class with a faculty member to discuss the supplementary material. This structure leads to richer faculty-student relationships, and often advances the mentoring process that is crucial for success in college and beyond. Most importantly, it allows students to focus their course work where their interests and passions are most fully engaged.

The Workload: It's About Quality, Not Quantity

Honors work has always been defined qualitatively rather than quantitatively. Typically it is thicker, richer, and more fully informed by theoretical themes. As a result, many students report that their honors courses bring out the best in them without interfering with other commitments. This makes sense, since most of the time, they are choosing to do their honors work in courses they find intrinsically interesting.

Katherine Gilleran '17 of Farmingdale, NY, completed her degree in engineering science with a biomedical option. She chose Hofstra University "because of the community atmosphere I felt while visiting campus. Hofstra felt like home."



Being a part of Honors College enriched her Hofstra experience. She says, "HUHC provided me with a network of people that helped me grow both personally and professionally. I met one of my mentors, Dr. Rabbany, at an Honors College event." From there she started conducting research in Hofstra's Cell and Tissue

Engineering Laboratory. "The professors are truly engaged in assisting students achieve their goals. It is unique for a university to provide such individualized attention to its undergraduate students."

During her senior year, Katherine collaborated with fellow DeMatteis School students and professors to design and build a continuous flow bioreactor. She is excited to be able to present the project along with classmates Maria Leo Garcia and Colin Tomaselli-Greenslade at the Biomedical Engineering Society annual meeting in October 2017. She reflects, "... being a part of HUHC and the DeMatteis School at Hofstra University has given me a great foundation that I am excited to take with me while pursuing a career in the pharmaceutical industry."