

## An HUHC/Engineering Schedule: Years One and Two

The chart below illustrates how HUHC's courses are integrated into the typical first two years of an engineering curriculum. The Honors College 12-credit sequence (Culture and Expression) fulfills University-wide social sciences and humanities requirements during the first year. The engineering curriculum's required mathematics and physical sciences courses, along with introductory and general engineering courses, constitute most of the rest of the first two years of course work. There are some minor differences in this sequence for electrical and biomedical engineering students, and students who enter Hofstra with advanced placement (AP) or other college credits are able to proceed more quickly to higher level courses. The following chart is meant to serve as a general template, as it represents the suggested common curriculum for the first two years for mechanical, civil, and industrial engineering students.

Recommended Course Sequence: Semesters 1-4			
FIRST SEMESTER	SECOND SEMESTER	THIRD SEMESTER	FOURTH SEMESTER
<b>MATH 71:</b> Calculus I (4 s.h.)	<b>MATH 72:</b> Calculus II (4 s.h.)	<b>MATH 73:</b> Calculus III (4 s.h.)	<b>MATH 131:</b> Elementary Differential Equations (3 s.h.)
	<b>PHYS 11A:</b> General Physics (4 s.h.)	<b>PHYS 12A:</b> General Physics (4 s.h.)	<b>CHEM 3A:</b> General Chemistry I (3 s.h.)
	<b>PHYS 11B:</b> General Physics Lab (1 s.h.)		<b>CHEM 3B:</b> General Chemistry I Lab (1 s.h.)
<b>ENGG 15:</b> Designing the Human-Made World (3 s.h.)	<b>ENGG 16:</b> Comprehensive Engineering Design (3 s.h.)	<b>ENGG 25:</b> Statics (3 s.h.)	<b>ENGG 26:</b> Dynamics (3 s.h.)
<b>ENGG 10:</b> Computational Methods for Engineers (3 s.h.)		<b>ENGG 30:</b> Engineering Circuit Analysis (3 s.h.)	<b>ENGG 28:</b> Strength of Materials (3 s.h.)
		<b>ENGG 100:</b> Engineering Economy (3 s.h.)	<b>ENGG 112:</b> Engineering Drawing (2 s.h.)
<b>HUHC 11:</b> Culture and Expression (HP) (3 s.h.)	<b>HUHC 12:</b> Culture and Expression (BH) (3 s.h.)		
<b>HUHC 13:</b> Culture and Expression (LT) (3 s.h.)	<b>HUHC 14:</b> Culture and Expression (LT) (3 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

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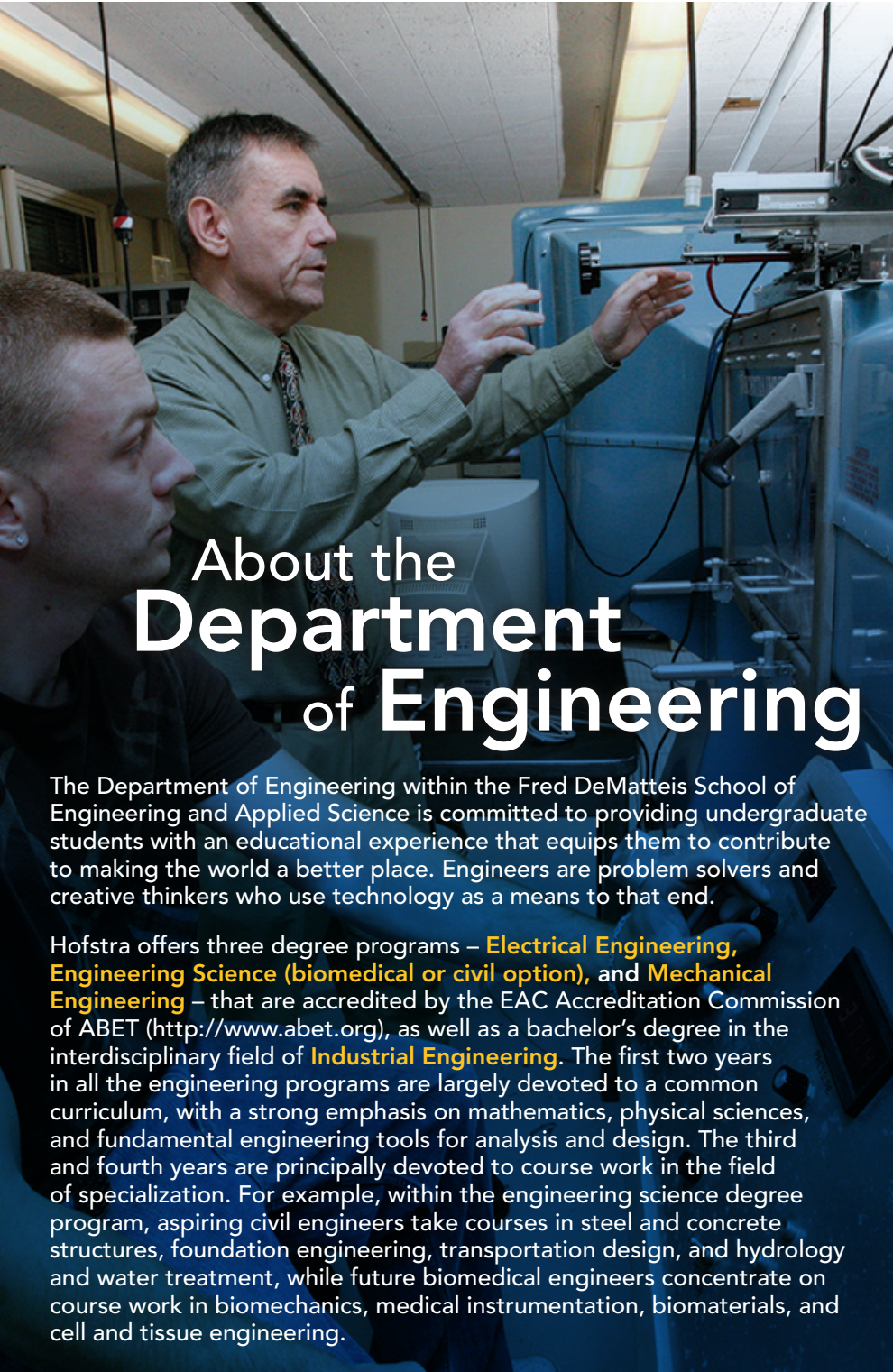
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# Hofstra University Honors College *and* Engineering



[hofstra.edu/huhc](https://hofstra.edu/huhc)  
[engineering.hofstra.edu](https://engineering.hofstra.edu)





# About the Department of Engineering

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

### 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.

**Kyle Castoria '17** of Long Beach, NY, received dual bachelor's degrees in mechanical engineering and physics. Having studied with professors he truly liked and



respected, Kyle has been able to take advantage of some interesting opportunities during his time at Hofstra. "I spent one of my summer breaks in South Korea where I studied the Korean language at Changwon National University in preparation for an internship position at Samsung Techwin [now Hanwha Techwin America]. Working under a physics professor at Hofstra and in conjunction

with an electrical engineering professor from Princeton, I have had the opportunity to research, and will soon publish, a paper on quantum mechanical computations. I also presented a poster of this work at a physics conference in New Orleans during the spring, which is one of the largest physics conferences in the country. I was engaged in another research project where I was designing and building a scanning tunneling microscope, which uses quantum tunneling to create pictures of atomic surfaces."

Hofstra has kept him busy doing what he is passionate about, but it hasn't been all work — he was a part of the Hofstra club rugby team, and HUHC introduced him to a volunteer experience at The INN (Interfaith Nutrition Network) in Hempstead, which provides food, shelter, long-term housing, and supportive services in a dignified and respectful manner for those in need. Kyle spent the summer after graduation working at The Inn, serving breakfast and lunch, helping guests create resumes in the career development center, and writing a computer software program to streamline The INN's intake process and recordkeeping.

He accepted a fellowship at Princeton University in its electrical engineering PhD program and is looking forward to his next chapter.