A Prospectus: Franklin W. Olin College of Engineering

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THE KIND OF ENGINEER WE'RE EDUCATING

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ALMOST DEFIES DESCRIPTION [BUT WE'LL TRY].

BLU



The subjects of this portrait are members of the classes of '06 and '07 who were willing to be herded into a photograph one April afternoon. They represent neither a cross section nor any particular segment of Olin's enrollment.

Majors Key:

E: Engineering ECE: Electrical and Computer Engineering ME: Mechanical Engineering

ALLISON LEE Kirtland, OH ('07, E) SERV (Support, Encourage and Recognize Volunteerism); Computing Opportunities for Disabled Adults founder; summer intern, US Endoscopy. automating a forming-wire process. Next: study abroad?

LAURA STUPIN Santa Fe, NM ('07, E) Tiger at the Gates and Lost in Yonkers cast member; singer; dancer (swing, Middle Eastern, tango); weaves chain rasi memoer, singer, dancer (swing, Middle Eastern, tango), weat mail: juggles; attended International Tango Congress, Argentina. ALEX WHEELER Bakersfield, CA ('07, E) Olin Volunteer Ambassador League (QVAL); Library Board; Summer Book Committee; reading; rollerblading; swimming.

MEL CHUA Glenview, IL ('07, E) Jack-of-all-trades; Frankly Speaking editor-inchief; artist; pianist; OVAL; insomniac; math-parody songwriter. Next: teaching?

Next: ocean engineering?

KAT KIM Union City, CA ('07, ECE) Violist; gymnast; hardcore gamer; loves bugs; has pi obsession; Conductorless Orchestra member. Next: Study in Korea? Changing the world?

KRYSTIN STAFFORD San Diego, CA ('06, ME) Co-editor, Olin's first yearbook; Frankly Speaking writer; teaches engineering to school kids; clarinetist; OVAL; likes "Olin Blue." Next: patent law?

ADAM "JOE" COLLEGE Clearwater, FL ('07, ECE) Honor Board: Student Activities Committee: OVAL; F.I.L.M. Emmy-winner (really) for direction; creative writer, Next: MBA?

BRENDAN DOMS Chanhassen, MN ('07, E) Franklin W. Olin Player, "Friendly Fire" video game club member; Donkey Kong Country record holder; working on original screenplay.

ANDREW BOUCHARD Franklin, TN ('07, E) Frankly Speaking's op/editor; Babson Rugby player; singer; political activist; Olin Mini Baja Team member

DAVID BOY Jamestown, NC ('07, E) CORe campus

life v.p.; high-school senior year at Guilford College; Ultimate Frisbee player; drummer; famous for wild shirts and singing about toast (including French)

MATT TESCH Trophy Club, TX ('07, E) Big-time volunteer; bass trombonist; jazz band member; composer; organizationer; relationer; programmer; relationer; football, encouloball/equateballl/equateball/equateball/

MATT TESCH Trophy Club, TX ('07, E) Big-time volunteer; bass trombonist; Jazz band member; composer; green designer; programmer; Ultimate Frisbee, football, racquetball/squash player. Next: space station?

ALEX DORSK Cape Elizabeth, ME ('07, ECE) Works with kids; cyclist; trombonist; pianist; reads everything; multimedia expert; Ulysses in Franklin W. Olin Players' (FWOP) Tiger at the Gates.

> MATTHEW BROUILLARD Hingham, MA ('07, E) Massage Therapy Club president; Frankly Speaking writer; great tap dancer;

MAYSA ALAVI Hollis, NH ('07, E-bioengineering) CORe; Shock Corps belly dancer; photographer; high-school senior year at USC (neuroscience). Next: medical research, M.D./Ph.D.?

ZACH BROCK Los Angeles, CA ('07, E-systems) Web designer. singer; wrestler; theatre lighting designer; robotics researcher; DARPA Grand Challenge Team; interested in mechatronics.

KEVIN TOSTADO San Diego, CA ('06, E-computing) National Hispanic Scholar, Student Activities Committee chair; Resident Resource; Broadcasting Club founder; A/V extraordinaire; football player; FWOP

Rockville, MD ('07, ME) Colombian; Student Activities Committee; belly dancer; bowler; loves sports; passionate about history. Next: "away term" (and tomato fight) in Barcelona?

JULIANA BERNAL-OSTOS

jeweler; cellist; rock band; Olin Business Foundry. Next: fall study in Switzerland; Med school?

contributes to FWOP; Open (LGBTQ group)

SARAH BOMAN Forest, VA ('07, E) Frisbee golfer; poet; DARPA Grand Challenge Team founder (solar vehicle competition). Next: study abroad?

ERIN McCUSKER Lillington, NC ('06, E-bioengineering) Student Activities Committee; lead in The Foreigner; dessert lover; severe wanderlust; b&w photographer; summer intern, biomaterials. Next: design?

HOLLY MEAD Plano, TX ('06, E-bioengineering) Student Activities Committee chair; Council of Olin Representatives (CORe); runner; classical studies Next: Italy? Med school?

CHRISTINE LEE Lynbrook, NY ('07, E-environmental) Green advocate; Chinese Club; runner; gourmet cook; dragon builder; Next: founding an environmental engineering consulting firm?

QUESTIONS

WHY would an AP scholar or a 17-year-old CEO turn down the nation's top engineering programs to enroll in a new engineering college that's still inventing itself?

WHY would acclaimed professors leave major research universities to teach undergraduates at a college without tenure, academic departments, or a big reputation (yet)?

WHY would parents allow their pride and joy to choose a college that's not in all the college guide books or on a counselor's hot list?

WHY would accreditation boards tell the nation's newest engineering college to break molds, take risks, and make engineering education more relevant and exciting?

WHY would one of the world's largest philanthropic foundations invest nearly half a billion dollars in a vision for a new college with full-tuition scholarships for all?

WHY would top brass from IBM, Samsung, Hewlett-Packard, Raytheon, Boston Scientific, MIT, Caltech, Stanford, Tennessee, Michigan, Harvey Mudd, Georgia Tech, and the University of California spend time advising the president of a college that didn't even exist in 2000?



Photo: Mark Flannery

ANSWER

Because none of us could refuse a less-than-once-in-a-lifetime chance to help build a college that aims to educate a different kind of engineer.

> If this sounds a little scary or crazy, and you are NOT interested, at least do us the favor of giving this Prospectus to the sophomore who wrecks the grading curve in your AP calculus class and was awarded a patent in eighth grade.

If this sounds a little scary or crazy, and you ARE intrigued, then watch out: You may be one of us. Read on.

QUESTIONS

WHY do we need a different kind of engineer?

WHAT are we doing to break the molds?



HOW do we know what we are doing?

ANSWERS

- 1. Because every made thing we see or use has been at some time engineered, engineers have a lot of influence over our lives. We need them to be looking out for our interests.
- 2. Our economy depends on creative engineers who can harness scientific knowledge, see possibilities, and turn problems into solutions that people can use.
- 3. Organizations need the brightest, most creative people designing and leading engineering teams.
- 4. We need people in teaching, medicine, law, business, the arts, and public policy who understand science, engineering, and technology.

- 5. We are building a brand new college. From the ground up, everything about it has the goal of educating a different kind of engineer.
- 9. When choosing students, we look beyond their (outstanding) secondary-school records and test results. We're looking for creative people, self-starters, risk-takers, potential leaders-and we know how to find them.
- 6. For balance, our curriculum is built on three leas: engineering, liberal arts, and entrepreneurship. Plus, students can follow their own passionate pursuits.
- 10. We use real projects to teach design and the fundamentals of engineering. Our aim is to show you how to teach yourself-something you can take with you and use forever.
- 7. We are educating whole people. Here, learning and fun come togetherin and outside of classes and labs-and all of your talents and interests can be engaged.
- 11. We chose our location to be near some of the nation's leading high-tech corporations. Our partnerships are producing projects, internships, and employment for Olin students.
- 8. Our agreements with nearby colleges-Babson, Brandeis, and Wellesley-let Olin students study subjects-such as anthropology, entrepreneurship, history, and the arts-that can make them smarter engineers.

- 12. Before committing its endowment to Olin College, the F. W. Olin Foundation had 66 years' experience evaluating and providing support to college and university science programs across the nation.
- 13. We scoured the nation 14. We hired a faculty, for the best practices in engineering education, then designed approaches that took some ideas further than would be possible in any existing institution.
- which now numbers 32, out of a pool of more than 3.300 applicants-master teachers who wanted a chance to put their best ideas into practice.
- 15. We consulted with the National Science Foundation and the Accreditation Board for Engineering and Technology so that our programs would meet their aims and standards-and we are on schedule for accreditation after our first class graduates.



Breaking Molds: The Olin Engineer

We're not just educating engineers here (although we expect to produce many great ones); we're educating people—thinkers and leaders who will be able to make a positive difference in the world. The Olin education is a 200 percent experience that involves every aspect of college life. We've

combined some of the best practices in engineering education with many new ideas of our own. The result is a unique synthesis we believe could offer a new model for engineering education—one based on creativity, innovation, and the passion people bring to their learning.



"There is nothing typical about days at Olin! I've built cannons, rockets, and dragsters, all in the name of homework, with a team of other students—all incredibly gifted and fun. I've run a marathon, traveled to three countries in seven days, and crawled into an igloo. I've learned that nothing is impossible. A new college can spring up atop a hill; the most talented students and faculty can come to an unknown institution."

Polina Segalova ('06) Addison, IL

THE LEARNING CONTINUUM









Olin integrates experiences in and out of the classroom. Designed to be flexible, the curriculum enables students to cultivate their talents and passions, to pursue their interests wherever they may lead.









Olin's project-based curriculum is rigorous but fun; it helps students see the connections among disciplines and figure out how to learn on their own.

Students are helping to build the Olin community through service in CORe (the student government), the Honor Board, or on the staff of *Frankly Speaking*, the student newspaper.

Students have taken the lead in forming clubs and organizations such as the outing club or the martial arts club—to link up with like-minded classmates. Research comes in many flavors at Olin, including independent study and externally and internally funded grants involving faculty and students as early as their first year. For study of a personal interest under faculty direction, students have earned non-degree credit in subjects as varied as flute, welding, photography, and jewelry making.



Because of the incredible diversity of interests and backgrounds among Oliners, even pick-up football or relaxing in the residence hall with friends are learning experiences. Olin's co-curriculars combine fun and intellectual awareness. Led by faculty and staff members, these activities have included film studies, language tables, and current events.

Beneficiaries of a great act of philanthropy, Olin students give back through SERV (Support, Encourage, and Recognize Volunteerism) and other collaborations. AT OLIN COLLEGE, WE BELIEVE IN LEARNING ENGINEERING IN CONTEXT. The engineering leaders of the future will be versatile, imaginative problem-solvers who see challenges from multiple perspectives. This is just what the National Science Foundation had in mind a few years back when it recommended revamping engineering education nationally. We listened and incorporated many suggested changes into our innovative curriculum.

Classes at Olin are rigorous, but learning is infused with the joy of creation and the buzz of intellectual stimulation. Olin has brought together some of the brightest students and most inspiring teachers anywhere and created conditions for their best work.





THE OLIN TRIANGLE Central to our mission is a commitment to rigorous engineering fundamentals and design. You will receive an exceptional technical education, but you will also develop your communication, teamwork, and leadership skills. You will gain confidence and the ability to deal with ambiguity – traits that will serve you well in a constantly changing technical environment. The second element of the Olin education is entrepreneurship. To address the needs of a global society, engineers will need to understand the marketplace. Moreover, they should be able to identify opportunities and find technical solutions for profit and nonprofit enterprises. The third element is liberal arts. We call it "AHS" —arts, humanities, and social sciences. At Olin, these courses are taught within the context of a technical education, so that you gain an appreciation for the societal impact of your work. These three elements are not merely joined; they are woven together by design, creativity, and innovation — and are enriched through our commitment to our core values (see Honor Code, page 32).

Majors

Engineering Electrical and Computer Engineering Mechanical Engineering

Concentrations

Bioengineering Computing Materials Science Systems Engineering

Postgraduate Interests

Business Engineering Entrepreneurship Law (Intellectual Property and Patent) Medicine National Security Nonprofit Enterprise Public Policy Research Teaching You Name It "The engineers here can talk art, and the artists are also engineers. I don't have to partition my life—I can draw on both disciplines. Best of all, everyone is doing the same blending, so I'm with like souls. I'm here because I want to learn how to be a human being—one that can solve problems with second order differential equations—or with photographs." *Mallory (Mel) Chua ('07), Glenview, IL*

THE OLIN EDUCATION

Here are just a few of the things that distinguish Olin's learning approach:

- Hands-on learning: we believe students learn best when they tackle authentic engineering problems. This project orientation starts early and increases in sophistication as students progress through the curriculum.
- Focus on interdisciplinary connections: faculty collaboration is evident throughout the curriculum, starting in the Integrated Course Blocks (ICBs), foundation courses which enable students to apply fundamental math and science to real engineering projects.
- Open-ended design projects: these projects call on students to define problems, utilize technical knowledge, and apply teamwork and communication skills to craft a solution. The open-ended project focus culminates in an ambitious, yearlong capstone project that engages students in significant design problems with realistic constraints.
- AHS (Arts, Humanities, and Social Sciences): there is flexibility within the curriculum for up to 24 credits of AHS. Our partnerships with Babson, Brandeis, and Wellesley increase the options in these areas.
- Entrepreneurship: Olin students learn entrepreneurship and business skills as part of the required curriculum, beyond which they may take up to 12 additional credits. Opportunities in this area are especially strong because of our partnership with neighboring Babson College, a leader in entrepreneurship and business education.
- Flexibility: the curriculum leaves room for students to pursue their interests through technical electives and such options as passionate pursuits, independent study, research, and study away.

Will our approach make you a better engineer? We think so. When you graduate from Olin, you will have an impressive portfolio of actual engineering design projects you've been involved in, and possibly some industry experience. You will have worked outside your comfort zone and learned to deal with ambiguity—fundamental building blocks of the 21st Century engineer. You will also know how to:

- Analyze engineering problems and select appropriate tools to solve them
- Develop creative designs
- · Work effectively in teams
- Understand the ethical, social, and professional responsibilities of engineering
- Identify opportunities
- Apply social, cultural, and humanistic perspectives to your work
- Convey information effectively in written, oral, and visual form
- Identify and address your own educational needs in a changing world

Olin's unique combination of rigorous engineering and science courses, projects, design, AHS, and entrepreneurship will make you into a self-confident problem solver and independent learner. Upon graduation from Olin, you will not be trained as an engineer; you will be an engineer, ready for success in a wide variety of fields.

Accreditation

Olin is on course to attain two types of accreditation: institutional accreditation by the New England Association of Schools and Colleges (NEASC) and accreditation of all degree programs by the Accreditation Board for Engineering and Technology (ABET).

From the start, Olin has designed its programs in consultation with experts who have served on engineering accrediting teams. One of those experts, Olin's own Sherra Kerns, vice president for innovation and research, has served on the Engineering Accreditation Commission of ABET ('00-'05) and has led teams evaluating more than 30 engineering programs across the U.S.

Upon graduation of our first class in May 2006, Olin will become eligible for accreditation evaluations – both for our institution and for our three degree programs, Accreditation granted after an initial review in fall 2006 will be retroactive to all Olin graduates.

1ST YEAR

st Semester

ENGINEERING Engineering of Compartment Systems MATH Calculus SCIENCE Physics: Mechanics ENGINEERING Nature of Design

AHS

Arts, Humanities, or Social Science Foundation Course

= 16 credits

INTEGRATED COURSE BLOCK (ICB)

2nd Semester

ENGINEERING Engineering of Spatial Systems MATH Vector Calculus SCIENCE Physics: Electromagnetism and Waves SCIENCE e.g., Biology or Materials Science

E! FOUNDATION

Foundations of Business and Entrepreneurship

= 16 credits

INTEGRATED COURSE BLOCK (ICB)

THE OLIN CURRICULUM

[LAYING TRACK IN FRONT



Entrepreneurship

Olin students Bret Richmond and Jeffrey Satwicz (center, at left) teamed up with two Babson MBA students to take the \$20,000 first prize in Babson College's Douglass Foundation Graduate Business Plan Competition. Their entrepreneurial venture, Seahorse Power Company, earned top honors for its plan for an innovative solar-powered trash compactor.

Hands-on Learning

Hands-on learning starts early at Olin. In the freshman "Mechanical Nature" course block (right), students engineered a version of the high-jumping click beetle and tested their designs in a contest. Project-based learning is pervasive throughout the curriculum.



2ND YEAR



OF A MOVING LOCOMOTIVE]



Open-ended Design

The Olin curriculum offers increasing opportunities for students to use their creativity and engineering skills in "open-ended" design projects. These begin with simple projects like mechanical "wall walkers" (left) and culminate in the senior capstone, a major, yearlong effort.

Research at Olin

Olin College vigorously supports new and continuing scholarship, research in a wide variety of fields, innovation in engineering education, multidisciplinary initiatives, entrepreneurship, and other forms of intellectual vitality. These opportunities exist not only for our faculty, but also for Olin students as early as their first year.



3RD YEAR

1st Semester	GENERAL ELECTIVE	ENGINEERING Engineering Core	ENGINEERING Engineering Core	AHS Arts, Humanities, or Social Science Course	= 16 credits
mester	ELECTIVE	ENGINEERING Engineering	ELECTIVE	AHS/E! Arts, Humanities,	= 16 credits

THE OLIN CURRICULUM

Depth

[BUILDING THE AIRPLANE



Mentoring

Olin's small size and low student/faculty ratio mean there are plenty of opportunities to work closely with faculty. Contact with faculty can range from interactive classroom learning to help with assignments to mentoring in scholarly research.

or Social Science

Passionate Pursuits

Kori Haymore ('06) fulfilled her lifelong dream of receiving a pilot's license (right) as part of Olin's Passionate Pursuits program, which provides curricular and financial support for the study of personal interests. Inspired by another passion—math education reform—Haymore entered and won a national essay contest and presented her ideas on Capitol Hill.



2nd Ser

4TH YEAR



AS IT'S FLYING]



Interdisciplinary Learning

To a degree unusual in higher education, faculty collaborate to deliver the course material at Olin. The sophomore "Tough as Nails" course block, for example, brought together materials science and history in an examination of the evolution of metalworking through the ages.

Internships

Internships are a natural extension of Olin's hands-on learning environment. Through these structured workplace experiences, students (such as Kate Walsh, right, with her Living MicroSystems supervisor) gain real-world insights into engineering problems; the college builds connections to the corporate world.



"I think the ultimate goal for any engineering school is to teach students how to analyze and solve problems, regardless of the field of study—and while I don't know that this is the case elsewhere, I really feel that Olin is working towards that goal. Olin will have taught me aspects of design, manufacture, business, and plain old problem solving, and I think these skills will be far more valuable than remembering exactly what a five-point discrete Laplacian is." *Brian Shih ('07), Carrollton, TX*

"This summer I'll be working at Olin with Professor Debbie Chachra in biomaterials, doing studies of bone and collagen. Summer research appeals to me greatly because I get to work on hands-on, intensive, and short-term projects. It's great to be able to finish the summer and have that sense of accomplishment." *Erin McCusker ('06), Lillington, NC*

"Olin is attracting the best, brightest students to a program rich in hands-on, project-based learning, balanced with humanities, and enhanced by its entrepreneurial partnership with Babson College. Olin graduates will be exceptionally well prepared to tackle lifelong careers in science and engineering. I expect they'll be among tomorrow's business leaders."

Wayne C. Johnson Executive Director University Relations Worldwide Hewlett-Packard Company "This summer I'll be going to Texas for 10 weeks to do biomedical research with several med students and a professor at Texas Tech University. I'll be researching the ethanol sensitivity of the receptors in various regions of the brain. The staff and faculty at Olin were helpful; they let me know what opportunities were available and assisted me with the application process. Because of the fast-paced and project-based courses that I took my first year at Olin, I was able to get an internship that is not usually offered to first-year students." Sylvie Boiteau ('07), Upton, MA

FROM THE [NOT SO] HERE AND NOW

"Olin has taught me tenacity, determination, and how to take the lead when I need to. It's also caused me to expect constant change and feedback—and for this reason I have the feeling that Olin students will have trouble working as just another cubicle-warmer in a large corporation, but will flourish in small, more personal environments and in startup companies, where we can make the differences we want to." *Mikell Taylor ('06), Gahanna, OH*

"This summer, I'll be on campus working with nine other students for a joint Olin-NASA program. We're working on establishing a connection between our school and NASA for future involvement and internships. Our group is working to create a control system for an X-ray source that NASA uses to test spaceflight equipment. It's extremely rewarding to know you're helping build something that will be used extensively for future NASA projects." *Adam "Joe" College ('07), Clearwater, FL*

"This summer, I will be working at an internship at Seahorse Power Company, the company we started with Babson MBA students. Our first product is the SunPack BigBelly (a solar-powered trash compactor), and two fellow Olin students, Bret Richmond and Mikell Taylor, and I will be the leaders of development and production. This is going to be an incredibly exciting summer for us as we prepare to take it into large-scale production – and to launch a second product." *Jeff Satwicz ('06), Newton, MA*



TO INFINITY AND BEYOND

Internships

Our students have landed great internships.

Organizations and nonprofits: MITRE Corporation, Soldier Systems Center–Natick, IBM, Sensicast, Raytheon, Boston Engineering Corporation, Bose, Living MicroSystems, Foster-Miller, DesignMentor, Central Intelligence Agency, Herley Industries, Utah Energy Office (Wind and Renewable Energy Program), Boeing Corporation, The Jason Foundation, SpectraAstro.

National labs: Idaho National Engineering and Environmental Laboratory, Sandia National Laboratory, Lawrence-Livermore National Laboratory, Lawrence-Berkeley National Laboratory, Los Alamos National Laboratory.

Research Experiences

The list of freshman and sophomore lab experiences is already impressive: SUNY Stony Brook (Department of Biomedical Engineering), University of Chicago (Physics Research Experience for Undergraduates: Materials Research Science and Engineering Center), Tokyo Institute of Technology



(SURF Georgia Tech), Boston University (Biomedical Engineering), MIT (Materials Processing Center), Stanford University (NNIN Research Experience for Undergraduates Program), University of Illinois (Physics Research Experience for Undergraduates: Computer Aided Design of High Nitrogen Steels), Oregon State University (Electrical Engineering and Computer Science Research Experience for Undergraduates: Coding and Graph Theory), Tufts University (Coffin Virology Laboratory), Texas Tech University (Summer Accelerated Biomedical Research Internship), NASA-Sponsored Research Grant at Olin.

(This is just the start.)



Breaking Molds: A Different Kind of Teacher

From around the nation, the masterminds behind some of the best ideas in engineering education have come together as a faculty at Olin. Having taught at such engineering powerhouses as MIT, Vanderbilt, and UC-Berkeley, having worked for the likes of NASA and on such research as the human genome project, they possess an unparalleled combination of experience and insight. So why did they leave

prestigious jobs to take a risk on a college that didn't even exist? They wanted to do something creative to build a model for engineering education that would have wide influence and lasting value. They wanted to work more closely with students. They wanted to have fun at work. And that's their aim for their students, too.



"Learning at Olin is jaw-dropping. The relationships we build with professors help us learn because we feel comfortable working with them. I can walk into my professor's office to talk about sovereignty, the superiority of Macs, and, if I feel like it, the solution to Laplace's Equation."

Keoni Mahelona ('07), Lihue, HI THE OLIN FACULTY numbers 32: 19 men and 13 women, about one for every seven students. Their expertise ranges from high-energy astrophysics to Chopin, from artificial intelligence to cooking, from metallurgy to French. To Olin students, they are teachers, partners, role models, and friends.

Richard Miller President; Professor, Mechanical Engineering

Before Olin: Dean, College of Engineering and professor, University of Iowa . M.S., mechanical engineering, MIT; Ph.D., applied mechanics, Caltech Accomplishments: Started nation's first Technological Entrepreneurship Certificate Program for engineers . Five teaching awards at two universities · Expert in earthquake engineering and spacecraft design; consultant to Aerospace Corporation, NASA's Jet Propulsion Laboratory, Hughes Aircraft Company, Astro Aerospace Corporation Authored 100 technical publications Research: Structural dynamics and nonlinear mechanics Quirky fact: Paid college expenses

playing in rock band; once shared stage with Janis Joplin

David Barrett Associate Professor, Mechanical Engineering and Design; Director, Capstone Project Program

Before Olin: Vice president, engineering, iRobot Corporation • Founder, director, division of Walt Disney Imagineering Corporation • Ph.D., M.S., ocean engineering, M.S., mechanical engineering, MIT

Accomplishments: Many published articles • Member IEEE Robotics and Automation, Vehicular Technology, and Ocean Engineering Societies Research: Mechanical design, maritime construction, robotics, entrepreneurship and product and computer design Quirky fact: Holds eight patents, including Wheeled Platforms, with colleagues

Hillary Thompson Berbeco Assistant Professor, Chemistry

Before Olin: Director's Postdoctoral Fellow, Los Alamos National Laboratory • M.S., applied earth sciences; Ph.D., geological and environmental sciences, Stanford Accomplishments: National Science Foundation Graduate Research Fellowship, American Geophysical Union Student Poster Award • Ph.D. research used synchrotron x-ray and pulsed neutron sources to characterize materials at the nanoscale . Product development, marketing, and environmental consulting Research: Chemistry and thermodynamic properties of novel catalyst materials intended for fuel cell use Quirky fact: Gymnast and mom who teaches yoga and does handstands

John Bourne

Professor, Electrical and Computer Engineering; Director, Sloan Center for Online Education, Olin/Babson

Before Olin: Professor, electrical and computer engineering and professor, biomedical engineering, Vanderbilt • M.S., Ph.D., electrical engineering, University of Florida

Accomplishments: Promoted online learning among more than 700 highereducation institutions • Fellow, IEEE and American Institute of Medical and Biological Engineers • Editor-in-chief, Begell House Critical Reviews in Biomedical Engineering; founder/editor, Journal of Asynchronous Learning Networks Research: Brain research, artificial intelligence, distance learning Quirky fact: Played French horn in symphony for a decade

Debbie Chachra Assistant Professor, Materials Science

Before Olin: Postdoctoral associate, materials science and engineering, MIT • M.S. and Ph.D., materials science, Toronto Accomplishments: National Sciences and Engineering Research Council of Canada postdoctoral fellowship, Medical Research Council of Canada graduate fellowship Research: Models mechanical interac-

tion of cells with tissue; biomaterials and low-energy particle physics **Quirky fact:** Knows how to use spices ranging from asafoetida to zaatar

Mark L. Chang Assistant Professor, Electrical and Computer Engineering

Before Olin: Ph.D., electrical engineering (and instructor, senior-level design), University of Washington; M.S., electrical and computer engineering, Northwestern

Accomplishments: Intel Foundation Graduate Fellowship in 2002-03. Research: FPGA arithmetic and architecture, computer-aided design tools, reconfigurable computing, and VLSI design

Quirky fact: Keeps musical instruments and cars in tune

Rebecca Christianson Assistant Professor, Applied Physics

Before Olin: Post-doctoral researcher, instructor, Harvard; Ph.D., MIT Accomplishments: Teaching award, Derek Bok Center for Teaching and Learning, Harvard • Article, "Crystallization Kinetics of Binary Colloidal Alloys," summarized results of 2001 International Space Station experiment. Research: Self-assembly kinetics in two-component colloidal systems, anisotropic colloids, and surfactant systems; high-temperature superconductors and other low-dimensional magnetic materials

Quirky fact: Enjoys music (B.A. from Stanford, in fact), hiking, canoeing, cooking, gardening, and board games, not usually all at the same time

Jill Crisman Associate Professor, Electrical and Computer Engineering

Before Olin: At Northeastern, associate professor, electrical and computer engineering; director, Robotics and

Vision Systems Lab; adjunct, computer science, industrial engineering, information systems; co-advisor, biology •
M.S., electrical engineering, Pittsburgh; Ph.D., electrical and computer engineering, Carnegie Mellon
Accomplishments: Patented anthropomorphic robotic hand • Served on proposal review panels, National Science Foundation • Associate editor, *IEEE Robotics and Automation Society Magazine;* chair, IEEE's Boston chapter
Research: Color robotic vision systems
Quirky fact: Built "lobster" robot simulation; wants to "program" her triplets

Diana Dabby Assistant Professor, Electrical Engineering and Music

Before Olin: Visiting lecturer in music at Tufts and visiting lecturer in electrical engineering and computer science at MIT simultaneously • M.S., Ph.D., electrical engineering/computer science, MIT; M.F.A., music, Mills

Accomplishments: Best Poster prize at International SIAM Conference on Applications of Dynamical Systems • International concert pianist (soloed at Carnegie Hall); has given concert/ lectures on her work sponsored by MIT, Princeton, Cornell, and Dartmouth, among others. Teaches at Juilliard • Writing a book, Variations and Shadows—Music from Chaos Research: Uses chaos theory, generating musical variations of original works Quirky fact: Most exciting moment rafting down class VI rapids in Georgia

Helen Donis-Keller Professor, Biology and Art

Before Olin: Professor of surgery; director, Division of Human Molecular Genetics; joint appointments as professor of genetics, professor of genetics in psychiatry, Washington University School of Medicine • Ph.D., biochemistry and molecular biology, Harvard; M.F.A., studio art, School of the Museum of Fine Arts and Tufts Accomplishments: Art and science interests • Led research that developed first genetic linkage map of the human genome in 1980s • Authored 150+ science publications Research: Investigating the relationship between genotype and phenotype Quirky fact: Created art piece from 176 images derived from her Sam's Club membership card photo

Allen Downey Associate Professor, Computer Science

Before Olin: Faculty member, Colby, Wellesley; researcher, San Diego Supercomputer Center and Boston University • M.S., civil engineering, MIT; Ph.D., computer science, UC-Berkeley Accomplishments: Wrote *How to Think Like a Computer Scientist,* introduction to Java, C++, Python • Founded Green Tea Press to print free textbooks Research: Application of empirical science tools to computers and networks Quirky fact: Enjoys jazz and plays alto saxophone very badly (he says)

John Geddes Associate Professor, Mathematics

Before Olin: Assistant professor, mathematics, University of New Hampshire • Ph.D., applied mathematics, Arizona Accomplishments: NIH grant to study mathematics of microvascular blood flow Research: Laser-based chaotic communication schemes and pulse dynamics in model locked lasers Quirky fact: Owns a cockatoo

Stephen Holt Physics Professor, Olin/Babson; Sciences Director, Babson

Before Olin: Director, space sciences, NASA-Goddard Space Flight Center • Ph.D., physics, NYU

Accomplishments: Principal investigator and/or project scientist on eight NASA space missions • 200+ publications in journals and scholarly books; 100 major conference presentations • Leader in National Academy of Science, American Physical Society, and American Astronomical Society • Received NASA's highest civilian honor **Research:** High-energy astrophysics and supernovas

Quirky fact: Serious "B" tennis player

David Kerns, Jr. Provost, Franklin and Mary Olin Distinguished Professor of Electrical and Computer Engineering

Before Olin: Orrin Henry Ingram Distinguished Professor in Department of Electrical and Computer Engineering, Vanderbilt • M.S., Ph.D., electrical engineering, Florida State

Accomplishments: Established microelectronics research programs and education labs at several universities • Bell Labs technical staff member • IEEE Fellow and Millennium Award • Founded two successful technology start-ups • Directed Vanderbilt's Management of Technology program Research: Microelectronics and engineering education Quirky fact: Patents include sunglasses that enhance viewing for tennis

Sherra Kerns

Vice President for Innovation and Research, F. W. Olin Professor of Electrical and Computer Engineering

Before Olin: Chair, Department of Electrical and Computer Engineering, Vanderbilt • M.A., Wisconsin; Ph.D., UNC—both in physics

Accomplishments: Ex-director. University Consortium for Research on Electronics in Space . President, American Society for Engineering Education (ASEE), 2004-05 • Harriett B. Rigas Outstanding Woman Engineering Educator Award, ASEE . ECE Distinguished Educator Award, and IEEE Millennium Award . Leader with National Electrical Engineering Department Heads Association and ASEE • Evaluator for Accreditation Board for Engineering and Technology Research: Microelectronic circuits Quirky fact: Collects art that makes her laugh





Benjamin Linder Assistant Professor, Mechanical Engineering

Before Olin: M.S., Ph.D., mechanical engineering, MIT

Accomplishments: Cofounder, software company delivering product development tools to large manufacturing firms **Research:** Entrepreneurship and business structures for social ventures • Product design and design education, including estimation, ecodesign, and developing world design

Quirky fact: Goes by "Lin2 De2" in Mandarin, which he practices off and on

Caitrin Lynch Assistant Professor, Humanities and Social Sciences

Before Olin: Assistant professor, anthropology, Drew; Mellon postdoctoral fellow, Johns Hopkins • Ph.D., cultural anthropology, Chicago Accomplishments: Completing book, Producing Garments, Producing Identities: Gender and Cultural Politics in Sri Lanka's Global Garment Industry Research: Gender, labor, nationalism, and globalization; focuses on postcolonial Sri Lanka and the U.S.; comparative ethnographic and historical studies Quirky fact: Got lost in fog atop an Indonesian volcano; speaks Sinhala and Tamil (not that it helped)

Robert Martello Assistant Professor, History of Science and Technology

Before Olin: Digital History Annotations and Features Producer for undergraduate history text *Inventing America* • M.S., civil and environmental engineering; Ph.D., history and social study of science and technology, MIT Accomplishments: Researched Paul Revere narrative from technological, environmental, and entrepreneurial perspectives (recent article won two major awards) • Consultant on the environment and for an online publishing company • Programmer Research: Paul Revere and metallurgical work after the Revolution Quirky fact: Writing a screenplay on the road to the American Revolution

Bradley Minch Associate Professor, Electrical and Computer Engineering

Before Olin: Assistant professor, School of Electrical and Computer Engineering, Cornell • Ph.D., Computation and Neural Systems program, Caltech Accomplishments: Numerous teaching awards; Cornell's 2003 IEEE student organization's professor of the year; NSF Early CAREER Award Research: Analog and mixed-signal integrated circuit design Quirky fact: Pizzeria Uno fanatic known to drive 100 miles for a Chicago Classic

Michael Moody Dean of the Faculty; F. W. Olin Professor of Mathematics

Before Olin: Chair, Department of Mathematics, Harvey Mudd • Ph.D., applied mathematics, Chicago Accomplishments: Developed nationally recognized applied mathematics curriculum • Co-designer, developer of award-winning ODEArchitect software program • Author of books on integrating technology into calculus curriculum • Fulbright fellowship Research: Biomathematics (genetic models for evolving populations), mathematics education Quirky fact: Often asked if he is

Kevin Kline

Gill Pratt Associate Professor, Electrical and Computer Engineering

Before Olin: Associate professor, electrical engineering and computer science, MIT • M.S., Ph.D., electrical engineering and computer science, MIT Accomplishments: Directed MIT's Leg Laboratory • Invented "dinosaur" robot featured in *Scientific American* Research: "Series-elastic" actuators and "virtual model" control languages Quirky fact: Raced solar-powered cars in Australia and Europe

Joanne Pratt Assistant Professor, Biological Sciences

Before Olin: Instructor, Division of Cell Biology and the Department of Pediatrics, National Jewish Medical Research Center • Ph.D., immunology, Penn Accomplishments: National Research Science Award Individual Fellowship and Medical Foundation Fellowship • Presented research at national and international conferences Research: Factors that control the

growth and functional programs of white blood cells

Quirky fact: Known to run marathons and climb 14,000-foot mountains

Stephen Schiffman Associate Professor, Olin/Babson

Before Olin (and today): Faculty member, Babson • M.S., management, MIT; Ph.D., mathematics, Dartmouth Accomplishments: Architect of Babson's award-winning undergraduate curriculum • Worked at DEC Research: Information systems Quirky fact: Accomplished clarinetist

Mark Somerville Assistant Professor, Electrical Engineering and Physics

Before Olin: Assistant professor, physics, Vassar • M.S., electrical engineering, MIT; M.A., physics, Oxford; Ph.D., electrical engineering, MIT Accomplishments: Joint Services Electronics Program Doctoral and Post Doctoral Fellowship, Office of Naval Research Graduate Fellowship, and Rhodes Scholarship • Voted Vassar's "Outstanding Teacher" by students Research: Physics of semiconductors Quirky fact: Considered dropping out of graduate school to go to cooking school

Sarah Spence

Assistant Professor, Mathematics

Before Olin: M.S., Ph.D., Cornell; both in mathematics

Accomplishments: Research at NATO Advanced Study Institute and National Security Agency • Book on algebraic coding theory • Exxon Mobil Fellow in the Mathematical Association of America's Project NExT

Research: Cryptography

Quirky fact: Competed internationally in Lindy Hop (the original swing dance)

Lynn Andrea Stein Professor, Computer Science

Before Olin: Associate professor, computer science, MIT • M.S., Ph.D., computer science, Brown Accomplishments: Computer-science teaching pioneer • GE Foundation Faculty for the Future Award, National Science Foundation Young Investigator Award, and Ruth and Joel Spira Teaching Award • Publishing textbook that will revolutionize computer-science teaching Research: Computer-science education Quirky fact: Has built a robot baby and an "intelligent room"

Jonathan Stolk Assistant Professor, Mechanical Engineering and Materials Science

Before Olin: Visiting assistant professor, Bucknell • M.S., Ph.D., materials science and engineering, UT–Austin Accomplishments: Several teaching awards; voted "Bucknell's Favorite Professor" by students • Research scientist, Institute for Advanced Technology Research: Novel metal alloys and metal-polymer nanocomposites Quirky fact: Developed world's best green salsa

Brian Storey Assistant Professor, Mechanical Engineering

Before Olin: M.S., mechanical engineering, Illinois; Ph.D., mechanical engineering, UC–Berkeley Accomplishments: Ph.D. research involved detailed computational modeling in the study of sonochemistry • Worked in active sonar systems and underwater acoustics at University of Texas Applied Research Labs Research: Fluid mechanics, computational science and engineering Quirky fact: Known for "trash talk" before student/faculty basketball games

Burt Tilley Associate Professor, Mathematics

Before Olin: Assistant professor, mathematics, and Honors College instructor, NJIT • Ph.D., applied mathematics, Northwestern Accomplishments: NSF-NATO Postdoctoral Research Fellowship at Hydrodynamics Laboratory at Ecole Polytechnique in France • Presented research at numerous national and international conferences; work published in leading peer-reviewed journals **Research:** Stability and pattern formation on the interface between two fluids **Quirky fact:** Enjoys swimming, reading, playing with his children, and just about anything French

Jessica Townsend Assistant Professor, Mechanical Engineering

Before Olin: Post-doctoral associate. FAA/NASA Center of Excellence for Aviation Noise and Emissions Mitigation, MIT: instructor, mechanical engineering, MIT • performance engineer, Hamilton Sundstrand Power Systems . Ph.D., aeronautics and astronautics, MIT Accomplishments: Liaison, Aeronautics and Astronautics Department head search · co-founder, Graduate Association for Aeronautics and Astronautics . recipient, AIAA Foundation Wilbur and Orville Wright and Gordon C. Oates Air Breathing Propulsion awards; American Association of University Women Engineering Dissertation Fellowship Research: Heat transfer, thermodynamics and fluid dynamics Quirky fact: Enjoys learning new things-from pottery to snowboarding to meteorology

Yevgeniya V. Zastavker Assistant Professor, Physics

Before Olin: Visiting assistant professor, physics, Wellesley • Ph.D., biological physics, MIT Accomplishments: Active in rigorous program to introduce promising underrepresented high school students to science, engineering, and business Research: Helical ribbons formed in quaternary sterol systems Quirky fact: Taught belly dancing as a co-curricular

ACADEMIC PARTNERS

Woodie Flowers Distinguished Olin Partner

Before Olin (and today): Pappalardo Professor of Mechanical Engineering at MIT (serves concurrently) . S.M., M.E., Ph.D., mechanical engineering, MIT (minored in art for Ph.D. program) Accomplishments: Hosted PBS television series Scientific American Frontiers NASA Public Service Medal • MIT MacVicar Faculty Fellow for extraordinary contributions to undergraduate education • Director of four companies Technology Review board member Research: Creative design process and product development systems Quirky fact: Has tried hang-gliding, ultralights, skydiving, and drumming

Janey Pratt Senior Partner in Health Sciences

Before Olin (and today): General surgeon, Massachusetts General Hospital; instructor in surgery, Harvard Medical School • M.D., Tufts, School of Medicine Accomplishments: Member, American Society of Bariatric Surgeons, Society of American Gastrointestinal Endoscopic Surgeons

Research: Magnetic endoscopy and minimally invasive surgery for obesity Quirky fact: Southerner who lived in Indiana, then Maine, and spent two years in Paris and Brussels

CONSULTANTS / INSTRUCTORS

David Anderson Master Instructor, Mechanical Design and Fabrication

Timothy Hemesath Ph.D. Laboratory Specialist





I think the thing Olin does really well is teach the ability to learn. A lot of the specific skills won't be important in 15 or 20 years, but it

won't matter, because we'll be able to figure out the new stuff.

There is no such thing as busywork here. Everything you do applies to something—a project, another class, something.

There is a difference between workload and difficulty. Olin focuses more on difficulty and thought process than on assigning tons of work, which is really great.

I think our students will be more able to tolerate risks when they get out. Making a conscious choice of what you want to do and then doing it means you will not be pushed around so much by circumstance.

OLIN STUDENTS SAY:

This is a feedback culture. We try to improve our classes. We try to use our free time intentionally.

We were supposed to design a toy that would climb a glass wall. We had some notable team-dynamic issues, but by the end of it, we actually were communicating and working as a team. Although the project didn't turn out the way we planned, I learned a whole lot about working with others, getting over your differences, and getting the job done.



We're trying to produce graduates who will be the kind of employees a company will turn to when they need to get something done the kind of employees who can rise rapidly, who understand not only the engineering but also the context in which they are operating.



Entrepreneurship is really about identifying opportunity, assessing the opportunity, marshalling resources to create something that

The ingenuity to imagine that which does not exist and then make it or orchestrate how it is made—as an engineer does—is a creative art. doesn't exist that has value for someone else. That's what our students are interested in.

We tend to deal with a lot more ambiguity than a traditional engineering program, where you walk in the door and are told what you'll be doing for the next four years. Here, we have a road map, in that we have a curriculum design—but we know it's going to change.

In high school, I was totally involved with math and science, but I was also in charge of the literary magazine and the yearbook. So when I graduate from Olin, I plan to be not only great at engineering—well, I hope to be great at engineering—but I also want to keep everything in balance.

OLIN FACULTY SAY:

Engineering is a way of looking at the world and understanding the dynamics of systems that is important no matter what the occupation.

My freshman year, we had a course called The Next Big Thing, which was basically using wireless technology to create a great innovation. My team made a game called RC Laser Tag, using remote-control cars. We did a lot of hand waving, and we taught ourselves a lot about circuitry. At the end, it was not what we had originally The kind of engineer we want to educate is the one who is likely to come up with the answer to the question you did not think to ask.

planned, but it certainly did work. It was exciting. It was neat.

In my courses, I ask for feedback in every class. How is the class running? What are our learning objectives? What do you think you got out of that? It keeps us all on track.





9 a.m.

A DAY IN THE LIFE

"My typical day: get up, shower, get dressed, go to class, do class work, go to sleep. What makes it different from the daily life of every other college student on the face of the earth? The details. What you can't tell from the pictures is all the activities I participate in outside of class-socializing, playing in an orchestra, making yummy Asian food, fencing, starting political discussionsthe list goes on and on. I even dressed up as a pirate for Pirate vs. Ninja Day. I love Olin because there is no 'average' day. Every morning I wake up and know that I'll learn something new or try something different." Kristen Dorsey ('07), Olympia Fields, IL

n



OLI



12 p.m.

Breaking Molds: Student-Designed Student Life

Looking to spend four years in century-old buildings named after "departed" alumni? Then Olin's not for you. We're building history and traditions—and we're inviting your help. Everything here—including classrooms and curriculum—is new, but we have plenty of opportunities for involvement and inventive leadership.

Olin students are busy creating the college's legacy, starting clubs and organizations, interpreting their Honor Code, working with professors to design classes, shaping the student government, and volunteering in the community. There may be no other college where students—intelligent, energetic thinkers and doers—have such influence over their surroundings.



"The distinctive feature of Olin's Honor Code is the 'Do Something Clause,' which requires students to actively work to resolve problems. People here don't sit back and let others take care of issues. You'll hear 'Do Something' often at Olin, and not just with regard to the Honor Code."

Mike Curtis ('06), Cedar Rapids, IA



"I'm surrounded by people with interests as varied as mine. In the residence hall, we hang out and talk, play games, watch movies, eat pizza, and do homework—sometimes all at once, and sometimes until 3 in the morning. Until you've lived in a dorm at a "normal" college (or a large state u., as I did), you can't fully appreciate the luxury of the Olin res hall." *Lee Edwards ('07), Port St. Lucie, FL*

RESIDENCE HALL

"It's amazing what we can accomplish." Que Anh Nguyen ('06), San José, CA

LEFT-BRAIN FASCINATING

"The thing that makes Olin unique among other colleges and universities is both the opportunity and the obligation that students have to actively contribute to the building and development of the college. Olin students are present on committees dealing with everything from curricular decisions to oversight of independent study and research projects to accreditation to implementing the Honor

Code. All this makes for a tremendous learning experience. Kate Blazek ('06), Palo Alto, CA

"Olin students are characters. Living and studying with them has been so much fun!" Kori Haymore ('06), Kurtistown, HI



"Olin gives people the chance to learn real-world skills—like running a meeting or founding an organization. My experiences in the Hillside Elementary service project, Franklin W. Olin Players, the Chinese Club, Por Supuesto (the Spanish co-curricular), 76 Trombones (marching band club), and the Big Conversations committee allow me to see other people's talents." Alex Dorsk ('07), Cape Elizabeth, ME



NO LIMITS EXCITING TREMENDOUS RIGHT-BRAIN



"I am impressed by how many Olin students excel in the arts (music, visual arts, writing, and more). As the people we are, I think we get the left side of our brain exercised strenuously by the technical engineering classes of the curriculum, so to balance it out we also enjoy working and pushing the right side of our brains to be creative." *Janet Tsai ('06), Fort Collins, CO*

"I've been helping to plan and run the Spanish co-curricular for the past year, which involved having a Spanish-only table at lunch some days, watching Spanish movies on the weekends, and celebrating the rich culture of Hispanic countries. These activities helped me maintain my Spanish skills. This summer I'll spend in Costa Rica in a Spanish immersion program in preparation for the fall abroad at Universidad des las Americas in Puebla, Mexico." *Kimberly McCraw ('06), Fort Worth, TX*



DOERS, NOT SPECTATORS. When Olin students break away from books and projects (and they often do) you'll find them applying their talents to volunteer projects like Engineers Without Frontiers and Habitat for Humanity. You'll also find them playing intramural sports or feeding their passions through participation in their own creations,

like the jazz orchestra, the school paper, or ping-pong, comic book, or cooking clubs.



Co-curriculars

Olin's co-curricular offerings combine fun and intellectual awareness. Faculty and staff members lead the groups and award transcript notation to participating students. Different co-curriculars are offered every semester. Some examples: American Sign Language, Architecture and the Environment, Current Events Table, Introduction to Northeast Salt Water Fishing, La Vie Boheme, Math Table, Olin Dance Project, Ornithology for Engineers, and Yoga.

Volunteer Service

Whether developing technology solutions for wheelchair-bound adults, refurbishing computers for underprivileged Needham families, or producing information resources for the elderly, Olin students make a difference. SERV (Support, Encourage, and Recognize Volunteerism) provides opportunities for significant service. As in the philanthropic roots of the college, SERV instills a spirit and practice of giving back. THE HONOR CODE is the foundation for student life at Olin-not a class in ethics or a set of commandments etched in stone by the foundersbut the underpinning of our curricular, co-curricular, social, and personal lives. It is a living document, created, signed and governed by Olin students, and respected by all. The Honor Code: As a member of the Olin College community, I will strive to embody the spirit of honor and integrity as defined by the five core personal values-Integrity...Respect for Others... Passion for the Welfare of the College...Patience and Understanding...Openness to Change ... and will take action to address any breach of that spirit.

Sports

Olin students may play on Babson club or intramural teams including soccer, tennis, basketball, rugby, volleyball, hockey, and golf. Each season, Olin's own intramural program offers two activities including ultimate Frisbee, volleyball, softball, and basketball. Olin has two outdoor fields as well as access to Babson's extensive indoor facilities.

Events

The Student Activities Committee (SAC) is always busy, planning Hawaiian luaus, winter formals, laser tag trips, mass movie viewings, and the like. Recurring events include ExpressO open-mike talent shows, ice cream study breaks, spring barbeques, video game tournaments, and egg fights with the faculty.

Organizations

Olin students have started—and continue to start—organizations to match their interests. See http://core.olin.edu.



76 Trombones Babson Olin Catholic Association Olin Bowlin' Club Butterfingers Club (Juggling) Chinese Club Christian Club Comic Book Club Cooking Club Franklin W. Olin Players (Drama) F.I.L.M. Club Frankly Speaking (Newspaper) Game Club Hawaii Club In Decent Exposure International Club Japanese Club Jazz Orchestra Korean Club MacOS Many Faces of Engineering Massage and Therapy Club **Olin Automotive Enthusiasts** Olin Political Caucus Olin Broadcasting Club Olin Entrepreneurial Group (OEG) **Olin Star Gazing Society** Open **Open Computing Project Outing Club** Ping-Pong Club Sci-Fi Club Student Martial Arts Club (SMAC) Trivial Video Game Club ("Friendly Fire") Wanderlust Weapons Handling And Combat Kakistocracy (WHACK) Yearbook Club What club will you start?

Olin students are also eligible to join most of the 50-plus groups at Babson College including the Players, Babson College Radio, Improv Troupe, Babson Marketing Association, C-Notes a cappella, and Ice Hockey Club. Wellesley offerings include the Quiz Bowl Tearn, Art Club, Science Fiction & Fantasy Society, Amnesty International, Mock Trial, and Snowboard Club.



Every culture creates its own language, and so it is with Olin. Here are a few terms that have special meaning:

Ant Farm: Olin's Academic Center, which houses classrooms and labs, wood and machine shops, seminar and meeting rooms, and faculty research labs.

Away Experience: Each Olin student has the opportunity to experience learning "away" from the College-through an internship or study abroad, for example.

Conductorless Orchestra: Dedicated to the collaborative spirit of chamber music, the ensemble is conductorless. (Or is it semiconductorless?)

CORe: Council of Olin Representatives, student government.

Do-learn/Learn-do: A method of teaching in which students undertake projects that require them to seek and immediately apply new learning.

Expo: A student-run, end-of-semester "exposition" showcasing academic, co-curricular, Passionate Pursuit, and volunteer work.

FWOP: Franklin W. Olin Players drama club produces a radio drama and a full-stage production each year.

ICB: Integrated Course Block, in which multiple faculty members teach courses synchronized with a hands-on project. Coordinates the understanding of underlying disciplines and real engineering problems.

Oliner: A current Olin student.

The Oval: Grassy center of campus, ideal for impromptu games, studying, and relaxation.

OVALs: Olin Volunteer Ambassador League conducts tours for the Office of Admission and hosts overnight and day visits of prospective students.

Ninjas: Need info now (just ask)-a student peer-tutoring program in math and physics. Also used to describe anyone skilled in a field ("Zack is a real Linux ninja").

Passionate Pursuits: Program enabling students to develop interests and complete projects with faculty guidance (and, often, Olin funding) for non-degree credit.

Phoenix: The Olin College mascot.

R2: Resident Resource-student on each residence hall floor who answers questions, solves problems, provides support, and creates a safe and fun living environment.

SERV: Support Encourage and Recognize Volunteerism, Olin's volunteer organization.

Sibbs: A program that builds bridges between freshmen and volunteer sophomores, who adopt freshmen to help them adjust to the unique culture and quirks of Olin.

Spiral Learning: Learning that occurs in the course of a project during which students struggle, but realize what they have learned retrospectively.

Squirt-squirt: An Olin metaphor in which the student is a fish flopping and gasping (for understanding) on the deck and the professor is squirting just enough water (information) on it to keep it alive (thinking).



Breaking Ground, Breaking Out: The Place

Olin students benefit from all that surrounds them their own campus, the neighboring campuses of Babson, Brandeis, and Wellesley; the town of Needham; the corporate world of Route 128; and the city of Boston. Together, the four campuses give Olin students an incredibly broad range of educational and extracurricular opportunities. Needham meets

everyday needs and gives students a real community. Nearby Route 128, "America's Technology Highway," is home to many big-name, high-tech corporate partners. And Boston, America's primo college town, offers all the culture, nightlife, sports, and entertainment a student could want.



"For a college of its size, the diversity of extracurricular and co-curricular activities at Olin impresses me. It is also comforting to know that additional academic and extracurricular opportunities exist. This year, I enjoyed and excelled in two Babson history classes; next year, I hope to enroll in a Wellesley English course and, perhaps later, take one at Brandeis."

Alex Epstein ('07) Brooklyn, NY Member, Franklin W. Olin Players

THE ACADEMIC CENTER

27 major classrooms and labs* Two amphitheater-style classrooms 12 seminar/meeting rooms 25 faculty labs and support rooms Media Control Center Music and art studios Ubiquitous wireless access

*Classrooms and labs feature fiber-optic connections, Crestron E-control, AV/IT convergence, cutting-edge video applications, and data/power at every seat

CONNECTIVITY FIBER-OPTICS

11

24/7 LAB ACCESS

THE OLIN CENTER

Administrative offices, including Admission Faculty offices Library/Knowledge Lab 300-seat auditorium IT Center Multi-story atrium
THE RESIDENCE HALLS

Double rooms with private bath. The newest-East Hall, includes doubles and suites of six singles and two baths.

Desktop connectivity: quad power outlets quad Cat6 copper for voice/data, CATV, fiber-optic capabilities, wireless access

Common living room and working gas fireplace on each floor

VoIP WIRELESS NODES

LAPTOP ENVIRONMENT

THE CAMPUS CENTER

Main dining facility Meeting and conference rooms Student activity rooms Office of Student Life Support Services Office of Post-Graduate Opportunities Beyond the Oval, Olin students find worlds of learning, opportunity, and fun—all connected and accessible. They can tap the brainpower of nearby colleges and the Route 128 high-tech corridor, and soak up the excitement and culture of Boston.





Babson College

Distance from Olin: Adjacent campus, connected by walking paths

What it offers: Business college with national reputation for top programs in entrepreneurship. 1,700 students. Olin students take business courses, participate in entrepreneurial activities, clubs, sports teams, and recreational events.

Brandeis University

Distance from Olin: 7.2 miles, via Olin-arranged taxi/minibus

What it offers: Sense of small, selective college; facilities, faculty of a large research university. Special strengths in social sciences, history, Judaic studies. 3,100 students. Olin students take courses in languages, theater, computer science, and laboratory sciences.

Wellesley College

Distance from Olin: 2.5 miles, via Olin-arranged taxi/minibus

What it offers: Top-ranked, multicultural women's liberal arts college, with strength in the sciences. 2,300 students. Olin students take courses in political science, social sciences, laboratory sciences, theater, and languages. "I try to remember that Boston is just a T-ride away. There's plenty to do in town—eating, shows, walks, concerts, shopping, and did I mention eating? Olin can be very intense, so I think it's important to just get away when you can." *Erin McCusker ('06), Lillington, NC*

Boston

Distance from Olin: 16 miles— 28 minutes by T (train), 20 minutes by car

What it offers: Culture and resources of an international city and its community of 200,000 undergraduate, graduate, and professional students at 60 colleges and universities—including some of the world's most renowned. Major museums, vast libraries, galleries, theatre, ballet, Red Sox, and Boston Symphony. Rich with America's history.

Needham, Massachusetts

Distance from Olin: 2 miles to center

What it offers: All the features of an attractive, small (population 30,000) New England town—pleasant neighborhoods, town square, churches, schools, shopping, coffee houses, restaurants, library, YMCA, community theatre. Check out the Minuteman Model Yacht Club, the largest in New England, Tuesday evenings at the village reservoir.

Route 128

Distance from Olin: 3.7 miles

What it offers: Concentration of high-tech firms including: Analog Devices, Bose, Brooktrout Technology, Cisco, Compaq, EMC, E.piphany, General Dynamics, Genuity, Lotus Development, Microsoft, Nokia, Nortel, Oracle, PTC, Raytheon, RSA Security, Storage Networks, Sun Microsystems. Internships, part-time and full-time jobs, engineering projects.

HOME

"I spend a lot of time doing community service. I am a platelet donor and volunteer at the Animal Rescue League of Boston's shelter in Dedham. Philanthropy is the basis for Olin College, and though I don't have much money, it's important to give where I can." Joles Arnold ('06), Middletown Springs, VT "I have taken classes taught by Babson professors and deans, sung in Babson's a cappella group for a year, and studied martial arts at Brandeis. Each of these keeps me interacting with people who are in many ways both the same and different from me. They make me realize the many different 'languages' and mindsets that I will have to work with after I leave Olin." Adam Horton ('06), Westford, VT



ACTIVE

METROPOLITAN

COMMUNITY

Babson

"I started rock climbing and am involved in a Passionate Pursuit that is going to build a bouldering space in a squash court over at Babson." *Yrinee Michaelidis ('07), Boston, MA* Needham

Wellesley



Breaking Loose: Ideas from Many Sources

In 1997, Barnes & Noble was fresh out of "primers" on how to start an engineering college. So, to obtain the best futuristic thinking, the founders the F.W. Olin Foundation—met with the National Science Foundation and some of the nation's leading educators and practicing engineers. They listened carefully as the Accreditation Board for Engineering and Technology told them that engineering education needed revamping. The vision is now being realized,

and we acknowledge the massive contributions of intellectual capital. Corporations, educational institutions, and friends continue to give resources, ideas, and time to our faculty and students. We continually thank those who are responsible for our short past and are just as essential to our future.



"Olin has a long way to go, but I know it will go in the right direction. All that potential energy cannot just disappear or it would break the Law of Conservation of Energy."

Kat Kim ('07), Union City, CA OLIN COLLEGE'S ROOTS are in the F. W. Olin Foundation, which over 66 years consulted on and funded construction of 78 buildings on 58 campuses around the nation. In 1997, the Foundation's trustees determined that its endowment could make a larger and more lasting impact if invested in establishing a model college of engineering. Their gift to Olin College, currently valued at about \$400 million (one of the largest gifts in the history of American higher education), has constructed the campus in Needham and created a college endowment out of which Olin student tuitions will be funded in perpetuity.



Campus Dedication





The Start-up

Airning to create a new paradigm for engineering education consistent with the goals of the National Science Foundation and the greater engineering community, the college launched Invention 2000, a two-year effort to fundamentally rethink engineering education and college operations. Led by Foundation President Lawrence W. Milas and Olin College President Richard K. Miller, the effort looked at every aspect of college



Franklin W. Olin: Through talent, hard work, and education, Franklin Walter Olin founded one of the nation's leading corporations and a major philanthropic foundation. His deep commitment to innovation and entrepreneurship continues to empower others.

Born in 1860, he grew up in Vermont lumber camps and had little formal schooling after age 13. Fascinated with rising technology, he continued his education through self-study and qualified for entrance to Cornell. There, he studied civil engineering and played baseball, setting a still-standing home-run record using a bat he invented.

In summers, he played professional baseball, worked for a patent attorney, and designed textile mill machinery before getting his big break: the chance to build a gunpowder mill. His own business grew, and he developed one of America's great companies—today, the Olin Corporation.

Mr. Olin used his wealth to create the F. W. Olin Foundation in 1938. He said, "I don't want the youth of the present generation to encounter the same difficulties in obtaining a useful education that I had to overcome when I was a boy." Those words are the basis of the Foundation's endowment grant, allowing Olin College to be tuition-free.

Even before graduating its first class, Olin has caught the attention of college rating guides:

The Unofficial, Unbiased Guide to the 328 Most Interesting Colleges, a 2004 Kaplan book, cites Olin's "out-of-the-box, innovative" academic environment. Along with Brown, Cornell, and Duke, Olin is recommended by the book's counselor survey for "students seeking a more unconventional academic environment."

Olin was named one of nine "hot schools" for 2002—before the first freshmen arrived—by the Newsweek/Kaplan *How to Get Into College* guide. The "college that didn't exist" shared the list with established institutions such as Vanderbilt, Michigan, and Vassar.

The Princeton Review included Olin in *The Best 357 Colleges*, a 2005 undergraduate guidebook. Olin is featured as one of eight schools receiving the publisher's "Best" designation.

Academic Partners

To invent Olin College, we needed to investigate existing "best practices" in academics, student life, finance, administration, marketing, and admission. Who better to ask than our sister institutions from throughout the world for a few ideas? Not surprisingly, they took some of our ideas too, which was exactly the intention of the founders—to be a new paradigm for engineering education.

Babson College: Olin's location next to the country's #1 program in entrepreneurship was no accident. We wanted our students to get the business and entrepreneurship portion of their education from the best. For Olin students, it means that shared facilities, performing arts, student groups, religious life, and athletics are all within a five-minute walk. Wellesley and Brandeis: Agreements with nearby Wellesley and Brandeis provide options for enrichment in the arts, sciences, and humanities, and for participation in student organizations.

Other colleges and organizations: Many institutes of higher education helped Olin College get off the ground. These relationships came in many forms, from paid consultancies to informal meetings among colleagues:

Aalborg University . Accreditation Board of Engineering and Technology . Alabama • Alverno College • American Academy of Engineering, Amherst . Arizona State • Bryn Mawr • Bucknell • Caltech • Carnegie Mellon • Colorado College · Colorado · Cooper Union · Dartmouth • Drexel • Ecole des Mines de Nantes · Georgia Tech · Georgia Tech-Lorraine • Green • Hampshire • Hartford . Harvard (College, Business School, and Medical School) . Harvey Mudd • Hope • International University at Bremen • Information and Communication University (Korea) . Kwangju Institute of Science and Technology . Lehigh • Maryland • Michigan • MIT • National Science Foundation • New Hampshire • North Carolina State • NSF Coalitions • RISD • Rose-Hulman RPI - Samsung Advanced Institute of Technology • Smith • Stanford • Swarthmore • Technical University of Denmark • Tennessee • Texas • Texas A&M • Trinity College • Tufts • UC-Berkeley • UMass-Amherst • UMass-Dartmouth • UMass-Lowell • University of Andes • University of Southern Denmark - University of Strathclyde • Vanderbilt • Washington · Williams · WPI

Corporate Partners

The fact is, all Olin students will eventually need work. That's right—a job! So, it makes perfect sense to listen to the advice of leading companies about how they envision their needs for future leaders of technology. It's Olin's job to use their opinions and resources to create an engineering education that will stand the test of fast-moving technical advances, scientific breakthroughs, limited resources, and uncertainty.

Corporate representatives advise Olin on issues related to leadership, curriculum and best practices, research and intellectual property, and career planning. Additionally, they have been exceedingly generous with grants for equipment, software, programs, facilities, and scholarships.

In return, our partners gain benefits from association with Olin. They have the opportunity to influence a model of education that will fundamentally alter the engineering profession of the future. They have access to a pool of interns who are exceptionally well prepared to develop creative solutions in a business environment. They gain opportunities to investigate points of contact between faculty research projects and corporate business goals, as well as opportunities to explore new products, new technologies, and new ways of doing business.

Industry friends: ARAMARK

Education • Bose • Boston Scientific • Crestron Electronics • DEKA Research and Development • Design Mentor • Extron Electronics • Fidelity Investments • Foster-Miller • General Dynamics C4 Systems • Hewlett-Packard • IBM • IDEO • Ingersoll-Rand • iRobot • Jason Foundation • MITRE • NASA • Natick Soldier Center • NORDX • Nortel Networks • Pernicka • Pharos • PTC • Raytheon • Segway • Sodexho Campus Services

The corporate world is already embracing Olin

The MathWorks—a world leader in engineering software development—donated its MATLAB and Simulink programs to Olin and is collaborating with Olin faculty to creatively incorporate the software into the college's curriculum,

A business hatchery at Olin— Foundry@1795—brings together Olin and Babson student teams, advised by faculty members from both colleges, to develop ideas for new business ventures. Bostonbased Fidelity Capital donated office furniture; the National Collegiate Inventors and Innovators Alliance provided a multi-year grant. TOP CORPORATE LEADERS and some of the most distinguished names in engineering education have made themselves available to counsel the college. Their charge: to advise on improving the preparation of engineers through rethinking curriculum, student life, administration and finance, governance, admission, and other important topics.

The President's Council

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The Council: (front, L-R) Magnanti, Wu, Miller, Tomlinson-Keasey, Johnson, Tanenbaum; (back, L-R) McBurney, Ashton, Shelton, Sorenson, Walker, Jennings; not pictured—Abele, Director, Hatsopoulos, Ramey, Rim, Sheppard, Timmons, Wulf.

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Great Partners = Great Partnerships: Olin College is fortunate to have some great partners in the ambitious project of creating a new kind of engineering college. As you can see on these pages, some of the country's most distinguished educators, corporate leaders, entrepreneurs, philanthropists, and nonprofit executives have generously provided their time, advice, and expertise to help get us off the ground and headed in the right direction.

I believe that they recognize the same opportunity that energizes all of us here at Olin: the chance to make a real difference in engineering education and the world. We deeply appreciate their involvement with Olin. With their help, I am confident we will succeed. The sum is indeed greater than the parts.

Richard K. Miller President





Breaking In: The Admission Process

A different kind of college needs students who are open to new ideas—and talented enough to exploit them to the max. Olin wants students who are not only bright, but who also like adventure, thrive on creativity, and have an entrepreneurial streak—and come from every kind of cultural, economic, and geographic background. Moreover—and most unusual for an

engineering school—Olin has achieved its objective of gender balance in the student body. Many prospective Olin students express their delight with the idea of helping to direct the future of engineering education while having an exceptionally personalized experience. And it is no small consideration that each student's tuition is fully funded by an endowment created by the F. W. Olin Foundation to promote advances in engineering education.



"At first I was worried about the size of the school, but as soon as I met the students and the professors at Candidates' Weekend, I knew that there was this amazing sense of community and that you could never get tired of these awesome people."

Lindsay Gordon ('07) Austin, TX or Melbourne, Australia (depending on when you ask her) A DIFFERENT KIND OF ADMISSION PROCESS Selection to Olin is a two-step process. From some 600 academically superior applicants, a group of 160 is invited to one of two Candidates' Weekends on campus in the winter. Through these days of getting acquainted, team activities, and interviews, the college seeks to know applicants' personal qualities—enterprise, risk-taking, creativity, passion, and team spirit. Admission is offered to candidates with the greatest promise of contributing to and benefiting from the Olin experience. Target enrollment is 75 per incoming class.



Applying to Olin: Students should apply online at https://apply.olin.edu by January 7. Because of our twostage selection process, there is no Early Action or Early Decision policy. The application to Olin requires:

- Basic biographical information
- \$60 application fee and affidavit
- Secondary school report—returned by counselor with official transcripts
- Two teacher recommendations—one from math/science teacher, another from a teacher of the student's choice
- Results of SAT-I/ACT and SAT-II testing; please refer to the online application site or Olin Web site for details. Olin's CEEB code is 2824; the ACT code is 1883; the code for the Test of English as a Foreign Language (TOEFL) is 9008
- Two essays, one of 500 words, the other of 300 words
- Personal résumé of activities, honors, awards, employment.

Olin Class Profile (Classes of 2006-2008)

Students:	219 (approximately 75 per entering class)
Women:	45%
Students of color:	20%
Origins:	40 states, 4 foreign countries
Average GPA:	4.36 (on 4.0 scale)
National Merit Finalists:	39%
AP Scholars:	53%
Middle 50 percent of SAT-I scores:	1440-1540

Nondiscrimination/Affirmative Action Statement: In accordance with its own values and with federal and state regulations, Franklin W. Olin College of Engineering does not discriminate in admission, programs, services or employment—including the recruitment, hiring, training and promotion of persons in all job classifications—on the basis of race, color, religion, gender, national origin, sexual orientation, age, physical or mental disability, or veteran status.



Until Olin receives accreditation, we are unable to issue I-20 documents necessary for non-U.S. citizens to enroll in the college or study in the United States. Permanent residents of the U.S. and dual citizens may apply.

The Olin Scholarship: Every admitted student who enrolls automatically receives an Olin scholarship (worth more than \$125,000) covering tuition.

Annual costs (2004-05)

Covered by Olin Schola	rship:
Tuition	\$29,400
Not covered by Olin Sci	holarship:
Room	\$7,000
Meal plan	3,720
Laptop purchase	1,250
Insurance	650
Fees	100
Books/supplies	750
Travel/incidentals	1,500
Total	\$14,970

(subject to change 2005-06)

Students who wish to apply for needbased financial aid for expenses—an Olin grant—should send the FAFSA to Olin upon admission, along with copies of the most recent tax returns.

All students are expected to pursue outside merit scholarships. If nonrestricted, funds can be applied to billed expenses. If restricted to tuition only, the Olin Scholarship is reduced accordingly. National Merit and National Achievement Scholarships cannot be used at Olin until the college receives regional accreditation.

Visiting Olin: We encourage students to learn as much as possible about Olin before applying. A campus visit affords the opportunity to meet other students, talk with faculty members, and tour both the Olin campus and partner campuses.

Our admission representatives also host information sessions and conduct admission interviews around the country. For more information, contact the Office of Admission at info@olin.edu.





Franklin W. Olin College of Engineering

Olin Way Needham, MA 02492-1200 www.olin.edu

ES.291 Learning Seminar: Experiments in Education Spring 2003

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