

Innovations

THE NEWSLETTER OF THE FRANKLIN W. OLIN COLLEGE OF ENGINEERING

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FIRST SEMESTER WRAPS UP WITH FOCUS ON PROJECTS

Event Highlights Olin's Distinctive Curriculum

OLIN FACULTY, staff and students browsed through the Academic Center on December 13, marveling at the displays of semester-end projects. The previously blank walls were lined with students' self-portraits, and the halls were filled with kinetic sculptures, student-designed engines and other examples of students' hard work. This 'Exhibition Day' offered a look at the fruits of not just one semester of work, but a few years of research and curricular development.

While the college is still growing into its brand new campus, the new curriculum is a near-perfect fit, according to the students. After more than two years of design and testing, Olin launched a new, rigorous engineering program in the fall with special emphasis on the arts, humanities, entrepreneurship and hands-on application. The range of displays during Exhibition Day demonstrated this unique combination.

Most of the students displayed their final projects from their "cohort" classes, which combine a math course and a physics course with an engineering project. The students' enthusiasm for Olin's hands-on, interdisciplinary approach is clear. "By immediately applying math and physics concepts to projects, homework is a lot more fun and we understand the material better," says Susan Fredholm, who displayed her dragster cohort project during Exhibition Day.

Students were as excited about their arts and humanities exhibits as they were their cohort displays on December 13th. Rather than write final papers, students from the History of Technology class designed content-rich web pages, which they displayed for the community. Other students revealed their artistic talent with drawings from an art class led by Helen Donis-Keller, professor of biology and art.

Several students showcased work from independent projects completed through Olin's "passionate pursuit" program, which awards non-degree credit and funding for projects that enrich students' educational experience. Joelle Arnold displayed work from a welding course, and David Yoshida showcased impressive works of blown-glass.

The Olin Conductorless Orchestra, made up of students from the music composition class, wrapped up Exhibition Day with an impressive performance. Student soloists including a pianist, cellist, percussionist, violinist and clarinetist also wowed the audience.

Students departed for winter recess on December 19 thankful that their oral and written final exams were behind them and amazed at what they accomplished during their first semester of college. Faculty celebrated the successful completion of Olin's first-ever semester of classes.

ENTREPRENEURSHIP CURRICULUM TAKES SHAPE:

Students to Come Up with New Uses for Segway Transporter

OLIN COLLEGE will implement a key component of its developing entrepreneurship curriculum this spring, as students take part in an 'opportunity assessment' practicum aimed at fostering entrepreneurial thinking. As part of the exercise, students will compete to come up with new uses for the renowned Segway transporter invented by New Hampshire entrepreneur Dean Kamen.

Working in small teams assisted by business 'mentors,' Olin students will vie to come

up with the best new applications for the Segway, which allows users to move about using a gyroscopically balanced scooter-like device. The invention is being hailed as an environmentally friendly transportation solution for everything from traffic congestion to mail delivery.

Kamen himself is scheduled to visit the Olin campus April 9 to judge the competition and take part in "Big Conversations," a campus-wide event exploring the interface between society and technolo-

gy. A Segway transporter will be on campus throughout the semester.

The opportunity assessment challenge is the brainchild of Olin faculty members Stephen Schiffman and John Bourne, who, along with staff member Ann Schaffner, are working to flesh out the entrepreneurship curriculum at Olin. Bourne sees the identification of opportunities as a key skill for budding entrepreneurs.

"We hope to teach students to be opportunity obsessed," said Bourne.

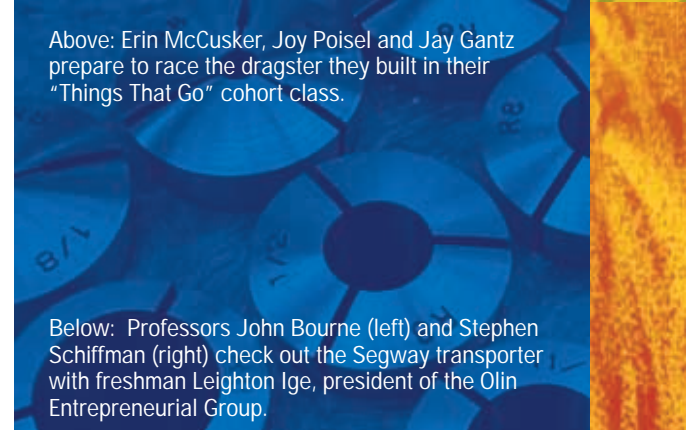
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Above: Erin McCusker, Joy Poisel and Jay Gantz prepare to race the dragster they built in their "Things That Go" cohort class.



Below: Professors John Bourne (left) and Stephen Schiffman (right) check out the Segway transporter with freshman Leighton Ige, president of the Olin Entrepreneurial Group.



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PRESIDENT'S MESSAGE:



The first semester of Olin's existence as a full-fledged college has been full of "marquee events" that will long resonate in our institutional history: the arrival

of the inaugural freshman class; the introduction of our innovative, hands-on curriculum; and the opening of our campus, to name a few.

But behind the scenes, events of equal importance to the future of the college have taken place. I am thinking particularly of the work of the Board of Trustees and the President's Council in charting the course of the college in the next phase of its growth.

The college is in good hands on this score. These two bodies, one governing and the other advisory, are made up of individuals with deep experience in higher education and business. They include two former college presidents, the directors of the Olin Foundation, and national leaders in academia, business and engineering education.

What astounds me is the enthusiasm and sense of engagement these busy individuals have for Olin College. At the November 2002 meeting that brought together these two bodies, this enthusiasm was palpable. The topic was how to ensure that the financial models we rely on to provide for the future align with the innovative academic program we are developing. The Trustees and members of the President's Council listened attentively, engaged in a lively discussion, and made it clear they care passionately about the outcome of this bold experiment we call Olin College. After the meeting, I received detailed, thoughtful comments from the members with suggestions, proposals and ideas for continuing our success.

We are off to a great start. And thanks to the efforts of our Board of Trustees, President's Council, and the wider Olin community, I believe we have a bright future before us.

Richard K. Miller
President

STUDENT ACTIVITY OPTIONS CONTINUE TO GROW

OLIN'S 75 inaugural students were busy in and out of the classroom during their first semester. Within the first few weeks, several clubs were up and running, community service teams were leading programs, and students had initiated independent "Passionate Pursuit" projects. The students returned for second semester with even more opportunities for fun and enrichment outside of the classroom.

Student leaders founded 13 clubs first semester, providing opportunities ranging from theatrical productions to bowling. Highlights of club activities during the fall include the launch of *Frankly Speaking*, Olin's online student newspaper, as well as the Franklin W. Olin Player's production of *Albert's Bridge*, a radio drama. WHACK, Olin's newly formed fencing club, adds to the roster of clubs that includes the Game Club, *In Decent Exposure*

(literary magazine) and the Olin Broadcasting Club.

Students also took advantage of a number of co-curricular offerings first semester. Olin's co-curricular groups, which are led by faculty or staff members, combine fun activities with intellectual awareness. First semester co-curricular offerings included F.I.L.M (For Intelligent Lovers of Movies), the Olin Dance Project, Ornithology for Engineers and La Vie Boheme (French discussion group). Some of the first semester offerings are continuing into the spring term in addition to new offerings such as an American Sign Language course, Yoga Stretching, and Architecture and the Environment.

Students have continued to advance the philanthropic mission of the college by actively participating in community service projects. One group of Olin students regularly staffs the recreation program on Friday afternoons at the local Charles River Association for Retarded Citizens. Other students are involved with philanthropic organizations such as Hillside Elementary School, the Broadmoor Audubon Wildlife Sanctuary and the Perkins School for the Blind. Several students also participate in a number of walks and races for good causes.

A number of students are taking advantage of Olin's unique "Passionate Pursuits" program, which awards non-degree credit and funding for independent projects in areas of student interest. Jeff Satwicz's first and second semester Passionate Pursuit is an ambitious car restoration project he titled "Build Your Own General Lee." Other students have initiated Passion Pursuits in music, language, and trade crafts.

The Student Activities Committee, which coordinates additional programming for students, has also planned a number of fun activities ranging from Halloween costume contests to formal dances.

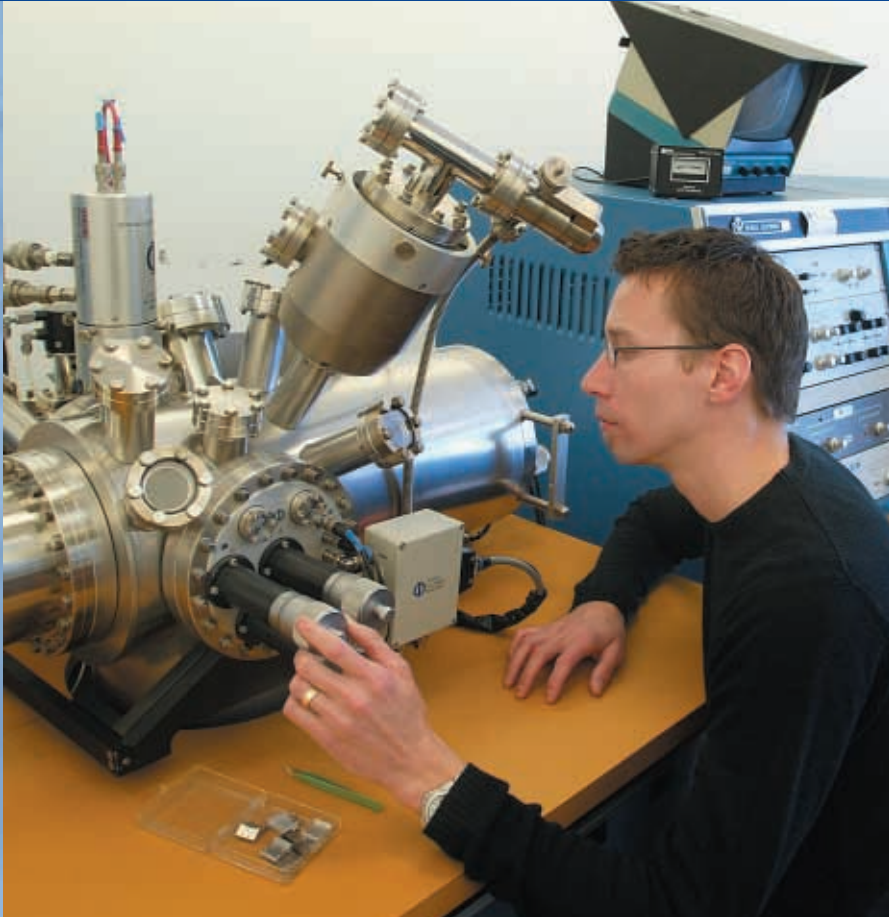
"The clubs and activities on campus offer us important outlets from our rigorous coursework," said Freshman Erin McCusker. "Student leaders at Olin have helped provide a wide range of activities that offer something for everyone."



Above: Katie Rivard and James Krejcarek learn some new dance steps at a recent Salsa workshop. Below: Erin McCusker (right) practices sign language skills with Assoc. Prof. Jill Crisman.



NEW TOOLS



Above: Asst. Prof. Jonathan Stolk tries out the new equipment, a multi-technique scanning AEX/XPS System.

COLLEGE RECEIVES EQUIPMENT DONATION

High-end Device is Boon to Materials Study

The Pernicka Corporation of Fort Collins, Col., has donated a Multi-technique Scanning AEX/XPS System valued at \$350,000 to Olin College. The device is a high-end materials analysis tool that is not usually encountered in undergraduate education.

"We hope that the students of Olin College will benefit from the hands-on experience and research that can be performed on this system," wrote John C. Pernicka, president of the corporation, in a September 26 letter to President Miller.

"We look forward to developing ways to use this unique donation to further our mission to provide the most innovative engineering education in the country," said President Miller. "We deeply value the support of the Pernicka Corporation, because we know that it is only with the advocacy of engineering firms and business leaders that Olin College will succeed in its mission."

Mr. Pernicka and his wife Diana visited the college in mid-October to oversee the installation of the equipment, which is housed in the Academic Center.

NEW MEMBERS NAMED TO BOARD, PRESIDENT'S COUNCIL

This fall, two new trustees joined the Olin College Board, and the President's Council gained one new member.

William R. Cotter and **Tamara P. Davis** were named to the Board of Trustees. Both had served previously on the President's Council.

Mr. Cotter is president of the Oak Foundation in Boston, Mass. He is the former president of Colby College, where he served from 1979-2000. A graduate of Harvard College and Harvard Law School, Mr. Cotter served as assistant attorney general in northern Nigeria, as a White House Fellow and as coordinator of international programs for the Ford Foundation, among other posts.

Ms. Davis is the managing director and head of the Corporate Governance Practice at Levin & Company, Inc. in Boston, where she consults with CEOs of entrepreneurial life science and technology companies. Previously, she was president, CEO, and director of UST Leasing Corporation in Boston. A graduate of the University of California, Los Angeles, and California State University, Ms. Davis is Chairman of the Massachusetts State College Building Authority.

James E. Ashton was named to the President's Council. He is chairman of Poco Graphite, Inc., and a partner in Grisanti, Galif & Goldress, Inc., both of Dallas. Mr. Ashton's professional career includes executive positions at some of America's leading companies, such as FMC Corporation, Rockwell International and General Dynamics. From 1967-1982, he led the General Dynamics team that developed the F-16 fighter plane, one of the country's most successful weapons systems. He left General Dynamics after testifying before Congress about waste and mismanagement in the Trident submarine program. He is a frequent speaker on the topics of business ethics and integrity.



The Board of Trustees and President's Council met in mid-November to consider the issues facing the college as it enters the next phase of its growth. Here, the Board and President's Council are shown with members of Olin's senior administrative team.

TRANSLATION TEAM



Polina Segalova, right, is translating the letters of Alexander Borodin with the encouragement and help of Assistant Professor Yevgeniya Zastavker (left) and Assistant Professor Diana Dabby.

Like many Olin students, Polina Segalova has a passion outside of engineering. For Segalova, that passion is remaining in touch with the Russian language and cultural roots the Ukraine native left behind as a child of 10 when she emigrated to the U.S. Thanks to a project suggested by one of her professors, she has been able to do just that.

Segalova is finishing a project to translate 30 letters of Alexander Borodin (1833-1887), a Russian composer who also worked as a chemist and professor. Borodin wrote tuneful symphonies, operas and shorter works, many of whose melodies found their way into the Broadway musical *Kismet* and popular songs.

The project was the brainchild of Diana Dabby, an assistant professor of engineering and music at Olin. Dabby, a composer and concert pianist who has championed the study of artists who are also scientists and engineers, suggested it as a possible student project during the Olin Partner year.

“Borodin had a track record as a chemist and composer,” said Dabby. “I thought that was very timely for us, because it embodies the ‘Renaissance engineer’ concept that is becoming so important here at Olin.”

Segalova, a non-musician, eagerly accepted the challenge, which quickly became a labor of love. Although Borodin’s letters take up four volumes in Russian, only a few excerpts of them have appeared in English. Segalova and Dabby decided to concentrate on thirty key missives spanning the composer’s life, excerpts of which had appeared in the English version of a seminal Russian biography of Borodin.

The effort turned out to be harder than the native Russian speaker expected. First of all, she had trouble translating some phrases into idiomatic English. She also needed help with some cultural and historical concepts. She found that help when Assistant Professor Yevgeniya Zastavker, also a native of Ukraine, joined the faculty last year.

Olin Freshman Translates Letters of Russian Composer

“The take away message of the letters is that you can pursue more than one passion in life. Borodin’s life is a perfect model for us here at Olin.”

-Polina Segalova, Class of 2006

Zastavker became her collaborator and made sure, as she put it, that the “color of the Russian culture was not lost.” She also helped make the translation more flowing, and provided some of the missing historical and cultural context.

The letters, to Borodin’s ailing wife in Moscow, discussed day-to-day developments in his life on the faculty of the Medical Surgical Academy in St. Petersburg. He also wrote about his musical ideas and commented on the work of other Russian composers.

According to Dabby, the translations are significant because they “shed light on Borodin’s composing process and the personalities of those involved in the Russian musical movement.”

For Segalova, the exercise offered important lessons from the career of a person criticized at the time for working in two very different fields. “The take away message of the letters is that you can pursue more than one passion in life,” said Segalova. “Borodin’s life is a perfect model for us here at Olin.”

Zastavker saw the project as a confirmation of Olin’s approach to engineering education. “We are not just growing technicians, we want to make sure our graduates are multi-dimensional and erudite,” she said.

During the course of the project, for which Segalova received non-degree credit as part of Olin’s “Passionate Pursuit” program, she drew close to her mentors. The three will continue to work together during the next phase of the effort as they “finish, polish, and publish,” according to Segalova.

“This project brought us together,” she noted. “Where else but at Olin would I have had the opportunity to get so much time with professors?”

UPCOMING EVENTS

- **Candidates' Weekends 2003:**

February 28 - March 1 and March 7 - March 8 — Olin hosts finalist admission applicants and their families on campus for a series of events including team design exercises, individual interviews, group discussions and information sessions.

- **"Big Conversations" with Dean Kamen:**

April 9 — Dean Kamen, inventor of the Segway and founder of Deka Research & Development Corporation, is the featured guest speaker for the first event of Olin's "Big Conversations" series focusing on the interface of technology and society.

- **Olin Rising: Campus Dedication and Presidential Inauguration:**

May 3 — The Olin community welcomes friends and distinguished guests to celebrate the dedication of Olin's new campus, the inauguration of President Richard K. Miller, and the achievements of the inaugural class.

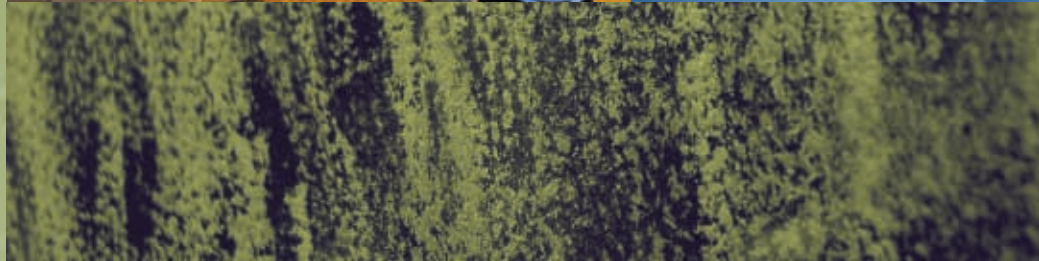


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