



PHYSICS & ENGINEERING DEPARTMENT

Elizabethtown College

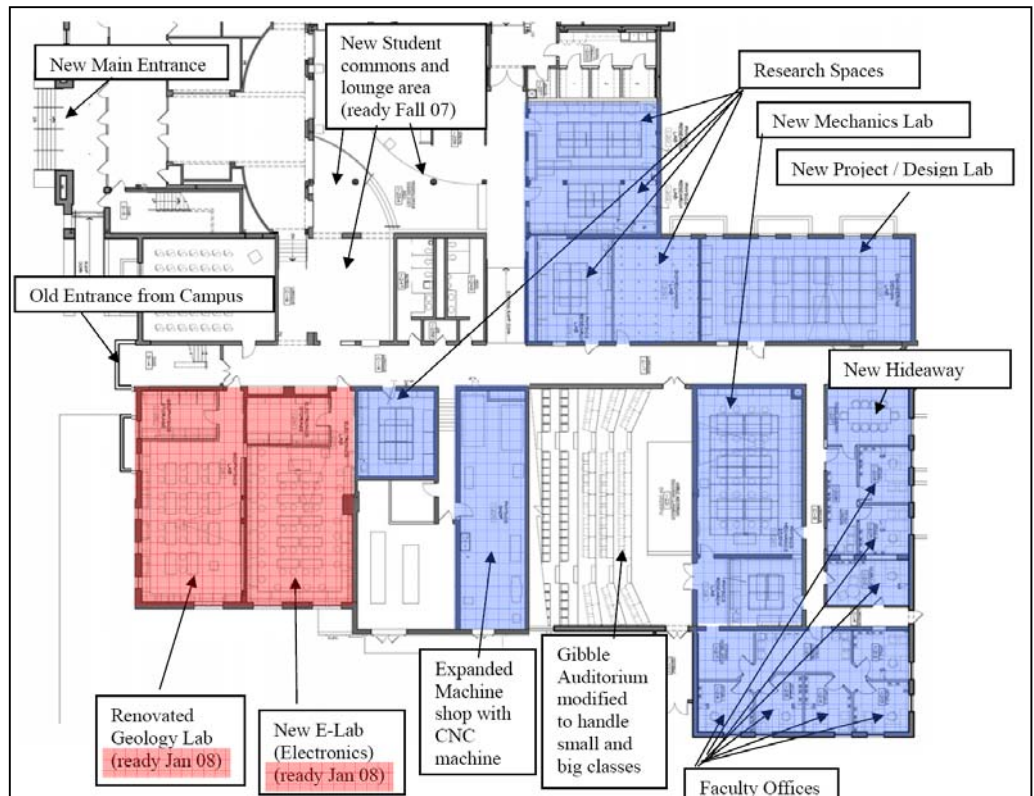
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Master's Science Math & Engineering Center Progress

Major construction is underway adjacent to Esbshade as the College works its way towards completion of the new Master's Science Math and Engineering Center. We are looking forward to completion this June of the new

Biology wing of the Master's Center which will include a first floor student commons area that connects with the Physics & Engineering area. The new commons area will undoubtedly become a popular gathering place for physics & engineering students in addition to the Hideaway. The first renovations involving the Physics and Engineering department will begin this Fall, when the Geology Lab will be renovated in its current location and a new Electronics Lab will be installed in the adjacent classroom. At a later yet undetermined date, the current Electronics Lab will be converted into a 1000 sq foot design lab, replacing the

(continued on page 3)



Tentative floor plan of the Physics & Engineering portion of new Master's center

Congratulations Spring 2007 Graduates!



Spring 2007 Graduates include Liz Prettner (Phys Edu), Garry Brock (Egr Phys), Juan Pablo Rodriguez (Cmp Egr), Amlan Banerjee (Cmp Egr), Jeremy Davis (3+2), Lauren Swiecicki (3+2), Mee Mee Hein(3+2), Jake Porter, Mark LaPalomanto (3+2), Arindam Kanjilal (Cmp Egr), and not pictured Kaitlin Hartzell (Egr Phys).

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Alumni Spotlight — Shade, Yeager, and Phoenix Contact

Justin Shade '06 and Tom Yeager '06 were classmates for four years, took the Wunderbot to the IGVC in Michigan following graduation and then both took jobs at the same company in Harrisburg. They are both now in the same Sales & Marketing Apprenticeship program for Phoenix Contact — “The innovative market leader of industrial connection technology, automation technology, electronic interface systems and surge protection.” Their job is to develop understanding of the company’s 6 different product groups — rotating to each different product group on a 1-2 month cycle.



**Phoenix Contact employee, former Wunderbot team member, and 2006 Computer Engineering Graduate
Tom Yeager**

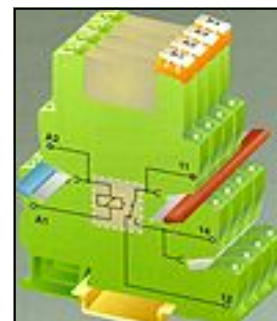
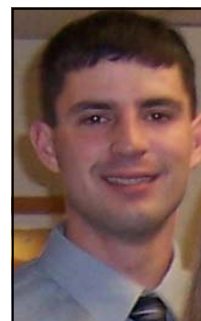
From Tom Yeager:

Related to my Computer Engineering degree, I recently developed a demo for one of the biggest industrial trade shows in the world in Hanover, Germany. I was working with a small Nano PLC that we will be releasing in the September area. The project goals were to help our Phoenix Contact Ann Arbor Michigan division implement firmware for the Nano PLC and test the Nano Navigator software (flow chart style programming for the PLC). After helping debug the firmware and software, I took the initiative to create a program that resembles the game Whack-A-Mole to show off the programming power of the Nano PLC. I connected the Nano PLC to illuminated push-buttons and created a random output flashing pattern. The push-buttons light up and you must press the buttons within an allowed time limit to continue; the time limit decreases and the game goes faster and faster until you either fail or win. I put the demo into an enclosure, mounting the push buttons nicely, and sent it off for display at the Trade Show in Germany. We are hoping that the game attracts global customers while displaying the features of our small Nano PLC. The whole goal was to make it more fun than a sales guy just saying “Oh, here is our Nano PLC, it has this # of inputs and # outputs.” —Tom Yeager, 2006 computer engineering graduate

From Justin Shade:

So far I have had some interesting projects which include working on a product launch folder for our new line of CC and J fuse holders and redesigning our CoaxTrab surge arrestor. Along with this I am currently covering a medical leave for a fellow worker in the Technical Service department. I was given a week long product training and now I am currently working with the Tech Service dept. assisting customers, sales reps and distributors with product problems. This also includes specifying products for customers when they call in with industrial applications where they want to use our products. Throughout the day I take anywhere from 12-25 calls with questions ranging from simple terminal blocks to getting wireless radios working in the field. It has been a real good experience and it helps me learn the products better and more in depth.

The plan is to have us placed in a permanent position by the end of May/June. This will be done by either one of the Product Marketing Managers having an interest in us, applying for an outside sales job, or any other department that has an interest in us. Currently, I am soon going to apply for a job in the Technical Service department as soon as the department expands. —Justin Shade, 2006 computer engineering graduate



(left) Phoenix Contact employee, former Wunderbot team member, and 2006 Computer Engineering Graduate Justin Shade. (right) A Phoenix Contact connector block (can you figure out what it does?).



Student in the Spotlight — Drew Graybeal

This summer I'm looking forward to working at the Johns Hopkins Applied Physics Lab in Laurel, Maryland for the 3rd year. Working in the Information and Telecommunications department, I'm able to get hands-on experience with a number of technologies, including enterprise level networking equipment, IP telephony, and both fiber-optical and wireless 801.11 b/g networking. I spend the majority of last summer working with 2 full time employees on planning and implementing over 150 access points across their campus in a unique, proprietary solution that offers seamless coverage to the end-user as they move between coverage locations.

When I am not in class or doing school work I spend most of my free time training and competing in Track and Field. I am currently a captain of E-town's team and was proud to win both the 400 meter and 800 meter races at the Middle Atlantic Conference Indoor Track and Field Championships to help bring home a team victory for the 5th year in a row. I also finished 5th in the 800 meter at the NCAA Indoor Track and Field Championships to earn All-American honors.

Competing in track has helped me to better plan my days by forcing me to effectively use and manage the time I have. It also has taught me perseverance and determination. I apply these traits everyday, not only on the track, but in the classroom. Competing in this sport has made me a much better student and person, and also given me memories that I'll never forget. —Drew Graybeal



**Third-year computer engineering student and All-American track athlete
Drew Graybeal.**

Department welcomes Cynthia Rothrock



New half-time assistant for ABET accreditation work Cynthia Rothrock

Cynthia Rothrock was recently hired in February 2007 as a half-time administrative assistant for the Physics & Engineering Department, with the specific task of facilitating our ABET accreditation drive. She also works half-time for the Business Departments. Cindy is working hard putting together our 200+ page self study for our expected January 2008 application for ABET accreditation review. She earned a bachelor's degree in Elementary Education from Bloomsburg University. In addition to part-time teaching positions, Cindy has spent the past 13 years working in marketing and supervising the support staff at Ad-Tech Electronics in Harrisburg, PA., so she is very familiar with working with engineers.



Elizabethtown College
Physics and Engineering

Master's Building Continued... (from front page)

small project space near the Hideaway. In the current master plan, we will also be expanding the CNC shop to a full machine shop of over 800 sq feet, gaining three new research spaces, an office for adjunct faculty, and all existing spaces will be renovated. Additionally, we are thrilled to have Computer Science moving into the second floor of Esbenshade, with a new lab dedicated to robotics. It will be exciting to see all of this take shape over the next few years.

Editor: Kaitlin Hartzell, '07

Co-Editors: Jennifer Hawkins '09

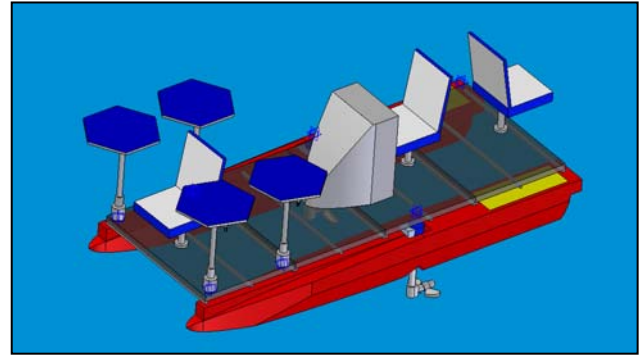
Bridgett Miller '10

Advisor: Dr. Troy McBride

Special Acknowledgement to our Faculty and Friends for their input, articles and photos.

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FEAST: Solar Splash 2007 — Arkansas Bound



After a two-year hiatus, Elizabethtown College is returning to the solar boat championships — this year held in Fayetteville, Arkansas. Club [FEAST](#) (Future Energies & Sustainable Technologies), with its fourteen members — eleven of whom are Physics and Engineering students — has designed and is finishing construction / testing of their solar boat to compete in [Solar Splash 2007](#), the world collegiate championship of solar electric boating. At upper left are team members (from left to right) Mike Patrick '10, Doug Eroh '09, Terry Bartholomew '10, Phil Robinson '10, Jennifer Whitmore '10, Adrian Nelson '10, and Allison James '10. Also displayed are the Solid Edge design of the boat and a photograph of boat being assembled by Lake Placida. More information on the Elizabethtown College solar boat can be found at www.etown.edu/solarboat.

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