

# CAMPUS NEWS

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## School of Nursing

Perhaps the easiest example of an academic change at Behrend is the School of Nursing. This May, the Nursing program at Behrend will graduate its first class of 29 students. Though the Nursing program at Penn State has been successfully operating for over 40 years, the program in Erie is still in its infancy.

Nursing Program Coordinator, Jo Anne Carrick, who has been at Behrend since January 2006, has seen the program grow from its roots to the launching pad that it is today. Carrick, who taught as part of the Nursing program at Penn State Shenango and McKeesport, says that Behrend was a great choice for such a major.

"Behrend wanted to add new programs to diversify student's choices," Caster says. "With Behrend's strength in science, math, and psychology classes, it was a great choice. Having a nursing program, too, allows students to specify a degree like biology by studying more into nursing."

Already, the nursing program has responded to changes in the market need. The program has added critical care nursing electives for students who wish to pursue that type of health care - that change was largely dictated by an extreme need in local and national health organizations.

Carrick says that one reason that a nursing program was brought was because of that support in the community. "We could really address the health care needs out there," she says. "Students who are graduating from this program are getting job offers very easily, especially in places such as Pittsburgh." Erie, she explains, could become a flooded market with a large amount of graduates entering the workforce at once. Even that, she says, would even out; within six months, she is confident that more spots would open.

The program could use some more growth to hit the spot where it wants to be. Carrick hopes that the program will graduate 20 more students next year on top of this year's total of 29. She says that the limiting factors could be the physical space at the university, a limit to local internship spaces, or a possible difficulty in finding faculty with which to expand the program. "The growth may be gradual over the next five years," she says. "We hope to have a big growth in the baccalaureate degree here."

"We're Behrend," says Carrick. "We are Penn State. Because of that, we are committed to that new graduate being as prepared as possible."

## School of Engineering

Director of the school of Engineering at Behrend Dr. Ralph Ford has been in his current capacity for 15 years. Since then, he says, there have been massive changes to the college.

"Back then, we were 'Penn

State Who,'" he says. "Now, if I'm sitting next to a person at a conference and mention where I teach, they'll know right away the things we're doing up here."

The changes to his School, though, have consisted of much more than changes to the external reputation of the program. Perhaps one of the best examples of academic innovation at Behrend comes with the Engineering program's interdisciplinary degree with the School of Business in offering a Business with Engineering Studies major.

Industry influence has made a huge impact on Behrend's engineering program, says Ford, who meets with over 30 different firms per year. "We want to see even more industry participation," he says, "especially within undergraduate research. We're looking at sixty percent of all senior projects having an industry sponsor, and another ten or twenty percent working with non-profits."

The advantages of the Engineering program at Behrend, Ford says, are many. "We really benefit from small class size," he says. "It's not in our character to become a ten thousand student university, because we would lose that. We've been able to raise our enrollment here, but not at the

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**Dr. Roger Knacke**  
Director of the School of Science

cost of quality. Rather, our requirements have raised, and brought our quality with them."

Possible areas of expansion for the program include an interest in biotechnology, specifically within biomedicine. Electrical and Computer Engineering could be expanded more to deal with signal processing; the school is currently sending a faculty member to a summer program to develop teaching strategies within that area.

Behrend also must be responsive to changes in technology alongside changes in the workplace, Ford says. If a certain new technology is becoming an industry standard, the school has a responsibility to train students on that technology.

On the horizon for the program could possibly include an offering of certificates in biotechnology, though probably not a full-fledged major. Inter-disciplinary programs, such as the business hybrid degree, will continue to mature, and perhaps expand as the program gains notoriety and has time to improve. The school will certainly respond to changes within the field of study, too, looking at challenges in the energy sector and offering courses to students who are interested in fixing national and local problems.

## School of Business

In the Sam and Irene Black School of Business, many of

the largest changes Behrend can expect within the next few years will largely come from two areas. An increase in interdisciplinary degrees, like the Business with Engineering Studies major, is almost inevitable, says Director Dr. John Magenau. Another area which will grow, he says, is the emphasis on online and hybrid courses.

Online programs, primarily at the graduate levels, have been growing dramatically. The college plans to offer a System Analysis and Program Development (SAP) certificate online, as quickly as within the next five years. "We want to reach a national audience," Magenau says. "This kind of certificate is only offered online by about a dozen schools in the nation - Penn State Behrend is one of them."

Like other schools, much of the change rolling through the School of Business originates with faculty needs and requests. Most of it, though, deals first with what students want. "Demand for majors changes all the time," Magenau says. "Accounting was declining rapidly, not too long ago; now, it's the largest degree here."

Much like the Engineering School at Behrend, the Business School is very reactive to industry requests.

One example, he says, is General Electric (GE), who approached Behrend regarding their outsourcing costs. According to Magenau, GE said that costs of labor in foreign countries was rising, and the firm wanted to bring Information Technology (IT) jobs back to the United States. "We tried to turn that into an opportunity for our students," Magenau says. "By bringing their business back here, it could have brought a huge number of jobs. The moral of the story is that when we see an opportunity arise in business, we pursue it as much as possible to give our students the best chance at succeeding."

Though industry can dictate some changes, Magenau says that the fundamentals of efficiency remain in the forefront throughout the process. The school won't jump at a major or new area of development without proven need.

Interdisciplinary expansion is something that is exploding right now within the school, and that trend will not end anytime soon. The Business with Engineering Studies major was brought about as a faculty initiative, and drew upon good relations between the engineering and business programs at Behrend. It took about five years to create, Magenau says, and any future majors would likely follow the same timeline. "In general, University Park was very supportive of the major," Magenau says. As to the future, the program might expand, but it will



The Behrend school of engineering office.

DANIEL SMITH / The Behrend Beacon

certainly offer a "different type of students," especially those with a strong background in math.

## School of Science

For the School of Science at Behrend, changes in academic programming is often dictated not by industry, but by challenges within individual fields of study. Dr. Roger Knacke, Director of the School of Science, says that responding to needs of the scientific community presents a constant battle for the school.

Figuring out the most efficient type of teaching strategies to get concepts across to students, even if the concepts are long-standing fundamentals, also gives a chance for innovation. Knacke, who has been the Director of the School of Science since 1992, points to "scale-up" teaching techniques currently used in several physics classes as an example of new instruction strategies.

"We know that students don't want to sit in class for an hour and listen to a lecture," he says. "People want to learn by doing something, and they learn more by seeing it in front of them." The scale-up teaching strategy will engage students with guided experiments and computer simulators, Knacke says.

The science programs at Behrend are also making use of online deliverance systems for courses. One meteorology course in the school is completely online, and many more classes feature a hybrid element mixing online elements into traditional classes. These technological developments allow teachers to provide simulations of experiments. "Letting students experiment in simulations allows them to try more," Knacke says.

The school, like most others at Behrend, does respond to changes within industry. Knacke says. "Group work is something that we've been hearing from about a lot. People like working together to learn - and industry is calling for teamwork education." For many areas within science, a group element has had a great effect on student success.

Within the physics program, students who either withdraw or get a D or F have fallen from 40 percent to 28 percent, Knacke says. "It lets students retain more information, and prepare them for working with colleagues in industry. There are no more excuses in the work world."

On the horizon for the science school could be a furthering in science secondary education as a four-year degree. It's hard to predict, Knacke says, because so much is being suggested and requested by members of the school. Other possible expansions could include a biology focus on genetics, a geology major (a personal interest for Knacke), and a deeper focus into chemistry and biology.

Whatever comes to Behrend, Knacke feels that Behrend offers the right qualities for a great science program. "Most working scientists got their education at a primarily undergraduate university like

Behrend," he says. "We're well-poised to fill that need with an excellent education in science; we're not just trying to imitate University Park. We are our own program."

## Preparing Students for the Future

Though each school at Behrend offers its own unique ways to prepare students for entering the work world, that process of finding a job is essential to any college graduate.

For many students, that effort goes straight through the office of Career Development. Andrew Watters, who has been working as an Associate Director there for eight years, says that despite changes in society and industry, the demands from employers have remained relatively the same over recent years.

"The underlying set of characteristics and grad schools want hasn't really changed," he says. "Communication skills are first, every year. Technology and non-technology majors alike still have a huge demand for that."

Student activities provide

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Director of Nursing

growth in classes with a hybrid online-classroom mix. Aquila says. "The issue is not whether the online element will continue to grow," he says. "It is a question of whether or not we can efficiently and effectively use that element to enhance learning. The technology will be used; it's just a matter of resource to do it."

If courses launch online, there is an effort to make sure that they are as high-quality as classroom courses. That can be difficult, Aquila says. "We want a course that is both challenging and worthwhile," he says.

Limited resources are also a large question in bringing new majors to the school. Aquila says. New programs and ideas must be evaluated on the net benefit they would bring to the school.

With regards to expansion, Aquila says that the benefit that the school offers to all students is something that cannot be underestimated.

"[Humanities and Social Sciences] sees itself as a foundation for every student," he says. "We offer students a basic understanding of the world around them, whether they're an engineering major or an English major."

The school does have their eyes towards the future, though. With creating new majors, Aquila says that he and the school must make sure that the degree is "cutting edge." Also, Behrend has a preference towards degrees that find niches both nationally and locally.

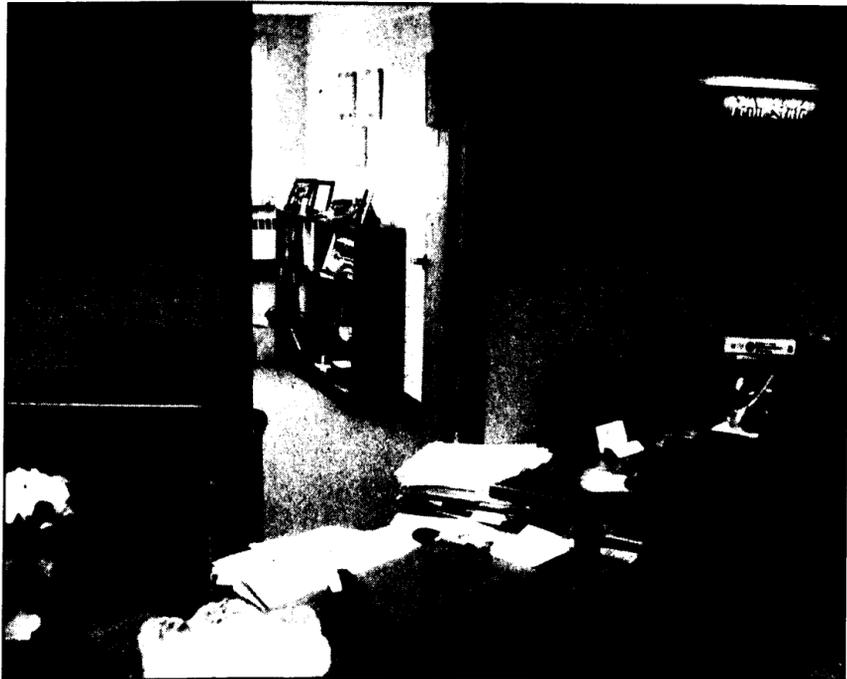
"Our competition isn't University Park," Aquila says, in his fifth year as the Director of the School of Humanities and Social Sciences. "Our competition is other colleges. When we build on a foundation of where we have our strengths, and the quality of a Penn State degree, we feel that we can offer a great product."

excellent resume builders for college graduates. Most students seem to be aware of the fact that participating in student organizations will set them apart in the job market; Watters might say that students need to take that a step further: "Being in extracurricular activities is great," he says. "But what can really set you apart is leadership in that group."

Watters also notes how an online and digital element have revolutionized the way that the Career Development office operates. "We really started using an online system three years ago," he says, "called Nittany Lion Recruiting. Before that, our system was eight file cabinets."

That innovation in the office has led to useful new offerings for students wanting to find a career. One of the greatest options they will have is expanded video conferencing, which will allow students to conduct interviews in other states. Watters says that face-to-face element combined with new technology makes a student's application even more attractive.

Perhaps the most useful addition to the program has been the advent of e-portfolios, which allow students to collect evidence and prevent it professionally, with reflections on lessons learned. "It's easily accessible, easy-to-use, and will be accessible for all four years that students are attending the university," Watters says.



The Behrend school of nursing office.

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