



Jesse Philips Humanities Center: A quote chiseled on the side of the building states that mystery grows along with knowledge. That's why here, students explore questions that do not have easy answers.



UNIVERSITY *of* DAYTON

Here, educating hearts is just as important as educating minds. BY NANCY OAKLEY

In southwestern Ohio, Dayton stands as an example of 20th-century progress. Key to the city's success is a 161-year-old Catholic institution that's helping to chart the city and region's growth for the 21st century. Since 1850, the University of Dayton has adhered to the principles of the Marianist order: Nourish the mind and soul, and do good works in the community. Or as the university puts it: "Learn. Lead. Serve."

PHOTOS COURTESY OF UNIVERSITY OF DAYTON

It's a motto that permeates every aspect of the UD experience, whether in the classroom, in the research labs and learning centers, or in the extracurricular activities available to students. The philosophy, combined with academic excellence has resulted in UD's ranking as a top-tier Catholic university in the U.S. One has only to look at its programs and initiatives to understand why.

Well-Rounded

With more than 70 majors, the University of Dayton offers its 7,100 undergraduates the promise of “a critical mind, a passionate heart, and an impressive resume.” Sure, students might be enrolled in poli-sci courses, but they can declare a human rights major, the first of its kind in the U.S. Or perhaps they're studying biology, in which case they might also have the opportunity to collaborate on faculty research projects at the University's Center for Tissue Regeneration & Engineering at Dayton (TREND). Similarly, students at the School of Education and Allied Professions (administrators, counselors, physical therapists, and the like) are encouraged to “transform lives,” through various hands-on opportunities, such as the Bombeck Family Learning Center, UD's demonstration school for early childhood education.

The School of Business Administration involves far more than studying principles of accounting and marketing. Since 1999, the SBA has offered an entrepreneurship program that has ranked among the top 15 nationally for the last six years. It includes a variety of real-world situations for students, who can set up a

micro-business with \$5,000 in seed money through UD's L. William Crotty Center for Entrepreneurship and donate any profits to charity. Flyer Angels (so named for the school's athletic teams, the Flyers) is an investment group in which student entrepreneurs are paired with financial angels to assess whether start-up ventures are worthy of investment. Flyer Enterprises is the country's fourth-largest student-run business, earning more than \$1.4 million in annual revenue from eight different entities, while Flyer Consulting offers consulting services to Dayton area nonprofits. Students have the opportunity to compete in a business plan competition and through the Davis Center of Portfolio Management, invest \$11 million of the university's endowment in one of the United States' 15 largest portfolios managed by students. No wonder that the university is host to the R.I.S.E. (Redefining Investment Strategy Education) Forum, the largest student investment conference in the world. The forum hosts financial leaders, such as Federal Reserve Chairman Ben Bernanke.

UD's associate provost and dean of the graduate school, Paul Vanderburgh says that opportunities for undergraduates can feed the university's graduate programs, now numbering 3,300 students (not including 530 in its School of Law). “We're the perfect size for undergraduates to do research,” he says, citing the biology department as an example. Undergrads have multiple opportunities to collaborate on faculty research projects, some at the university's TREND center. Others, such as studying the efficacy of coronary artery bypass grafts, have led to topics for students' honors theses, some of which were published. In

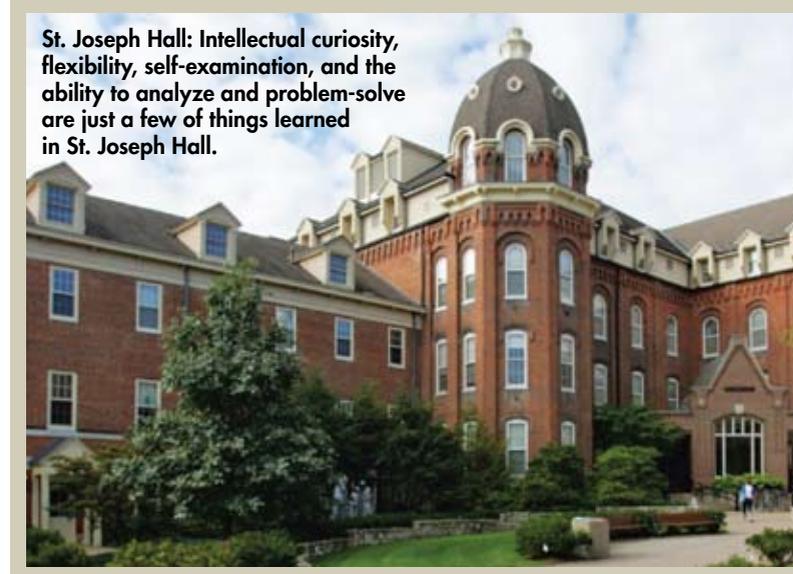
Motoman Robotics Laboratory:
A \$1 million robotics lab where science fiction comes to life — and then improves it.



the physical therapy program, an undergrad student even presented a paper at a sports medicine conference. “Very often students think: ‘I can't possibly do what no one else is doing.’” Vanderburgh observes. That's why UD will be offering a five-year bachelors plus masters program across all disciplines, with financial aid for that last year.

One of the areas where Vanderburgh expects to see high interest in the combined program is the department of health and sport science, where he is a professor. The department's newly minted doctorate for physical therapy, which saw its first class graduate in 2009, has

St. Joseph Hall: Intellectual curiosity, flexibility, self-examination, and the ability to analyze and problem-solve are just a few of things learned in St. Joseph Hall.



DEEP ROOTS

A cholera epidemic in the mid-1800s played a part in the founding of the university. A local farmer, John Stuart, was so grief-stricken over the loss of his daughter to the disease, he was anxious to return to Europe and wanted to sell his 125-acre property with vineyards, orchards, a manse, and farm buildings. As it happened, a priest, Father Leo Meyer, had arrived to tend the sick in the parish. When he heard of Stuart's intentions, he offered him a St. Joseph's medal for the estate, and the promise of \$12,000. In July, 1850, St. Mary's Institute for Boys admitted 14 students. The school's name changed at various times before becoming the University of Dayton in 1920.



River Campus/1700 South Patterson Building: The former world headquarters of NCR Corporation is now home to the University's world-class Research Institute, CLED, graduate classes, and alumni center.

DID YOU KNOW?

- The University of Dayton is named one of the nation's **top 10 Catholic universities** by *U.S. News and World Report*.
- International electronic giant Sony named UD on its list of "**10 valuable universities.**"
- For the past two years, UD has **exceeded its enrollment goal** by about 200 students and welcomed first-year classes with approximately 2,050 students.
- With an increasing international presence, approximately one in ten UD students hails from another country. The university is consistently ranked **No. 1 in international student satisfaction**, according to the International Student Barometer.

The University of Dayton offers its 7,100 undergraduates the promise of "a critical mind, a passionate heart, and an impressive resume."

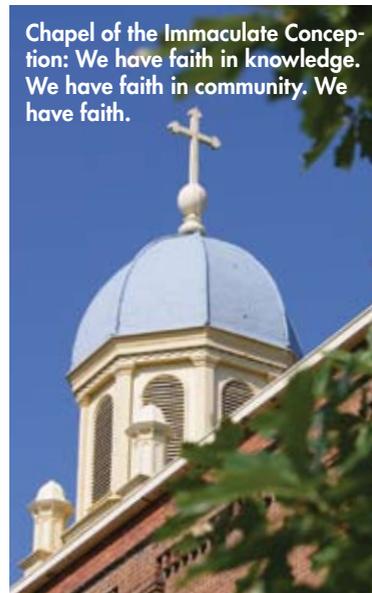
"transformed UD's reputation in Allied Health," Vanderburgh says, explaining that it has begun to attract high-achieving high school students interested in enrolling in UD as freshmen. Part of the allure is more cutting-edge research in exercise and multiple sclerosis patients, or the use of high-speed cameras to find therapies for patients with arthritis. The doctoral PT program has met with so much success that UD is now contemplating adding a Physician's Assistant program.

Not to be forgotten in UD's graduate curricula is the theology doctoral program. "We've got some world-renowned experts," Vanderburgh says, explaining that the university's Catholic tradition does not preclude but rather invites discussions that address faith and reason.

"Because of that, we attract a lot of outstanding faculty in the humanities," he says. "People who like to be a part of juicy dialogues and debates," he adds. "What we try to encourage is responsible dialogue, civil dialogue, back it with facts, and learn how to take stances, positions. And we don't think we know what the destination is. We don't think we've got it all figured out."

Engineering: A Century and Counting

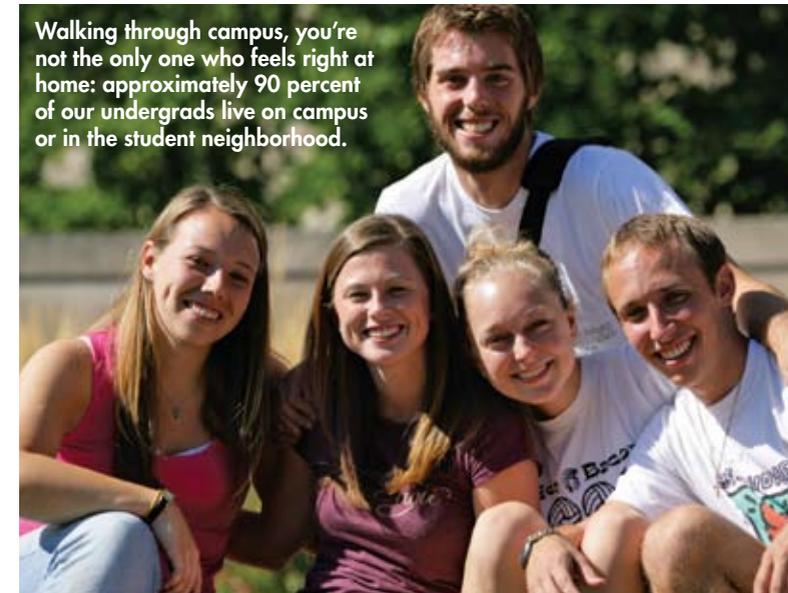
"We have a storied history," reflects Tony Saliba, PhD and Dean of UD's School of Engineering. "We came from humble beginnings in 1911, with chemical engineering and electrical engineering." Indeed, 100 years, three more undergraduate degrees, 13 masters and five doctoral



Chapel of the Immaculate Conception: We have faith in knowledge. We have faith in community. We have faith.

programs later, not to mention an added engineering technology department, the school has much to celebrate. It has been commemorating the centennial with yearlong activities. "But," Saliba cautions, "We can't rest on our laurels."

That means nurturing the innovative spirit of the 1,500 undergraduate and 500 graduate students to keep up with the pace of technology. Toward this end, the school must



Walking through campus, you're not the only one who feels right at home: approximately 90 percent of our undergrads live on campus or in the student neighborhood.

educate what Saliba calls "the engineer of the future": someone who, in addition to having excellent technical skills and strong knowledge of science and engineering basics, possesses critical thinking skills, the ability to adapt to changing demands, a grounding in the liberal arts, leadership skills, and an entrepreneurial mindset. And of course, someone with an innovative spirit.

Hence, the \$4 million Center for

Innovation, established 15 years ago, in which students have solved more than 600 industry problems for 130 different clients. Among them: Emerson Climate Technologies, for which students have addressed scroll compressor design issues and assisted in developing plant layouts for new products. For Hobart Corporation, says Saliba, "students have successfully implemented design concepts in commercial dishwashers." Engi-

neering students also get an interdisciplinary approach to the projects by working with business students on client needs and law students on intellectual property issues.

For Saliba, there's one more component to educating engineers: ethical behavior and decision-making, central to the Marianist philosophy. That's why the School developed a program called ETHOS (Engineers in Technical Humanitarian Opportunities of Service-Learning). One of its accomplishments: creating a solar-powered cooker for an African village, so it would have a means to sterilize medical equipment.

The Professionals

Education at the university doesn't stop with a diploma. No matter one's position on the corporate ladder, UD's Center for Leadership and Executive Development (CLED) offers about 80 days of programs for different levels — executive coaching, executive development, programs for emerging leaders, mid-line

supervisors and managers, and consulting services. “We were developed from the outside in,” says Lisa Beutel, CLED’s director, explaining that some of the school’s partners — NCR, Mead, Premier Health Partners, Wright-Patterson Air Force Base, Emerson Climate Technologies — felt it would be more cost-effective to pool their resources and send their executives to UD for training than to other business schools in the U.S. “They could be networking and learning from each other at the same time,” she notes.

Since its inception in 1999, CLED has hosted 13,000 participants. “Every year we survey senior leaders from in and around the region,” says Beutel. “We identify their most pressing business and leadership issues and look for scholar/practitioners who do research but who also teach and who can teach to an executive audience.”

Looking ahead, CLED plans to extend its reach with up to ten online programs geared toward more experienced executives in 2013.

A Leader in Research

“It’s a unique organization,” says Mickey McCabe, referring to University of Dayton Research Institute (UDRI). McCabe, the institute’s executive director and vice president for research, explains that UDRI is different from most research entities because its 430 employees are full-time researchers, as opposed to professor/researchers who have other obligations. “When someone contacts us, they get our attention 40, 50, 60 hours a week — whatever it takes to get the job done,” he says. And within a budget — a big advantage in today’s marketplace.

UDRI was established in 1956, when the university was juggling 20 research projects, many of them for Wright-Patterson Air Force Base. Since then, UDRI has explored ev-



The University of Dayton Research Institute is home to 430 full-time researchers in a variety of fields.

erything from the properties of aircraft-related materials, to space materials, to data processing and lasers. With nearly \$100 million in sponsored projects, UDRI ranks second in the U.S. for materials research (after Penn State), and is No. 1 in Department of Defense research in the state of Ohio. Although it boasts more than a dozen technical areas,

the institute is in the forefront of applying nanotechnology to high-performance materials and discovering new properties in them. Bio-engineering and fuels and energy are also hot topics, as are sensors, which from an unmanned aerial vehicle or UAV, can measure chemical and biological hazards, as well as body heat.

So successful is UDRI’s track record that it, along with the School of Engineering, convinced GE Aviation to build a \$51 million facility on campus. It will be called Electrical Power Integrated Systems Research and Development Center or EPISCenter, and is slated to open in 2012.

But UDRI is also committed to service and frequently partners with small businesses in the area. As McCabe illustrates: “A small business might call and say, ‘we’re painting a part and the paint won’t stick.’ And we’ll do a microscopic scan to see why the paint’s not sticking. It’s a way of helping out small businesses without charging them a fortune.” Or rather the UD way, the Marianist way — and a proven success.

NOTABLE ALUMS

- **Bill Klesse**, CEO of Valero
- **Keith Wandell**, CEO of Harley-Davidson, Inc.
- **Joseph Hinrichs**, CEO of Ford China
- **Katherine Tamer**, former VP & CIO of NASA contractor United Space Alliance
- **Kristina Keneally**, first female premier of New South Wales
- **Gary Heminger**, CEO of Marathon Petroleum Corporation

A RIVER RUNS THROUGH IT

The university offers a variety of extra-curricular activities for students, whether athletics, intramural sports, or clubs. One of the more unusual opportunities is **River Stewards**, a program of the university’s River Institutes. In the three-year interdisciplinary program, undergrads take weekly mini courses, learning about the watershed of the **Great Miami River**, which flows through the campus, and volunteer in the community. In their senior year, the students develop a project, completing yet another way in which they’ll have learned, led, and served.



Main Entrance: When students graduate, the path to success isn’t ahead of them. They’re already a good way down it.



With more than 200 student clubs, students will find plenty of outlets to express themselves.



ArtStreet forms a cultural hub where classmates and friends become artistic contemporaries. Call it inspired living.