

## Alumni Newsletters

School of  
Architecture

College of  
Business Administration

Impact

College of  
Health Professions

College of  
Liberal Arts and Education



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*Impact - Fall 2005*

### Dean's sabbatical paves way for future themes, visions and programs

After 13 years at the helm of UDM's College of Engineering & Science, a three-month summer sabbatical allowed Dean Leo E. Hanifin to step back from administrative duties to explore "trends and emerging developments in our country, in the organizations that hire our graduates, and throughout the world" with the intent of defining potential new directions and opportunities for the College.



He has presented five themes for future emphasis in the College:

- Innovation, entrepreneurship and creativity in service to the community
- Education of responsible and effective global leaders
- Computationally intensive science and engineering
- Inter-college service and collaboration
- Aggressive and focused marketing

To arrive at these themes, Hanifin looked at areas including emerging technologies (nanotechnology, fuel cells, bioinformatics, environmental engineering, genetics, etc.), American innovation, globalization and new educational models. He also held "futuring" discussions with leaders at Ford, IBM and other companies; visited benchmark universities such as Rensselaer Polytechnic in New York and Lehigh in Pennsylvania; met with National Science Foundation leaders;

### Proposed course to focus on community needs

As part of its role in fostering community development, UDM is exploring an interdisciplinary community-based design studio to address critical needs of the people of Detroit. As proposed, the first-term junior-year course would involve student team members from Architecture, Business, Digital Media and Engineering who would work on the identified project.

Architectural students would provide aesthetic design; Business students would do market analysis and develop the business plan; Digital Media students would produce promotional materials/graphics/web pages; and Engineering students would design mechanical, electrical, civil and manufacturing functions appropriate for the

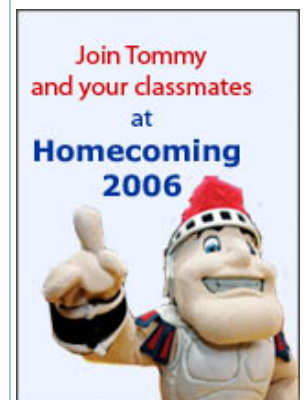
### Past Issues

Select past issue

### Alumni Classnotes

Find out the latest about your classmates! Visit [Alumni Classnotes](#) on the UDM web site.

### Alumni Events



[Calendar](#)

[Theatre Season](#)

### Giving to UDM

Make a new or increased gift to the University between September 1 and December 31 to be entered to [win two tickets to the Super Bowl XL](#) on February 5, 2006 at Ford Field in Detroit.

### UDM News and Events

[Alumni Events](#)

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[programs](#)[Five-Year BS/MS PA track to begin, fall 2006](#)[New master's programs prepare students to protect national security](#)[Honors program inducts 27 new members](#)

attended several major conferences; and conducted a number of retreats with faculty.

The themes and related initiatives are intended to stimulate dialogue among all constituents and partners of the College, including faculty, alumni and corporate and government partners.

"These themes could involve initiatives ranging from modifying current programs to creating entirely new programs, centers and partnerships that reflect new ways to achieve the goals and objectives of the College," Hanifin explains. "They are a *menu* to explore where and how we might employ the resources of the College, our partners and sponsors to achieve our greatest potential for good in the world."

Hanifin's sabbatical report, *Engineering and Science Education in the 21st Century*, also suggests collaborative processes and next steps to select changes and initiatives for the College. In addition to considering the needs of students, employers and our nation, decisions for change must consider resources available, "scalability" and risks, he says.

"That being said, I am convinced that a decision to change nothing may have the greatest risk of all options," he continues. "To be effective in the future requires bold initiatives and programs that respond to the changing world and that differentiate UDM's E&S programs and graduates from those of competitive institutions."

Meetings with faculty and external partners on different theme areas are in process.

manufacturing functions appropriate for the task.

Additionally, according to the plan, the Psychology team would assist in the understanding of the organizational behavior and team dynamics. The Health Professions team might provide design projects to meet the needs of patients and health care providers.

The tentative development schedule calls for course design this fall; project explorations, definition of faculty roles/assignments, and promotion and course enrollment in Spring 2006; project definition in Summer 2006; and the pilot next fall.

According to E&S Dean Leo Hanifin, "This type of experience will develop the capabilities of students to collaborate across disciplines and to be responsive to the needs of real customers in our community . . . important competencies for graduates in any profession."

[NEWS and EVENTS](#)

Search UDM's web site:



## Now It's Time to Move Ahead

In mid-August, when I returned from my [summer of study and reflection](#), I presented five themes for future emphasis in the College:



- Innovation, entrepreneurship and creativity in service to the community
- Education of responsible and effective global leaders
- Computationally intensive science and engineering
- Inter-college service and collaboration
- Aggressive and focused marketing

I am pleased at the positive response that these have received from the college's faculty, alumni and corporate partners. This response confirms my confidence that these focal areas are both "on target" in today's world and in Detroit, and that they are aligned well with the mission and values of our University and College.

The faculty of the College has embraced these themes and moved quickly forward in selecting relevant initiatives that they feel are most appropriate and "doable." In some cases, these initiatives are still being studied; in other cases, progress has been made to launch new courses, programs and activities. Here is a *sampling* of initiatives:

- [Interdisciplinary Design, Entrepreneurship and Service \(IDEAS\)](#) studio-based course is under development by a team from four UDM colleges and schools, and will be piloted next fall.
- Engineering and business faculty members have created a four year plan to develop entrepreneurship cases, courses, certificate and minor, and support has been requested from a foundation.
- The establishment of a chapter of "Engineers without Borders" is being evaluated.
- International universities have been invited to link their students to ours at UDM on design projects.
- The E&S faculty have developed a laptop specification and computational vision as a preamble to a possible laptop program for students.
- The "[Engineering Road-shows](#)" are being scheduled at over twenty schools, with a target of fifty schools for the year.

To support the faculty travel and time dedicated to these and other initiatives I have asked 14 alumni for support totaling more than \$100,000 for program development and launch. So far, 12 alumni have indicated that they will support these exciting projects.

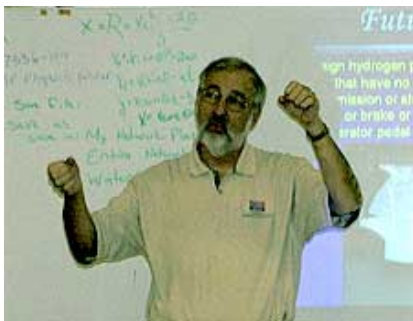
If you would like to discuss these initiatives and the many ways you can make a difference in the future of the College, please call me at (313-993-1216) or send me an email at [hanifinl@udmercy.edu](mailto:hanifinl@udmercy.edu).

## More ambassadors join Engineering Road Show

A group of alumni, trained as presenters for the "Engineering Road Show," are eager to share their experiences with high school students in an effort to increase their interest in engineering. Looking forward to his first presentation in January 2006 at Lincoln High School in Warren,

**Christopher Koziara '03**, who works in

DaimlerChrysler's hybrid electric vehicle program, says, "We as experienced engineers must share our knowledge with young students. Some of the greatest inventions in mankind's history were made by engineers. Having the chance to join the ranks of great men and women of innovation should be a very exciting opportunity."



**Phil Kimmel '04**, a CIE engineer with DaimlerChrysler Product Strategy, is working towards his master's in Mechanical Engineering at UDM. "My involvement is two-fold: I would like to see UDM's program grow. I also would like to see DaimlerChrysler improve because of the quality engineers we graduate. I truly believe in the whole education that UDM gives its students and the way in which UDM prepares people for life, not just work."

**Sean Newell '92, '93**, is scheduled to present at Allen Park and Southgate Anderson High Schools, both in proximity to his job as an electrical systems manager in Ford Motor Company Product Development. "As presenters we want to share what's fun and exciting in engineering so students get a real understanding that it's not all math and geeky tech," says Newell.

Regarding employment potential, he shared comments from a recent Ford executive's speech that even in "down times," the automotive industry has the need for new skills and innovations that talented young engineers can bring to areas including hybrids, telematics (in-vehicle communications) and computer systems.

**Paul Shefferly '75**, director of DaimlerChrysler's Vehicle Build in Product Development, will present at Detroit Catholic Central of Novi and Milford High School this fall. Discussing why the nation needs engineers, he says, "As an ongoing leader in technological innovations, the U.S. will have more ability to influence how things will play out in the future, to incorporate our values for society and the environment. We need to create jobs and solutions that represent our perspective and that are appropriate for us."

Other alumni who have volunteered to present include **Frank Trovato '92, '95** of DaimlerChrysler, **Steve Hamlin '94** of Tre Builders, LLC, **Matt Smith '94**, **Jeff Vogel '91**, and **Mike Pilon '94**.

Since the “Road Show” began in 2004, E&S Dean Leo Hanifin, faculty and others have talked to several thousand students in schools throughout the metropolitan Detroit region and Ohio. They share information about the scope of available careers and the rewards of being an engineer, and demonstrate a mobile robot designed and built by UDM students.

Citing that Asian universities graduate more than 10 times as many engineers as North American universities, Hanifin adds, “Without an adequate supply of engineers, we will not be competitive in the global economy nor will we be secure in a very dangerous world.”

## Alumni Profile: Steven Hamlin '94, bets on new company

Including minority and women-owned businesses in the construction markets in which he works is a passion of Engineering alumnus Steven M. Hamlin '94. As owner and vice president of operations of a new company, Tre Builders, LLC, with two partners, he is in a key position to make a difference.

Tre Builders, founded earlier this year, is a Las Vegas-based company with offices also in Detroit. It performs construction management and project management services with a focus in the hospitality and gaming markets.

Projects have included the MGM Grand Detroit Casino and remodeling at Mandalay Bay in Las Vegas.



"Being a superintendent and project engineer with Perini Building Company the past three years was instrumental in promoting and enforcing policies to include minority and women-owned businesses, providing opportunities to companies historically not involved in projects of this magnitude," says Hamlin.

He served as Perini's superintendent on projects at the MGM Grand Mansion Casino/Robuchon Restaurant and MGM Grand Skylofts in Las Vegas as well as the Ritz Carlton-Lake Las Vegas Resort and the Green Valley Ranch Station Casino, both in Henderson, Nev. He served as project engineer on remodeling, expansion and other work at the MGM Grand Casino, Caesars Palace Spa Tower, Harrah's Casino and other sites.

While at Perini, he was a two-time winner of the President's Safety Award. At UDM, he was president of the UDM Student Chapter of the American Society of Civil Engineers, vice president of the E&S Student Council, finalist for the Engineering Student of the Year Award and founder of the E&S "King of the Geeks" Volleyball Tournament.

"My time at UDM prepared me for my career by encouraging creative, analytical thought within an uncompromising ethical framework," he says. "The value-based UDM education provides students with the technical abilities to excel in the workplace while instilling a 'moral compass' to help steer our decision making as we encounter ethical challenges."

In addition to his career, Hamlin has organized fundraisers to provide holiday meals for families in need. He also volunteered to present with the [Engineering Road Show](#), about which he says, "I believe that engineering will play a vital role in determining America's future position in the rapidly evolving global community. High school students, given the exposure to what is involved in an engineering career, will be more likely to consider it as an attractive, socially important and often exhilarating option."

## Exceptional programs offered for exceptional students

Three fast-track programs offer motivated students the opportunity to earn bachelor's and advanced degrees at an accelerated pace. In Fall Term 2006, UDM will add a five-year BS/MS program track for physician assistants (PA) in addition to its long-standing six-year BS/DDS dental program and five-year BS/MS engineering and science program.



The PA program will include three years of undergraduate studies toward a BS in biology and two years of master's level studies for a PA degree, explains Associate Dean for Academic Affairs Ken Henold.

"To acquire clinical and care-giving experience, students also will train and work as Emergency Medical Technicians (EMTs) or in other opportunities at hospitals," he adds.

As health care continues to change, "more primary care units will become staffed by PAs," Henold predicts. "A number of our current PA Program students have previous background or experience in health care, as well as other fields of science. We think there is a need and market, particularly with the aging population, for more, younger PAs. Our new program will bring a new cadre of highly motivated students to the field."

The fast-track PA program will be limited to approximately 15 students per class for the two years of master's level studies.

The six-year accelerated dental program is ideal for students who intend to become specialists, researchers or professors, all of which require a bachelor's degree in addition to the DDS. Students in the BS/DDS program take two years of accelerated undergraduate courses followed by four years in dental school. The program is limited to six to eight students a year.

The five-year BS/MS track for engineering and science programs has been available for two years to students with a minimum 3.25 grade point average who are majoring in chemistry; electrical, civil and mechanical engineering; or computer science.

"Students take graduate courses their senior year and typically attend summer school two terms," Henold explains. Co-op placement also is mandated for engineering students.

"We are excited about all three of these accelerated programs," Henold says. "They offer eligible motivated students an opportunity to earn their degrees in a concentrated timeframe without sacrificing quality of education."

## Wireless capability, other upgrades benefit students, faculty

As technology advances, so does UDM. Recent enhancements provide high-speed wireless internet connectivity for all users throughout the Engineering and Science buildings.

"Students and professors will no longer be tethered to specific locations for internet access. They are free to learn and communicate anywhere within the Engineering and Science buildings and also with the other 85 percent of the McNichols Campus that now has wireless connectivity," explains Edward G. Tracy II, UDM's director of Information Technology Services.



For several years, Engineering has had a small wireless network. In September, all of its access points were upgraded to accommodate significantly higher speed service. Work to install wireless capability in the Life Sciences and Chemistry buildings was completed in early November.

Tracy adds, "At this time, we are pleased to have 100 percent of the Engineering and Science buildings completely wireless. Wireless in Life Sciences nicely complements the newly updated auditorium and technologically impressive Fr. Albright Hall. We look forward to finishing the remaining 15 percent of wireless access for the academic buildings on campus over the next year, as well as the residence halls for 100 percent coverage."

Other enhancements include a new roof for the Chemistry Building and renovation of Life Sciences Room 115.

## Renewable energy project to save money, help educate

With higher heating bills forecasted for winter and energy usage a growing concern, UDM is taking steps to be more energy efficient. A trained team of students and faculty from the College of Engineering & Science and School of Architecture recently installed seven 20-foot by 20-foot solar photovoltaic panels on the roof of the Engineering Building. The project has two objectives: to demonstrate that photovoltaic solar energy generation can be seamlessly incorporated into existing architecture and, secondly, to educate a wide-ranging target audience about the technology.



“Renewable energy sources are becoming increasingly important as oil and natural gas prices continue to rise,” says Mechanical Engineering Professor Mark Schumack, one of four principal investigators on the project. “The 10-kilowatt photovoltaic system we installed converts sunlight to electricity, producing power on both sunny and cloudy days. Electricity from the solar cells will feed directly into the Engineering Building’s electrical system, offsetting its commercial electrical consumption by about 10,000 kilowatt hours a year. This amounts to about 40 percent of the building’s lighting needs.”

In addition to Schumack, investigators are E&S Associate Dean Arthur Haman, Associate Professor of Chemistry/Biochemistry Robert Ross and Associate Professor of Architecture Will Wittig. The system was designed and made by United Solar Ovonic in Auburn Hills, Mich. The State of Michigan Energy Office issued the \$53,000 grant for the system, with funds coming from the U.S. Department of Energy.

A display explaining solar photovoltaic principles and demonstrating real-time electrical power production from the array of panels will be housed in the Engineering Building lobby. A ceremony to dedicate the system is planned for the spring.

## **Faculty Profile: Katherine Snyder at home in UDM community**

Assistant Professor of Mathematics and Computer Science Katherine Snyder has lived in Detroit her whole life.

"I went to Gesu grade school across the street and still live near campus. The 'gravitational pull' of this area seems to keep me here," she says.

She earned her Bachelor of Science degree in Mathematics and a secondary teaching certification in 1989 and a master's in Computer Science in 1993, all from UDM. While teaching, she now is working towards her doctorate in curriculum and instruction in Math and Computer Science at Wayne State University.



About UDM and her work she says, "UDM plays an important role in trying to make great things happen for Detroit and its people. I enjoy the students, faculty, staff and administration with whom I work, and I enjoy the challenges that come from the job we are trying to do."

In addition to helping author several publications, she also has participated in "Tech Day," an annual UDM engineering and science competition for area high school students; worked on a National Science Foundation grant to support curriculum collaboration between middle schools and colleges; and collaborated with a local middle school teacher to develop a word processing and computer curriculum for blind students K-12.

Previously, Snyder was a self-employed computer consultant, math and computer programming teacher at Holy Redeemer High School in Detroit, and math teacher at Cranbrook/Kingswood High School in Bloomfield Hills.

## Engineering and Science News

*News briefs from the College:*

### Engineering programs reaccredited

The Accreditation Board for Engineering and Technology has reaccredited UDM's bachelor degrees in Civil Engineering, Electrical Engineering and Mechanical Engineering. These programs have been continuously accredited since 1936, the first year any engineering programs in the country were accredited.

### Chemistry Club was named an Outstanding Student Affiliate Chapter

Under the leadership of faculty advisors Matt Mio and Kate Lanigan and student president Karrie Manes, UDM's Chemistry Club was named an Outstanding Student Affiliate Chapter, the highest award given by the American Chemical Society. Only 32 chapters were awarded this designation from more than 300 submissions of 900 listed chemistry clubs. UDM's Chem Club was also one of 10 chapters in the nation to win the Green Chemistry Chapter Award for advancing the ideas of sustainable living and sustainable chemical processes among its students.

### STEPS camp

STEPS is a one-week residential camp for young women entering the 10th or 11th grade. The camp focuses on robotics and seeks to inspire the campers to consider a career in engineering or science. In the summer of 2005, 84 girls from around the State of Michigan attended UDM STEPS camp.



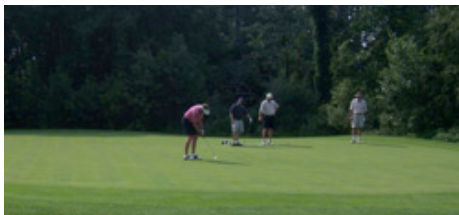
### High school students attend

#### Tech Day [[View Photos](#)]

More than 600 students from 25 high schools in metropolitan Detroit attended Technology Awareness Day, hosted by the College of Engineering and Science, Oct. 21. The event included the annual UDM Chemistry Magic Show, engineering displays and exhibits with several corporate displays from Ford Motor Company, DaimlerChrysler, Pfizer, Comau Pico, Continental Teves, DTE Energy and the Detroit Police Forensic Department.

### Golfing event scores another success

More than 80 golfers participated in the UDM College of Engineering & Science 2nd annual E&S Golf Outing held July 18 at the Links at Pinewood in Walled Lake. The event, sponsored by Soil and Materials Engineers, raised more than



\$6000 to support E&S student scholarships and organizations.



Other sponsors were:

Birdie Sponsor, Lawrence Wisne

Two Hole-in-One Sponsors, Class of '71 & Deloitte

Two Closest to the Pin Sponsors, Wade-Trim & NTH Consultants

Longest Drive, IDS

Straightest Drive, National Precast

Food Sponsor, Anonymous Class of '88

The event included 18 holes of golf, use of a golf cart and range balls, continental breakfast, luncheon, open bar plus awards and prizes. Congratulations to the winning Foursome which was a threesome: John Kirchhoff, Pat Patterson, Kevin Pavlov.

Next summer's Golf Outing is scheduled for July 17 and will be held at Shenandoah Country Club in West Bloomfield. To reserve a spot, arrange sponsorship, make a contribution or for more information, call 313-993-1218.

### **Engineering team wins competition**

UDM's Engineering Team won first place in the 2005 Micro-Truck Baja Design Competition during the SAE 2005 World Congress. The competing vehicles were tested in a race against the clock on a tortuous all-terrain course. Each entry was judged on its excellence in planning and execution of its design.



## **Faculty Notes**

**Stokes Baker**, associate professor of Biology, has been awarded a three-year National Science Foundation Educational Materials Development Grant entitled, "Using Transgenic Plants that Express Green Fluorescent Protein in Teaching Quantitative Experimental Skills to First Year Undergraduates."

As part of an interdisciplinary team of faculty, **Alan Hoback**, associate professor of Civil Engineering, **and Scott Anderson**, adjunct professor of Mathematics, discussed "Link between transit funding and obesity" at the Institute for Transportation Engineers in July. The research showed that physical activity of walking to bus stops promotes health. **Utpal Dutta**, professor of Civil Engineering, also participated in the research.

**Prasad Venugopal**, associate professor of Physics, was featured in a new film about the meaning of life and how spirituality exists in our diverse world, mirroring UDM's mission. The documentary movie, "ONE," features interviews with many local and national leaders including well-known spiritual leaders and authors such as Deepak Chopra, Father Thomas Keating and Robert Thurman.

**Mark Schumack**, associate professor of Mechanical Engineering, has been promoted to full professor.

## **Your Support helps E&S Students (and not just in the classroom)**

The students in the College of Engineering & Science have numerous opportunities to apply their “book learning” knowledge first-hand. Outside programs and competitions are a major part of an E&S education. A sample of these opportunities include:

- the Mini-Baja and Micro-Baja competitions, where students design and race off-road vehicles;
- the autonomous ground vehicle competition, where students design vehicles that need no driver, but instead follow a path and avoid obstacles through sensory technology;
- and the Chem Club that enables students to provide extra-curricular programs to high school students (such as its renown “Magic Show”) and UDM students alike.

Other opportunities to grow as professionals are available in the E&S student organizations, which not only mentor incoming students, but also provide speakers and networking opportunities with industry professionals.

Alumni and friends have been generous to support student programs in the College; corporations such as the DaimlerChrysler Corporation Fund and the Ford Motor Company Fund support many of our student programs and organizations on an annual basis.

All gifts, regardless of their size, help to ensure the continuing quality of a UDM education. Private support is crucial to our ability to maintain and enhance the excellent programs that have been part of the University tradition for generations.

Please consider making a gift to Engineering and Science before Dec. 31. Stock gifts are advantageous because they eliminate capital gains tax liability and provide income tax savings. If you want to make your gift to the College of Engineering and Science, please contact Marc Melamed, director of Development at (313)993-1510 or [melamedm@udmercy.edu](mailto:melamedm@udmercy.edu). You can also make a gift online at [www.udmercy.edu/giving](http://www.udmercy.edu/giving).