Sustainable Brewing
A unique new degree

Also inside:
• Tigers’ Dave Dombrowski
• Students’ life-saving invention
A Final Act
$2 million posthumous gift establishes fine arts fund

Brewing Scholars
WMU & KVCC offer nation’s first sustainable brewing degrees
Chemist’s new way to analyze hops

Breath of Life
Students’ invention could save critically ill infants
Marketing student wins patent

Detroit Tigers’ Calm Captain
Dave Dombrowski missed out on Bronco baseball, but it led to MLB front-office stardom

Medallion Scholars & Middle Schoolers
Program helps boost academic readiness of middle school students

Inside Cuba
WMU Cuba specialist shares an insider’s view amid historic shift in U.S.-Cuba relations

University News
Expert Insights
In Print
College News
Classnotes
In Memoriam
Alumni Profile
The pageantry and artistry of a traditional powwow returned to campus in early April. This celebration of Native American culture was hosted in University Arena by WMU's Native American Student Association. The event's theme, "Reviving Tradition," paid homage to the 16 years of nearly annual powwows that were held on campus until 2006 and that at their peak, drew some 8,500 spectators.
Dear Friends,

Higher education is often regarded narrowly as an endeavor that prepares students for employment. But the value higher education imparts is deeper than a single job. Its worth lies in equipping individuals for a lifetime of contributing their talents and uniqueness to society in a variety of ways.

To be sure, those who take full advantage of a Western Michigan University education are primed and ready to take on the world of work. And, as you’ll read in University News, even our newest alumni have incredible success doing so.

But I’m also proud to report that this University educates and encourages students to positively impact the world even while pursuing their degrees. Our students are learning to use their burgeoning talents to make a difference holistically.

On the following pages, you will meet two premed students who learned about a serious condition killing newborns in developing nations and decided to use their engineering know-how to come up with a solution.

At our College of Engineering and Applied Sciences, Stephen John and Joseph Barnett devised a simple and inexpensive device to help low-resourced medical centers treat infants suffering from respiratory distress. These aspiring doctors volunteer at mission hospitals abroad and know the need.

A group of Medallion Scholars—among our highest-achieving undergraduates—responded to the academic struggles of some area sixth-graders by creating the Future Leaders of Kalamazoo mentoring program. They have “adopted” the middle school students, committing to tutoring and mentoring the youngsters each week for their three years of middle school.

As graphic design major Kelly Brandon put it, she and the other Medallion Scholars want to have a “lasting impact that goes beyond the semester report card.”

Our students know that helping guide their younger counterparts has incalculable value.

Though I’m sure you have heard today’s young people characterized as being more focused on self than on the world around them, there are countless examples in our student body challenging that notion. Many substantively enhance their education and themselves by going beyond the rigor of the classroom experience. As a result, our students, and the world, are better for those contributions.

Best regards,

John M. Dunn
President

WMU graduates see an 89 percent success rate

Thousands of WMU seniors graduate this spring and summer with the knowledge that last year’s graduates saw an 89 percent rate of success within just three months of commencement.

A five-year-old effort to track the postgraduate activities of WMU alumni has emerged as what is believed to be the most comprehensive documentation of life after graduation for students at any Michigan university. The annual survey garnered responses from more than two-thirds of 2013-14 WMU graduates.

The core finding for 2013-14 was that 89.1 percent of graduates were “actively engaged” in the next steps of their professional development within three months of graduation.

Active engagement is defined as:

- Full-time employment—62.5 percent
- Graduate school attendance—14.6 percent
- Part-time employment—11 percent
- Military service—1 percent

For those employed full time, 81 percent were employed in jobs related to their academic discipline, and the median salary was in the $45,000 to $50,000 range.

The WMU survey is the product of five years of work by Dr. Ewa Urban, associate director for assessment and technology in WMU’s Career and Student Employment Services.

When she first began seeking this data years ago, she garnered responses from just 25 percent of graduates. Urban has since built a survey and outreach program that last year netted responses from 68.5 percent of graduates—3,590 of the more than 5,200 students who earned bachelor’s, master’s and doctoral degrees in 2013-14.

Working with Amy Galick, who is a graduate assistant working on a master’s degree in applied mathematics, Urban says they were able to make the most recently completed report the most thorough to date.

A comprehensive report is available online at wmich.edu/careerplanning/reports.
International student enrollment continues to rise

WMU’s continuing growth in international student enrollment reflects national trends reported in the annual Open Doors Report on International Educational Exchange. Open Doors reported on international student enrollment across the United States for the 2013-14 academic year, comparing changes to 2012-13. The report, released in the fall, found that the number of international students at U.S. colleges and universities rose by 8 percent for a record high of 886,052 students.

Meanwhile, WMU’s international student enrollment rose by 7.1 percent during that time frame, reaching a total of 1,688 international students representing 105 countries. Although not reflected in the report, University officials say that WMU’s international student body has continued to grow at an even higher rate when considering statistics from 2014-15. This recent enrollment data showed an additional 9.8 percent increase compared to 2013-14, with 1,854 international students representing 100 countries now studying on campus.

In September, the University welcomed scores of new students: 101 from India (271 total), 49 from Saudi Arabia (456 total), 29 from Brazil (95 total) and 26 from Iraq (86 total).

On the national scale, students who come to the United States from around the world contributed nearly $27 billion to the economy as well as contributed to America’s scientific and technical research. By studying in the United States, they also brought international perspectives into American classrooms, which helps prepare U.S. undergraduates for global careers and often leads to longer-term business relationships.

Instructor’s poetry book wins 2014 USA Best Book Award

A book of poems by a WMU Spanish instructor won a 2014 USA Best Book Award, while a second book was named a finalist in another category.

Dr. Hedy Habra is author of the poetry collection “Tea in Heliopolis,” which took top honors in the Poetry: General category. Her book “Flying Carpets” also was named one of five finalists in the Fiction: Short Story category.

USABookNews.com is an online magazine featuring mainstream and independent publishing houses. More than 400 winners and finalists were announced in over 100 categories.

The two awards are the most recent accolades Habra has received for her two books. “Tea in Heliopolis” was recently named one of five finalists for the 2014 International Poetry Book Award, while “Flying Carpets” won an honorable mention for the 2013 Arab American National Book Award and finalist for the 2014 Eric Hoffer Book Award.

OT prof wins recognition from national organization

Dr. Debra Lindstrom, a professor of occupational therapy, has been chosen to receive the American Occupational Therapy Association’s Roster of Fellows Award. The Roster of Fellows recognizes AOTA members who, with their knowledge and expertise, have made a significant contribution to continuing the education and professional development of fellow members. In particular, Lindstrom is recognized for her contributions as a clinical reasoning champion, educator, researcher, mentor and advocate.

“Dr. Lindstrom has a consistent pattern of creating innovative teaching and learning opportunities for her students,” says Dr. Ben Atchison, chair of the WMU Department of Occupational Therapy. “She is deeply committed to the professional development of her students as well as her colleagues.”

Nominators noted that Lindstrom has successfully moved from problem-based learning, to case-based learning, to team-based learning in her classes.

Her research topics range from work and ergonomics issues and clinical reasoning to psychometric properties of commonly used assessment instruments. She also has mentored more than 25 students, faculty and alumni in research.

Many of her considerable contributions in the area of advocacy have been through the American Association of Retired Persons, including co-creating and developing a program based on the AARP Home Fit Guide. The program helps older adults understand what they need to do to be able to safely stay in their homes as long as possible.

Michigan is now seen as one of the leaders in AARP in Livable Communities due in great part to her work. And the program has spread to other states.
New engineering college dean to take reins in July

Dr. Houssam A. Toutanji, professor and chair of civil and environmental engineering at the University of Alabama-Huntsville, will this summer become the new dean of the College of Engineering and Applied Sciences.

The veteran academic leader and researcher will take on the mantle of dean at the start of the 2015-16 academic year, July 1. An Alabama-Huntsville faculty member since 1997, Toutanji has been chair of his department since 2008 and has served since 2013 as associate dean for graduate education and research.

“Houssam Toutanji brings to the deanship a record of enormous accomplishment as an educator, researcher and academic leader,” says Dr. Timothy Greene, WMU provost and vice president for academic affairs. “He will be a wonderful asset to our engineering college, of course, but also a wonderful addition to our business community.”

Before joining the Alabama-Huntsville faculty, Toutanji held a four-year faculty appointment at the University of Puerto Rico-Mayaguez, and he held international visiting professor appointments at France’s University of Cergy-Pontoise and Belgium’s Ghent University. He also has served as a faculty fellow at NASA’s Marshall Space Flight Center and a postdoctoral fellow at Worcester Polytechnic Institute.

“There are many excellent opportunities to grow the academic and research enterprise in the College of Engineering and Applied Sciences at WMU, and I’m excited to be part of this endeavor,” Toutanji says about taking on the new position.

Law students win national American Bar Association competition

WMU-Cooley Law students Elizabeth and Bryan Devolder took first place at the American Bar Association Law Student Division Client Counseling Competition National Finals at North Carolina Central University School of Law in March.

As the national champions, the husband-and-wife team advanced to compete at the Louis M. Brown and Forrest S. Mosten International Client Consultation Competition, representing all U.S. law schools.

The ABA Client Counseling Competition simulates a law office consultation in which law students, acting as attorneys, are presented with a client matter. They conduct an interview with a person playing the role of the client and then explain how they would proceed further in the hypothetical situation.

“We are extremely proud of Elizabeth and Bryan for bringing the national championship in the ABA Client Counseling Competition back to WMU-Cooley Law School, a title the school last held in 2011,” says Christine Church, WMU-Cooley associate dean.

“...pressed applauds at the end of the round, which I’ve not seen before at a national competition. Another judge said ‘I would hire you’ at the end of the round.”

The International Client Consultation Competition was to be held April 15-18. Outcome of the international contest was not known at press time.

Center for Disability Services awarded accreditation

WMU’s Center for Disability Services received the highest level of accreditation from a national organization that promotes quality, value and optimal outcomes of services for people with disabilities.

The center has been accredited for the maximum period of three years for its community integration, service coordination, supported living and adult day service programs by CARF International.

This accreditation decision reflects the center’s substantial conformance to the CARF standards. An organization receiving a three-year accreditation has put itself through a rigorous peer-review process. It has demonstrated to a team of surveyors during an on-site visit its commitment to offering programs and services that are measurable, accountable and of the highest quality.

The Center for Disability Services has been providing services to adults with disabilities for more than 30 years, in addition to providing valuable learning experiences for students and interns at the University.

CARF International

CARF International is an independent, nonprofit accrediting body that was founded in 1966 as the Commission on Accreditation of Rehabilitation Facilities. It establishes consumer-focused standards to help organizations measure and improve the quality of their programs and services.
A
fter decades of joyfully supporting the fine arts and students at Western Michigan University, the late Martha “Marti” Hearron of Kalamazoo made one final major gift that was to be revealed only after her death.

Hearron, a renowned biostatistician for the Upjohn Co., died Nov. 29. Her estate included a $2 million gift to WMU that establishes the Arthur E. and Martha S. Hearron College of Fine Arts Distinguished Professorship. It also will provide funding for some of her favorite arts programs as well as endow a new Medallion Scholarship for students in the fine arts.

The gift—and the fact that the endowed professorship is the first in College of Fine Arts history—was announced in February by Dean Daniel Guyette at the college’s annual Dance Advocacy Award ceremony that was part of the Winter Gala Dance Concert.

“In typical Marti fashion, she required that this gift remain undisclosed and anonymous until after she was gone,” Guyette said. “But rest assured, we made sure she knew how much we loved and appreciated her generosity, sense of humor and wonderful spirit.”

For years, Hearron and her late husband Arthur were devoted supporters of the fine arts at WMU, attending as many events as possible and establishing several scholarship funds to enable the fine arts education of dozens of students who became known as “Hearron kids.”

Including the newly announced gift, their donations over time exceeded $3 million.

The new professorship, Guyette says, will allow the college to designate exceptional faculty members or appoint visiting professors who have made significant contributions to their disciplines.

The designations will come with supplemental funding to support research and creative initiatives, and over the years, he says, the professorship will rotate through the college’s four disciplines.

The Hearron gift also will support an Endowed Medallion Scholarship bearing the couple’s names. Medallion scholarships are WMU’s premier awards for incoming undergraduates, providing $50,000 over four years.

“We will celebrate the lives that Marti and Art will continue to impact for decades to come as we welcome many new ‘Hearron kids’ to our family,” Guyette told the audience during his announcement.

Additional funds from the gift will provide support for the Department of Theatre’s Instructional Equipment Endowment and the Great Works Dance Project Endowment.

Hearron spent 32 years working as an Upjohn Co. biostatistician in Kalamazoo. During that time, she was a trailblazer with a number of “firsts” to her credit. Active nationally in professional organizations, she helped form the Biopharmaceutical Section of the American Statistical Association and she was the first woman leader of that group.

Hearron earned bachelor’s and master’s degrees from the University of Michigan. Her husband, Arthur Hearron, also was a graduate of U-M and a lifelong musician. He worked for the Upjohn Co. as well, designing and analyzing drug trials.

Together, the pair reveled in the Kalamazoo performing arts scene and provided support for WMU’s marching band as well as its jazz studies, musical theatre, theatre, dance and art programs. Their largesse during their lifetimes also extended to other areas of the University, such as athletics.

The College of Fine Arts consists of the Frostic School of Art, Department of Dance, School of Music and Department of Theatre. All of these academic units are nationally accredited, making the college one of only eight such colleges in the nation to have all disciplines accredited by their respective professional organizations.
Ryan Hamilton has been on a steady path turning his passion for craft beer into his professional craft. But he figured his ultimate aspiration to earn a degree in the science of brewing would eventually require him to leave the state.

As someone who “loves the beer community in Michigan,” that’s not something he wanted to do—and now he, and untold others, won’t have to.

When Hamilton begins classes this fall, he will be among the first to benefit from Western Michigan University and Kalamazoo Valley Community College launching the nation’s first higher education programs in sustainable brewing.

Not only will Hamilton and other students get the hands-on science and art behind brewing beer for a microbrewery or on a larger scale, but also the programs’ unique focus on sustainability, which many say is vital to the future of a billion dollar industry heavily dependent on natural resources and also growing at an exponential rate.

“It’s not just something that will help me at work, but it’s something that I feel fulfilled by and driven to complete,” says Hamilton, who is the maltster at Pilot Malt House in Byron Center, Michigan.

“And when I learned who was behind the curriculum, the breweries involved, I pretty quickly chose this route.”

To determine the programs’ content, WMU and KVCC tapped a who’s who in craft beer in Michigan, including officials from Bell’s Brewery Inc. and Arcadia Ales in the Kalamazoo area, along with seven other breweries.

The curriculum also was developed with Mike Babb, a third-generation master brewer who teaches the craft at the 130-year-old Siebel Institute of Technology in Chicago, and is hops fellow at Kalamazoo spice and flavoring producer Kalsec.
Brewing Scholars

The resulting programs in sustainable brewing offer many options for completion, including a “two-plus-two” option that allows students to earn an associate degree at KVCC, then move on to a Bachelor of Science degree that combines industry art and science with WMU’s national reputation in sustainability.

Brewing boom

Graduates will be entering a booming industry. Craft beer accounts for 11 percent of beer sales nationally, according to the Brewers Association. And in Michigan, craft brewing has a $1 billion economic impact, making Michigan’s impact 10th in the country.

West Michigan alone has developed a strong reputation for craft beer. In 2013, Grand Rapids was named Beer City USA, and Kalamazoo came in second in international voting.

Dr. Marcel Zondag is a WMU assistant professor of marketing who researches the beer and wine business, particularly in relation to product supply chain.

“If you look at the market data, the craft beer industry saw $4.2 billion in revenue (in 2014) with annual growth of 19 percent from ‘09 to 2014,” Zondag says quoting figures from market researcher IBISWorld.

IBISWorld projects the industry will continue to grow at an annualized rate of 7.4 percent, reaching $6 billion by the end of 2019.

Zondag says that the years-long rising interest in craft beer, on the part of consumers and makers, hearkens backs to pre-Prohibition days in the United States and at the same time speaks to the modern consumer movement toward locally sourced ingredients and less processed food and drink.

“It’s hitting on a lot of factors, one, that people just appreciate natural, local foods. They don’t want to buy over-processed food. And no matter what Bud or Miller has tried to put in their ads, people see them as being industrial, which, of course, they are.

“It brings back a local pride aspect, too. That you can go to a local brewer and get a local beer and that’s how it used to be anyway,” Zondag says.
Community-building and cultural heritage is what Dr. Steve Bertman points to when people suggest that interest in craft beer is sure to be short-lived.

“There are people who see the growth in the craft beer industry and say, ‘It’s a fad. It’s a flash in the pan.’ They miss the point that beer is part of our culture and always has been,” says Bertman, a professor of organic chemistry and one of the program founders.

“If you go to these small local pubs, they are packed all the time, not because people want to get drunk, but it’s a place to go to meet people in the neighborhood, catch up on news, just interact as human beings. We’re trying to fold that cultural awareness into the curriculum. It’s not about drinking beer. It’s about human culture and the economic future of Michigan, in part, as well.”

**Putting talent on tap**

As the craft brewing industry has grown and matured over the past two decades, the craft beer consumer has likewise become more discerning about the product, says Tim Suprise, the founder and chief executive of Arcadia Brewing Co.

Assuring quality with every bottle or can of craft beer demands educated, skilled workers at every level of the brewing operation, he says.

“Twenty years ago, if you were a home brewer, you might be able to successfully make a transition into a commercial operation, or start your own brewery, and maybe the consumer would have been a bit more forgiving and allowed that person the opportunity to learn from their mistakes along the way.

“But today, their level of expectation for quality from any brewery—whether it’s a brand new one or one that’s been around for 20 years—is that it’s going to be an outstanding, excellent product,” Suprise says.

In 1996, Suprise established his brewery in Battle Creek, Michigan, before expanding his operations to Kalamazoo last year. Over the years, he has developed Arcadia Ales into one of the state’s most recognized craft breweries.

Suprise says that the WMU-KVCC program “is one that I’m pretty excited about because it will address all of the interdisciplinary areas of knowledge that would be very important for the successful, career-minded person to have, whether in brewing, distilling or any kind of fermentation-related job.”

Joe Rudnick, co-owner of Tapistry Brewing Co. in Bridgman, Michigan, is looking forward to the influx of talent when the brewing programs begin producing interns and graduates. Tapistry’s head brewer and assistant brewer have both been trained by the Siebel Institute of Technology.

---

**Brewing education external advisory board**

Ben Fleckenstein, co-owner: Paw Paw Brewing Co. • Tyler Glaze, brewery operations manager: Short’s Brewing Co. • Matt and Rene Greff, founders: Arbor Brewing Co. • Greg Haner, owner: Gonzó’s BiggDogg Brewing • Walker Modic, sustainability specialist: Bells Brewery Inc. • Aaron Morse, co-owner: Dark Horse Brewing Co. • Joe Rudnick, co-owner: Tapistry Brewing Co. • Dave Sippel, director of operations, and Tim Suprise, owner: Arcadia Brewing Co. • Kris Spaulding, co-owner and director of sustainability: Brewery Vivant
“Passion is great, but educated people, those who understand the ins and the outs of this industry, are critical. I can’t emphasize enough the importance of what (WMU and KVCC) are doing for the industry,” says Rudnick, who also serves on the brewing advisory group.

“It’s going to be easier for us to hire people who understand the business.”

From grain to glass

These new sustainable brewing programs harness the strengths of both WMU and KVCC. And the schools’ collaboration provides students with flexible pathways to obtain the education, officials say.

“What the programs represent is our attempt to give students the hands-on experience of craft brewing and the scientific background that gives them not just the knowledge, but the kind of scientific rigor to go along with training in sustainability,” says Dr. Edwin Martini, a WMU history professor.

Martini spearheaded the development of the brewing programs with Bertman and Dr. Dean McCurdy, KVCC’s associate vice president for food and community sustainability.

“We’ve really been treating this like a one-institution program, even though we’re doing different pieces of it,” McCurdy says.

The centerpiece is a brewing certificate that students earn exclusively through Kalamazoo Valley.

WMU students seeking a four-year degree in sustainable craft brewing complete the certificate at KVCC and transfer those courses back to the University.

KVCC students, after completing the community college’s brewing certificate, may transfer to WMU. Alternatively, students may complete an associate degree at KVCC that includes the brewing certificate.

To use an industry term, students will be educated in the brewing process from grain to glass.

Among its courses in brewing, KVCC will offer beer recipe development, yeast fermentation and microbiology, quality control, and packaging and distribution.

And the education will be hands on as students learn “experientially” at a pilot teaching brewery on the community college’s new healthy-living campus now under construction near downtown Kalamazoo.

“They’ll be learning on professional equipment and, of course, they are going to be spending time with our craft brewing and supply partners, learning about their facilities as well,” McCurdy says.

Those who go on to pursue the bachelor’s degree through WMU will get advanced biology and chemistry along with greater depth in fermentation science and in sustainability studies.

“This is a pretty rigorous science degree,” according to Martini. “For a first semester student who comes in seeking (the Bachelor of Science) degree, their class schedule is not going to look radically different than it would for a pre-med student.”

In addition, there are a variety of electives students can pursue at WMU to build on a particular passion or interest, including production engineering, environmental economics, spirits and spirituality, and the culture around craft brewing.
The multiple credentials and training offered by the joint programs will prepare students for an industry that has a variety of roles to fill, and that’s why the programs were designed to be strongly interdisciplinary.

“That comes out of conversations with industry,” Martini says. “For most who go into this field, they’ll be going to places where they will be asked to do multiple different things. A vast majority of the craft brewing market is very small operations with fewer than 50 employees for sure, a lot of them fewer than 25.”

Those employed by a brewery may be part of the brewing operation. They may be involved in sales and marketing. They may work in a malt house or for a distribution business.

Graduates, particularly those who achieve the science-oriented bachelor’s degree, may be tapped to be a brewery’s sustainability expert.

Considering expense and the high toll commercial beer making has on natural resources, serious attention is being given to sustainability as the industry and individual breweries continue to expand.

“For a lot of folks in craft brewing, sustainability becomes part of their identity, part of their brand, that they’re about local ingredients, that they’re about community and for a lot of them, it begins with environmental sustainability—energy, water, local sourcing, and those kind of things,” Martini says.

Sustainability
Instituting sustainable practices speaks to a company’s commitment to environmental stewardship, but also to its own long-term viability.

Bell’s Brewery Inc. employs a full-time sustainability specialist. At Bell’s, Walker Modic’s job is to ensure the company’s operations are efficient in water and energy consumption, waste management and recycling, among other areas.

“In a constrained ecosystem, there’s only so much potable water and arable land to go around and that means a fixed amount of barley, a fixed amount of hops,” Modic says.

Meanwhile, the global population continues to rise and climate change has influenced the predictability and seasonality of climatic events, making the natural resources needed to brew beer “potentially scarcer and more expensive,” he says.

As a member of the national Brewers Association’s committee on sustainability, Modic has a bird’s eye view of the issues facing the industry. The committee is charged with disseminating information and best practices in sustainability to the craft brewing community.

“We talk about the collaborative efforts between breweries to become more sustainable. Through that, I’ve also found that every brewery is unique enough in its location and operation that those solutions are not always cookie cutter. The regulations on net metering are different in Michigan than they are going to be in California.

“The availability of water in Fort Collins, Colorado, is totally different from Michigan. My proximity to a rail car is different than it might be in downtown Cleveland. Your city might have industrial composting as a city-provided alternative. Whereas, here, I need to find inventive compost solutions for our waste biomass so that it doesn’t go to a landfill,” he says.

Those are the kind of issues an individual trained in sustainability studies may tackle for a brewing operation.

Modic, also a member of the WMU-KVCC brewing education advisory group, says that while most smaller volume craft breweries don’t have a position solely dedicated to sustainability, it may be part of someone’s job responsibilities, and increasingly so as the industry and individual breweries mature.

“As the cost of natural resources grow, small breweries will look to incorporate a sustainability role at an earlier point in their growth curves in the future because of the savings associated with the efficiencies,” he says.

“I think having a specialty in sustainability will make you a more attractive hire as a brewer.”

For more information on WMU’s sustainable brewing program, visit wmich.edu/arts-sciences/brewing.

For more on KVCC’s program, visit kvcc.edu.
A WMU chemist who established one of the first hops analysis labs in Michigan is developing new methods to test hops using mass spectrometry.

The female flowers of the hop plant provide a key flavoring ingredient in beer. Laboratory analysis of hops is a means of quality control for farmers and brewers.

“The hops quality control for hops growers and processors also supports the mission of my research program to simplify and make analytical methods more sustainable,” says Dr. Andre Venter, founder of the hops analysis laboratory and an associate professor of chemistry who specializes in analytical chemistry and researches ionization mechanisms in mass spectrometry.

Different varieties of hops impart different levels of bitterness and aromas to beer.

Venter’s research group examines the bittering acids, essential oils and other basic elements of the herb to determine quality. Brewers need to know the values of these chemical compounds to design tasty and reproducible recipes.

About three years ago, after learning about the need for a hops testing facility in the state of Michigan, Venter sought and won seed funding from the Michigan Department of Agriculture and Rural Development and the U.S. Department of Agriculture to establish the laboratory at WMU.

Since founding the lab, “in addition to providing services to the Michigan hops and brewing industries, we have analyzed samples as far afield as New York State, Ohio and British Columbia, Canada,” he says.

Venter began researching the use of mass spectrometry as an innovative method for analyzing hops, believing the technique would provide the hops grower and beer brewers with greater value.

Mass spectrometry is an analytical chemistry technique that identifies and quantifies the molecules in a given substance by counting ions with a particular molecular weight.

Compared to standard methodology for testing hops, he says that mass spectrometry has several advantages. It analyzes hop samples more quickly, saving time and money. The technique also provides more data about a sample, such as oxidation level, an indicator of freshness, and can be used to verify the identity of a hop variety.

“It’s also a greener process because it doesn’t require as much use of solvents and reduces the cost of disposing waste chemicals,” he says.

Venter is working with the American Society of Brewing Chemists to help validate this method for testing hops. Students in his research group also are developing new mass spectrometry methods to analyze the finished product in brewing—beer—as a quality control measure, gauging, for example, International Bitterness Units, alcohol content and diacetyl levels.
Students invent potentially life-saving, low-cost device to treat critically ill infants in developing nations
Two WMU undergraduates have designed a respiration support device that could be life saving for premature babies born in parts of the world where access to expensive medical equipment may be limited.

Babies born preterm sometimes have underdeveloped lungs and need some degree of respiratory life support. While U.S. hospitals typically have advanced respiratory treatment tools, that’s not always true in other parts of the world.

WMU seniors Stephen John and Joseph Barnett teamed up to develop a mechanism to expand treatment options in less well-resourced areas.

Both of these premed students have a strong interest in medical care and share similar backgrounds working in underserved communities in economically disadvantaged countries.

Pending approval by institutional review boards and the Nepal Health Research Council, the device, which carries a provisional patent, could be tested at two teaching hospitals in Nepal as soon as this summer.

“Our primary goal is to equip medical centers in developing countries to deliver more comprehensive care for neonates struggling with Respiratory Distress Syndrome, ultimately saving lives,” Barnett says.

“We want it to have a broad impact. (The device is) inexpensive to manufacture and that’s the goal—to deliver it at a very, very low cost to regions of Africa, Nepal, India, Asia—wherever medical care is hard to access.”

**Serving the medically underserved**

Though young men, these two friends have spent many years volunteering in and around mission hospitals in places where infant mortality rates are high—John in Nepal and Barnett in Honduras.

Their experiences abroad may be a foreshadowing of their future careers. They envision treating patients as doctors one day, but also want to design medical equipment specifically for poorly resourced medical centers.

Already, they’ve witnessed the challenge of providing patient care in settings that lack adequate funding, are not flush with medical staff and that don’t have sophisticated equipment.

And they’ve come to recognize that, aside from the expense of equipment, health care practices and tools that work well in the states, for instance, may not be feasible or suitable in the developing world.

John is U.S. born, but lived in Nepal for about 10 years where his father, a pediatrician, and his mother, an engineer, worked at the United Mission Hospital in Tansen, some 200 miles west of Kathmandu.

The family resettled in the states when John was 16, but they have continued to return to Tansen during summers.

“I think it’s more rewarding to practice medicine there because there’s just a huge need; you end up doing much more,” says John, a mechanical engineering and biomedical sciences major.

As a pediatrician in the states, his father was one of many in his community.

“But when my dad was in (the Nepalese hospital), he was the only pediatrician. You can see this really tangible benefit. People who would not have otherwise received care are treated.”

John served in the Tansen hospital last summer repairing medical equipment and installing software. He hopes to continue that work this summer before he begins medical school at the University of Michigan in August.

Though Barnett also plans to begin medical school in the near future, growing up, he says he had no desire to become a doctor.

“But after seeing the intense poverty and need for medical care in Honduras, India and other countries, I realized medicine was something meaningful that I could do with my life,” he says.

For the past five years, the Oklahoma native has worked at a rural hospital in Colon, Honduras. At Hospital Loma de Luz, he’s repaired malfunctioning biomedical equipment, helped medical staff in daily outpatient clinics and tutored early elementary students at a local school.

“Right now, neither of us are doctors, but through our experiences we’ve cared for people. It is rewarding work,” Barnett says.

After completing his degree in biomedical sciences at WMU this summer, he plans to spend a year in Honduras before beginning med school.

Continued on page 29
Sixth-grader Breonna Harris and Medallion Scholar Ana Morales high-five during a recent after-school session.
At times 11-year-old Breonna Harris skipped her homework if it appeared to be challenging, and she wouldn’t seek extra help from teachers, fearing teasing from her peers.

“I would beat myself up because I couldn’t get the work done. I was used to throwing it down and saying, ‘This is too hard for me!’ I didn’t even try it. I used to judge it by looking at it,” admits the sixth-grader.

This was before a group of accomplished WMU students took it upon themselves to form relationships with Breonna and other sixth-graders at Milwood Magnet School in Kalamazoo.

Tamiko Garrett has seen a change in the middle schoolers who meet weekly after school with the WMU students.

“Some of the kids are reluctant to do homework. Now they are so excited. They know their Scholar is going to come work with them,” says Garrett, an after-school coordinator with Communities In Schools of Kalamazoo.

“Just seeing the relationships being formed with the children has been awesome.”

The sixth-graders and university students will work together each week of the WMU academic year for the next three years.

The hope is that the tutoring—and the relational connections with the older students—leads to greater academic success among the middle schoolers. The WMU students are part of the proverbial village, including parents, teachers and others, rallying around the youngsters.

There’s a lot at stake.

Established in 2005, a program called the Kalamazoo Promise provides students in the Kalamazoo Public Schools with the opportunity to pursue higher education at any Michigan public university or one of 15 private colleges with up to a 100 percent scholarship to cover their tuition and fees.

Despite this incredible opportunity available to graduates of KPS, some students are not reaching their highest academic potential.

Because of this, WMU’s 2013 class of Medallion Scholars created FLOK, the Future Leaders of Kalamazoo mentoring program, seeking to boost the academic readiness and success of the students they mentor and tutor.

Medallion Scholars, recipients of WMU’s highest merit-based award, are some of the University’s best and brightest undergraduates.

“As recipients of the Medallion Scholarship we are well aware of the benefits of a support system,” says biological sciences major Marine Bolliet.

“Realizing that this is not a reality for all middle schools, we hope to be part of the support system for local students.”

The FLOK project partners one to two sixth-graders at Milwood with a Medallion Scholar under the auspices of Communities In Schools, an organization that works within the Kalamazoo city school system to bring together hundreds of volunteers and organizations to provide services to K-12 students before, during or after class.

During the WMU academic year, 18 Medallion mentors from various disciplines help their young charges with schoolwork and organizational skills, discuss weekly activities and special interests, give advice regarding obstacles the younger students may be facing, and answer questions regarding high school, college and future opportunities.

Breonna, who has been tutored by Medallion Scholars Narisse Martin and Ana Morales, says the special attention is a self-esteem booster for the sixth-graders—and it’s fun.

“Once my mentors told me that I could get through my homework and encouraged me to do it, I started bringing in my homework, finishing my work and getting good grades on it because I actually tried it and got it done,” she says.

The plan to sustain FLOK over the next three years with the same students provides continuity that “will help to build a lasting impact that goes beyond the semester report card,” says Kelly Brandon, a Medallion Scholar who studies graphic design.

“Our goal is to instill confidence in these young students so that they can enter high school with positive momentum,” she says.

In addition to visiting Milwood each week, Medallion Scholars have received an Inspired Learning grant through the Learning Network of Greater Kalamazoo that will enable the scholars to host the Milwood students on WMU’s campus for a number of social, cultural and educational activities.

“We want to form a social bond with these students,” says Benjamin Hudy-Velasco, an aerospace engineering major.

Consistently exposing the youngsters to college students and a college environment, “we hope will help them envision themselves as students at a university,” he adds.

Garrett, the after-school coordinator, goes even further than that.

“I’m pretty sure that in the future, we’re going to have students from Milwood actually be Medallion Scholars,” she says.
Set in the center of main campus, Sangren Hall is one of WMU’s most impressive structures for its beauty, function and sustainability. In 2014, it earned a LEED Gold award, the U.S. Green Building Council’s highest certification for “green” features. Home to the College of Education and Human Development and the Department of Sociology, it is among the University’s most heavily used classroom buildings.
Over the past 15 years, cultural anthropologist Dr. Kristina Wirtz has traveled to Cuba to live for short stints, studying everyday life and culture there. Religion, discourse, and race and national identity are some of her scholarly interests. Wirtz released her latest book, “Performing Afro-Cuba: Image, Voice, Spectacle in the Making of Race and History,” just last year.

As an academic researcher, the WMU associate professor falls within the limited categories of Americans officially allowed to travel to Cuba despite a decades-long U.S. policy banning most U.S. citizens from stepping foot in the communist state.

As an anthropologist, she’s long had a fascination with seeing things that are off the beaten path.

“Our way of doing research is going to the place that we’re interested in studying,” she says.

“We try to stay with ordinary people, and to the extent possible, live life in the way of the community that we are studying. In my many trips to Cuba, I stay in someone’s home.”

Thus, at least among most Americans, Wirtz has an unusually up-close view and contemporary knowledge of a place and people officially estranged from the United States since 1961.

But it now appears that more Americans will be able to experience the Caribbean’s largest island for themselves as the Obama administration has recently moved to begin normalizing relations with Cuba.

Under new rules, instead of needing a specific license or advanced approval from the U.S. government to travel, Americans wishing to visit Cuba can do so on a general license. Authorized travel, however, still must be predicated on one of the 12 existing categories, including humanitarian work, educational activity or journalistic endeavors.

In Cuba, Wirtz has come to know a country where residents are resilient and resourceful, but also constantly subject to change and challenges from internal and external forces beyond their control.

The island nation was devastated following the withdrawal of Soviet subsidies that shored up its economy for so long.

“During the 1990s people were going hungry in Cuba. There were people who, because of vitamin A deficiency, lost their sight. You can see it in a whole generation,” Wirtz says.

“I can see it in the children of my friends who were hitting their growth spurts in the early 1990s. They are substantially shorter than their siblings who are few years older than them or a few years younger than them.”

Seeking a new economic path, Cuba developed closer ties with the European Union and other countries in Latin America. And it has moved full bore into a tourism economy, an enterprise that attracts visitors from all over the world.

“There are tons of European, Canadian and Latin American tourists,” Wirtz says. “And people from as far away as Japan and China. Basically, everyone but Americans go to Cuba.”

Many visitors stay in resorts or major hotels; others get a feel for Cuban life by spending their vacation in licensed private homes. These economic inroads in tourism have garnered the country revenue to be sure, but Cuba remains a place of scarce resources and intriguing incongruities.

Cuba’s contradictions

While poverty is a pervasive feature of this socialist-structured system, the island nation also has a lower infant mortality rate than the United States and is on par with the U.S. in life expectancy. It also dedicates a large percentage of its gross domestic product to education.

“Cubans, overall, are very well educated. They have very high literacy rates. Schooling through university is free,” says Wirtz,
“When you live in a society of scarcity, you become resourceful if you’re going to survive …Ration cards have been cut more and more. A family might be able to squeeze two weeks of meager basics out of those ration cards. So basically you still have to eat. So, everything else you need you have to get in some other fashion,” Wirtz says.

“People have a sensibility that is much like Depression-era Americans. It’s the idea that everything can be reused. You never throw away anything.”

One example is those famous old American cars on Cuba’s roads. Wirtz says, “open the hood, and everything has been replaced and jury-rigged with whatever Lada and Toyota parts people can scavenge.”

And Cubans with cars are the lucky few.

It’s still early days, but Cuba may be on the cusp of more significant change as U.S. policy toward the country is undergoing a historic shift.

In December, President Barack Obama announced plans to begin normalizing relations with the Cuban government, some 54 years after the U.S. completely severed ties with it in the wake of then-leader Fidel Castro’s trade accord with the Soviet Union.

Obama says that in the intervening decades, isolation has failed to “accomplish our objective of empowering Cubans to build an open and democratic country.”

In addition to making it easier for Americans to travel to this nation located just 90 miles from the U.S. southern border, diplomatic restoration plans include reviewing Cuba’s designation as a state sponsor of terrorism and re-establishing an embassy in Havana.

A trade embargo, however, remains firmly in place; only an act of Congress can change that.

While some view this new direction as “long overdue,” others argue that the U.S. is getting nothing in return for renewing ties with a communist state where basic rights that Americans enjoy are still denied to Cubans.

“That said, it’s fair to say that Cubans know much more about the U.S. than Americans do about Cuba. In part this is because so many Cubans have ties to Cuban-American family members and so much exposure to American media and pop culture,” Wirtz says.

As for what Cuba’s longer-term future holds, the researcher has found that her colleagues in Latin American studies—including other anthropologists, political scientists and economists—are reluctant to speculate.

“Even with people on the ground (in Cuba) who I trust and trust me and who I’ve known for 15 years, getting a pulse from them on what they want for their future is really hard,” she says.

“Cubans are very patriotic and very aware of their history as a small island with a very powerful neighbor. They also will be excited to see renewed ties with Americans.”
Don’t let that calm demeanor emanating from the immaculately suited man with silver-streaked hair slouched in a low swivel chair mislead you.

There is a drive hidden beneath the surface—a drive to win, to win it all, now.

Meet Dave Dombrowski, the lanky architect of the Detroit Tigers’ sudden and dramatic turnaround. Under his steady hand, pride has been restored to the old-English D, the Tigers’ famous insignia worn by the likes of Ty Cobb, Al Kaline, Hank Greenberg, Charlie Gehringer and now Miguel Cabrera, Justin Verlander and David Price.

But one last piece of the puzzle remains to put an exclamation mark on the Tigers’ comeback.

A world championship.

After two trips to the World Series in recent years, the Tigers have fallen short of the ultimate goal.

But Dombrowski, a 1979 graduate of WMU’s accounting program, is determined to change that in his characteristic low-key, but determined way.

Dombrowski steers the ship of the Tigers’ fortunes from behind a sturdy, wooden desk in his paneled office suite on the second floor of Comerica Park. It is from here that he pulls the trigger on sometimes landmark trades and huge contracts for free agents he hopes will bring baseball’s ultimate prize back to the Motor City.

Dombrowski has served as the top Tiger (next to owner Mike Ilitch) since being named team president in November 2001 and assuming the role of general manager and CEO in April 2002.

The team’s rise has been meteoric and includes four straight American League Central Division crowns in addition to those two trips to baseball’s biggest dance. The first of the two more recent trips, in 2006, earned Dombrowski Baseball America’s Executive of the Year honors and came just three years after the Tigers set a record in futility in 2003, losing more games than any American League team—ever.

So how did he do it?

“One of our primary goals when we first started internally, was to try to change the mindset of people on why they did not want to play for the Detroit Tigers to why they would want to play for the Detroit Tigers, where free-agent players really want to play here and players want to sign here,” Dombrowski says in his relaxed, Chicago-inflected voice.

“I think we’ve been able to accomplish that collectively, to make this an organization that is well-respected and people want to play here.”

Dombrowski says it was a building process that started, from a player perspective, with signing future Hall of Fame catcher...
Pudge Rodriguez. Others followed, including big-name players Magglio Ordoñez, Carlos Guillen and finally Cabrera. Bringing in Jim Leyland to manage the team added another key element.

Leyland and Dombrowski had worked together to bring a world championship to the Florida Marlins in 1997, marking the shortest time—after just five seasons in existence—that an expansion club has won it all.

**Bronco days**

To understand Dombrowski’s path into front office stardom, you have to go back to his youthful ambitions to land a spot on the Bronco baseball team.

A would-be first baseman, he transferred to WMU from Cornell University after his freshman year. It was too late to try out for the Bronco team as a sophomore, but Dombrowski gave it a shot his junior year as a walk-on tryout.

Then-coach Fred Decker stamped his front office destiny by not giving him a spot on the team.

“I always joke with coach because he was the one who actually gave me the best shot at my career and getting started,” Dombrowski recalls, “because it was like, once that happened, it was OK, time to focus on the front office. So he made one of the wisest decisions at that time and the one that helped me the most.”
Dombrowski and Decker reconnected years later and remain friends to this day.

Dombrowski pretty much always knew what he wanted to be. In eighth grade, a fellow student wrote a paper, asking students what they wanted to become. The most popular answers were doctor, lawyer and the like. Dombrowski, a young sports nut who was always intrigued by box scores, transactions and putting teams together, answered “general manager of a major league baseball team.”

“She said, ‘Come on, Dave. Give me something that’s realistic.’” Dombrowski remembers. “I said, ‘No. That’s what I really want to do.’”

Things began to take shape when Dombrowski became a student at the WMU Lee Honors College. He had to choose a topic for his honors thesis and decided to study the financials of major league baseball operations.

There was only one problem. Dombrowski got permission for his study, but found it nearly impossible to get information from baseball teams, which were then mostly privately owned.

So he decided to study baseball general managers and the evolution of the job over time. And that led to forging a relationship with Roland Hemond of the Chicago White Sox. Dombrowski, who is from Chicago’s south suburbs, met Hemond and interviewed him. Hemond invited him to stay for the game and recommended that the best way to break into the business was to go to the Baseball Winter Meetings. He also told him to get an accounting degree.

“By him telling me that, I went full bore into that area,” Dombrowski says. He also flew to the Winter Meetings in Honolulu, Hawaii, his senior year. He saw Hemond there.

“It just so happened that the White Sox had a job available,” Dombrowski says. “Somebody had just left.”

It was an entry-level position that paid $7,000. Dombrowski, following his father’s advice, asked for $8,000 and got the job. Dombrowski was to have graduated in April 1978. But the job offer was a now-or-never proposition. He was four courses short of graduation. Two were independent study courses he could complete on his own.

“Two were accounting courses, and Western was very nice and granted me permission to take the courses in the Chicago-land area,” Dombrowski says. “So I got my degree in spring of 1979.”

On Max Scherzer signing with the Washington Nationals

“It was a business decision. A player has the right to be a free agent. We thought we made a real good shot at trying to sign him last year and it just didn’t work out. We’re grateful for what he did for the franchise. He pitched great for us.”

On Tiger fans

“Michigan is a great sports state. Tiger fans are extremely passionate. We’ve drawn 3 million fans numerous times over the past few years, and they’re passionate all over the country.”
Dombrowski remembers his time at WMU fondly. He lived in Ellsworth Hall, which was then a dormitory. A transfer student, he quickly felt at home.

“I have fantastic memories of Western,” he says. “I didn’t know anybody when I went there. So I ended up on the second floor. And it just so happens that, on that same floor, to this day, were some of my best friends. We’re still in touch.”

His best friend from college would become the godfather of his two children. Others remain close more than three decades later.

“We had a great time, got a good education and made tremendous friendships—things that you cherish for your whole life.”

Dombrowski also remembers WMU professors, who encouraged his dream of entering baseball management, even though the idea of running a Major League Baseball operation might have seemed next to impossible.

“The business school and the honors college were tremendous,” Dombrowski says. “They helped me to get my first job. My senior year, when I went to the Winter Meetings, was finals week. My professors worked with me, and I took some exams early and some late, and they guided me toward what I needed to do.”

One of those professors was Dr. David Rozelle, professor emeritus of accounting.

“Dave was an individual who knew what he wanted to do,” Rozelle says. “That’s what struck me about him. From a pretty early age, he knew he was going to make his career and life in baseball.”

Still, it seemed like an overwhelming long shot that Dombrowski would end up becoming president, CEO and general manager of one of just 30 major league teams, Rozelle adds. So many students start out with big dreams, but get sidetracked.

“I never dreamed he would be as successful as he is,” Rozelle says. “Certainly he had the determination to be that successful, and that’s been a big part of his career.”

After working in an entry-level capacity for the White Sox, Dombrowski landed a job with the Montreal Expos, staying there five years and working his way up from being in charge of the team’s minor league system to general manager for the first time, becoming the youngest-then GM in baseball.

Then it was on to the Florida Marlins, where Dombrowski stayed for 10 years and got his first World Series title. He’s determined it won’t be his last.

So how are the Tigers’ chances for a world championship this year?

“I’m confident we have a good club,” he says, his voice rising a notch. “And I’m confident that we have a chance to do that. There have been a few times where we’ve been so close. One break here or one break there. We just haven’t gotten it done. But we have a very good team this year.”

A lot of it depends on the team staying healthy, he says. The Tigers got a break when they found out that designated hitter Victor Martinez, after suffering another knee injury, could still participate in spring training and was ready to play by opening day.

One thing is for sure—Dombrowski is glad to be with the Tigers and to be working for an owner like Mike Ilitch.

“He’s been great,” Dombrowski says. “He’s driven to win. He treats you well. It’s a situation where we’ve been able to build the franchise back. He’s very aggressive and he gives you the resources to win. He allows you to be in a position to be aggressive and make things happen.”

Dombrowski says he doesn’t have a typical day. He’s an early riser and likes to get to the ballpark early, a lot of time arriving home at 11 or 11:30 that night. But every day is different, especially at different times of the season and in the off-season.

“I think that’s one of the reasons that makes the job so interesting,” he says. “If you’re working in baseball nowadays, it’s almost 365 days a year and you’re on call all the time. So you better really love what you’re doing.”

And he does.
Unraveling idioms: ‘Where there’s a will, there’s a way?’

When a turn of phrase becomes an Achilles heel for non-native speakers

Many students have crammed for a quiz or exam by “burning the midnight oil” or “burning the candle at both ends.”

But that doesn’t mean non-native speakers of English aren’t “thrown for a loop” when they hear those two expressions or that their instructors are “primed and ready” to clear up their possible confusion.

The situation could change in time, though, with the aid of books such as one penned by Patrick T. Randolph, a faculty specialist in WMU’s Center for English Language and Culture for International Students, and Dr. Paul McPherron, coordinator of the undergraduate English as a second language program at Hunter College of the City University of New York.

Their book, “Cat Got Your Tongue?,” was released last year by TESOL Press and is now a best-seller. TESOL International Association accepted it for publication after inviting scholars from around the world to submit proposals for idiom books that are teacher-friendly and founded in research-based classroom practices.

The book is unusual in that it doesn’t just explore the theoretical and pedagogical research, or just examine how to teach idioms and figurative language. It does both. The text also includes neuroscience related to the brain and idiom acquisition, and is peppered throughout with practical classroom material.

“Cat Got Your Tongue” takes a global view. Randolph and McPherron surveyed students and teachers from several countries. The two heavily incorporated that feedback into the second half of the book, providing different perspectives on what does and doesn’t work when teaching idioms as well as which idioms are harder and easier to teach. There’s also a 50-page chapter just on activities and lesson plans from teachers in Australia, Canada, China, Myanmar and other countries.

The book reflects Randolph and McPherron’s belief that teaching idioms is necessary and is proper fodder for academic researchers, a belief that’s contested by some scholars.

“You don’t have to say anything to the students. They know how important idioms are and they want to learn them,” Randolph says. “Paul and I have always taught idioms. That’s why we were so happy when we got the results from the surveys. A lot of teachers do believe that idioms are important.”

Randolph says those who doubt their importance usually offer three main reasons: the expressions are used primarily in informal speech, rarely uttered or written in academia, and don’t stay in vogue long.

“(McPherron) and I thought, well, cat’s got your tongue—that dates back to the 1800s,” Randolph says. “Spill the beans—the Greeks used that in their voting system, so if you spilled the beans I guess people knew who was going to be elected.”

In terms of idiom usage in academia, he notes that he’s found idioms in even highly technical neuroscience articles, although these informal expressions usually turn up in case studies, cited examples and the like. But Randolph adds that he often hears idioms being used in classes. In one instance, he recalls attending a formal, 50-minute lecture on archaeology at Michigan State University and counting 142 single and repeated uses of idioms.
“If one of our students is sitting in a lecture and somebody’s talking about the government ‘falling back on’ some kind of a policy. The student’s thinking, ‘fall back on what?’ It throws them, so they fixate on that,” Randolph says.

“Maybe it’s only for 10 seconds, but now that’s 10 seconds of the lecture that they’ve totally missed. Their level (of English) can be very good, but so much gets lost. The instructor says, ‘In this case, the policymakers seem to be barking up the wrong tree,’ and again, that’s going to throw them.”

To help make that point, “Cat Got Your Tongue?” includes an appendix with dozens of examples of idioms. The list is divided into figurative ones—expressions that are relatively hard for the uninitiated to decipher—such as “burning the candle at both ends” and “head over heels,” and transparent ones—expressions that non-native speakers might be able to interpret correctly—such as “burning the midnight oil” and “spread oneself too thin.”

Other idioms are divided into tri-part phrasal verbs, such as “come up with” and “come up on”; bi-part phrasal verbs, such as “look into” and “run into”; proverbs and sayings, such as “it’s a small world” and “let the cat out of the bag”; and idiomatic greetings, such as “what’s up” and “what’s cooking.”

The appendix ends by listing the most difficult idioms to learn, as submitted by those who responded to Randolph and McPherron’s multi-country survey. Among the students’ top picks were “red herring,” “dog days,” “the bottom line” and “pull something off.” The teachers offered expressions including “in your face,” “run for office,” “tip of the iceberg” and “where there’s a will, there’s a way.”

---

**Die Grammatik der Männer (The Grammar of Men)**
(Klöpfer & Meyer, 2014)
By Dr. Peter Blickle

Written in German, this novel explores the emotions of men who face their fears, but still find it difficult to express themselves in words, in deeds and in gestures. Readers will find in this work the self-absorbed love of a secret service agent, the scared love of a prostate patient and a writer’s narcissistic love.

Blickle is a professor of German in the WMU Department of World Languages and Literatures, with a joint appointment as a professor of gender and women’s studies.

---

**Invisible Traffic**
(One Wet Shoe Publishing, 2014)
By Deborah Ann Percy

The stories in this collection of “desperate and gorgeous tales” are set in southwest Michigan. The characters are mostly decent middle-class folks who abandon those they love and are in turn abandoned—husbands vanish at the corner grocery, wives disappear into momentary affairs and children swim willfully far from shore, inspiring despair.

Percy earned her Master of Fine Arts degree from WMU in 1987.

---

**Raising Girls in Bohemia: Meditations of an American Father: A Memoir in Essays**
(Three Rooms Press, 2014)
By Richard Katrovas

In this memoir, Richard Katrovas chronicles his life as a father of three Czech-American daughters. While tracing what fatherhood has taught him about the world, Katrovas delves into a range of intricately related, yet far-flung subjects including fine dining, sexual epithets, gender identity, racism, poetry and education, tracing “the contours of his ignorance” about all things. He unveils what it means to be an American and to be a man, and especially what it means to be a father of three daughters, born in Prague, in what we can only hope is the twilight of patriarchy.

Katrovas is a professor of English and the founding director of WMU’s Prague Summer Program.
**Graduate College**

**Two professors named 2015 faculty fellows**

Drs. Julie Apker and Christine Browning have been selected as Graduate College Faculty Fellows for 2015.

Apker, associate professor of communication, was named a fellow in 2014 and continues in that role in 2015, focusing on student and faculty engagement and success. She has been working on producing an online orientation for graduate students and organizing several professional and personal development events for students. She also will focus on training opportunities for new mentors and graduate directors.

Browning, professor of mathematics, will focus on data collection, environmental scanning and benchmarking peer institutions. Her work will help the Graduate College as it intensifies its marketing efforts.

**College of Arts and Sciences**

**Demand gives rise to new data science degree**

The ever-increasing need to analyze large data sets permeates industry, marketing, science, medicine, environmental studies and many other realms, and consequently increases the need for data science experts able to help decision makers effectively use such data.

In light of the demand for this expertise, beginning this fall, the departments of statistics and computer science are jointly offering a Bachelor of Science degree in data science, a new interdisciplinary undergraduate major.

It’s one of the first data science majors in the nation.

Students in the program will acquire the skill set needed to work with “big data”—understanding computer hardware and network performance, learning methods of accessing, reducing and storing big data, and also statistical methods for exploring, visualizing and analyzing big data.

“Data science has been identified by many sources as an area now having a critical need for qualified personnel,” says Dr. Elise de Doncker, a computer science professor, who with Dr. John Kapenga from computer science, and Dr. Hyunkeun Cho and Dr. Joseph McKean from statistics, serves on the committee overseeing the new degree.

“We anticipate associated research in DataSci at both the undergraduate and graduate levels.”

**College of Engineering and Applied Sciences**

**Four hundred pounds of concrete—and it floats**

In April, engineering students competed and took third place overall at the annual American Society of Civil Engineers North Central Regional Competition for best design of a canoe that is both concrete and floats.

This year’s Concrete Canoe team completed casting using 400 pounds of two different concrete mixes and, proving this group’s efficiency, there was only a handful of concrete leftover.

Senior Connor Tierney is this year’s team captain. He says that one of his greatest challenges leading the team is to “get the freshman pumped up so they will want to come back next year.”

“You put in all the time and effort and you don’t see the fruits of your labor until the day of competition, where you get to represent WMU’s College of Engineering and Applied Sciences—that’s the motivator.”

Using his canoes on a local lake, Dave Diget of the Kalamazoo Canoe and Kayak Club, has helped the team perfect their paddling skills for the past several years. Diget works with the team on paddling technique, teaching them how to make crisp turns and efficient strokes.

Nine schools in all, including the University of Michigan, Michigan State University and Michigan Tech, compete at the regional conference.
Haworth College of Business

*Examining business in India*

Seizing an opportunity to investigate the evolving role of business in society in India, a group of business students led by Dr. Tim Palmer, professor of management, toured parts of India with business and social work students and faculty from Christ University in India and Griffith University in Australia, who teamed up on not only the logistics of the trip but also the curriculum.

“Our goal was to expose students to the spectrum of social stratification across India, giving them the opportunity to critically analyze the role of business in society,” Palmer says.

The trip was purposefully designed to focus on corporate social responsibility by integrating social work with business perspectives.

“The insights of these two diverse groups were invaluable to helping understand the depth of the social challenges in India that business can help address,” Palmer says.

During this short-term study abroad course, students toured one of India’s largest and fastest growing cities, Bangalore (officially known at Bengaluru); attended and participated in cultural events; and visited non-governmental organizations as well as businesses to explore the many forces at work in this expanding economy.

Students toured a mix of large and small companies that are conducting business while remaining mindful of the world around them. They were also exposed to societal issues and learned about their influence on the business environment in India.

College of Aviation

*Aviation hosts education initiative*

For the second consecutive year, the College of Aviation was selected to host the Michigan Business Aviation Association and the West Michigan Business Aviation Association for the promotion of their joint “Education Initiative.” Through this initiative, officials from top companies and organizations involved in business aviation get to meet WMU students. Those connections often lead to scholarships and internships for students.

Michigan Business Aviation Association for the promotion of their joint “Education Initiative.”

Lee Honors College

*Honors society recognized*

WMU’s chapter of Alpha Lambda Delta national honor society was honored as winner of the Registered Student Organization “Most Committed to Service” organization for the month of November.

The honor comes as a result of Alpha Lambda Delta’s commitment to leadership and dedication to the WMU community. As an organization, ALD celebrates the academic talent of first-year students.

Anthony Helms, ALD adviser and honors college assistant director of advising, also was recognized as RSO Adviser of the Month.

Cole Villalobos, ALD president since fall 2014, has been vigilant in his efforts to make the honor society more visible and available on campus. He secured office space for ALD in the student organization center and holds office hours weekdays to accommodate the organization’s more than 2,000 members.

College of Education and Human Development

*College launches WMU’s first Ph.D. program offered outside the U.S.*

The College of Education and Human Development has established a doctoral program in educational leadership in the Dominican Republic.

The first class is a cohort of 30 students who will go through the program together over the next four years. This new doctoral degree program is the first WMU has offered in another nation.

As part of a unique collaboration between WMU and the country’s Ministry of Education, Ministry of Higher Education and the Universidad Iberoamericana, this program is designed to prepare individuals to hold leadership and management roles in K-12 or higher education.

It is offered in a hybrid-learning format with teaching support from WMU faculty. The program also includes a study abroad component, in which the students will travel to WMU in June each year for three weeks of intensive study.

This new program is expected to help the Dominican Republic build its infrastructure and human resource capacity.
Student wins patent for speaking device

Patent No. 20140287385 belongs to WMU marketing student Daniel Floyd for his invention SpeechMasterPro, a device that assists those with speech impediments, as well as anyone else seeking to improve their articulation and elocution.

The sophomore initiated the patent process two years ago.

“This patent validates the design of my product and my hard work to this point,” Floyd says. “It will also make it easier to speak with future influencers and supporters and grow my business.”

The WMU sophomore was born with a disorder that makes it difficult for him to enunciate certain words and sounds. He began developing the speech aid when he was in high school. Last year, he participated in WMU’s student business accelerator, Starting Gate, to help take his business to the next level while his patent was pending.

Floyd’s device is of particular interest to those who use their voice for a living, including voice-over artists. His company was recently featured in Voice Over Times as a company to watch.

So far, Floyd has sold dozens of the speech aids, which can be purchased on speechmasterpro.com. Securing the patent is a big step for Floyd’s company, as he looks forward to growing his business by developing alternate distribution channels, such as retail outlets.

College of Fine Arts

Student earns spot in upcoming international trombone competition

WMU senior and trombone player Evan Clifton has been named a finalist in the Donald Yaxley Bass Trombone Competition and will travel to Valencia, Spain, in July to compete for a 2,000 euro gift certificate toward a new trombone at the 2015 International Trombone Festival.

The honor is especially notable for a several reasons. The competition ranged to age 25, which means the 21-year-old Clifton will compete against students who are likely much older from the top conservatories in the world.

Other finalists and honorable mentions are impressive, with the other two finalists coming from The Juilliard School in New York and the Rotterdam Conservatory in The Netherlands. In addition, Clifton was named the honorable mention selection in the bass trombone orchestral excerpt competition.

“While it’s exciting news for Evan, for the WMU trombone studio it also means that we have had students named finalists in the most important international competition for student trombonists in the world 18 times over the past 11 years, with winners named six of the past eight years,” says Steve Wolfinbarger, a WMU professor of music and Clifton’s instructor.

“It’s wonderful to see so many talented WMU students like Evan being showcased on an international stage.”

College of Health and Human Services

Grad student selected for addictions counselor fellowship

Princilla Ursery, a student majoring in clinical mental health counseling and enrolled in the Specialty Program Alcohol and Drug Addiction graduate certification program, was selected for the National Board for Certified Counselors Minority Fellowship Program-Addictions Counselors.

As part of the fellowship, Ursery will receive an $11,000 tuition stipend, and she must commit to a minimum of two years working with adolescents in transition following her graduation.

Ursery is already busy serving communities of need. She currently works as a full-time residential care provider and crisis specialist, providing group therapy, medication management and treatment plans for clients who struggle with suicidal ideation, mental impairment and substance use.

She also volunteers as a court-appointed special advocate with the family division of Kalamazoo County’s Ninth Circuit Court. In that role, she investigates, assesses and identifies resources for children assigned to her, reporting their needs, wishes and outcomes to the court.

“My overall goal in working in the mental health field is to help transform the lives of individuals that are disenfranchised and marginalized, especially people of color, through advocacy,” says Ursery. “I firmly believe my role...will be to help provide transitional youth and vulnerable populations with a firm sense of empowerment over their life.”

Ursery will be formally recognized for earning the fellowship at a Minority Fellowship Program meeting in May.

“I firmly believe my role... will be to help provide transitional youth and vulnerable populations with a firm sense of empowerment over their life.”

—Princilla Ursery, WMU student
Engineering to help babies breathe

The respiratory device the students teamed up to develop can be traced back to a conversation a few years ago. John, researching ideas for his Lee Honors College thesis and senior engineering design project, contacted Eric Cheng, the co-founder of Respiratory Therapists Without Borders. RTWB is a registered Canadian charity that exists to improve respiratory health through work with healthcare education partners worldwide.

Cheng had worked with John’s father in Nepal to train hospital staff in the use of bubble CPAP—continuous positive airway pressure—therapy for treatment of newborns experiencing respiratory distress.

Cheng expressed to John the need for an inexpensive device capable of administering non-invasive airway ventilation at two levels of pressure—oscillating between low and high—for premature infants with weak or underdeveloped lungs needing more than bubble CPAP could offer.

But this dual-level treatment—non-invasive positive pressure ventilation or NIPPV—has traditionally required sophisticated equipment that is not readily available to rural areas, says Cheng, who’s been a respiratory therapist for seven years.

He pitched the idea of a mechanism that would harvest the excess “bubble energy” from a bubble CPAP setup to power NIPPV therapy.

John devised the main design and brought Barnett on board to further develop it. Together, they’ve focused on refining the device, working in the laboratory of Dr. Peter Gustafson, professor of mechanical and aerospace engineering at WMU.

A “bubble” CPAP setup uses pressurized air supplied by a motor and a fan, with one branch of tubing sending air to the patient and one branch submerged in a container of water or acetic acid. The depth of the submerged tubing determines the pressure delivered to the baby. Any excess pressure is bled off as exhaust bubbles, hence the term “bubble” CPAP.

The students’ version of NIPPV connects to an existing bubble CPAP setup and uses its exhaust to power a mechanism they created to deliver alternating low and high air pressure to support respiration, preventing lung collapse and recruiting alveoli, tiny air sacs in the lungs in which oxygen is exchanged.

“Ours (NIPPV device) is unique because it’s inexpensive and powered by bubbles,” Barnett explains. “Because this will be an add-on to existing CPAP setups, this won’t require any additional energy.”

Broad impact

A year and a half ago, the students began developing their NIPPV solution in the kind of setting in which many innovative tools have begun life—John’s basement.

“We started out with ChapStick tubes and milk cartons,” Barnett says.

Since then, their design has gone through several iterations and has greatly advanced from its earliest version. A Kalamazoo-area manufacturer contributed to their work by machining prototype parts.

The students are seeking additional grant support and have an ultimate goal of widely distributing their low-cost NIPPV, perhaps through the World Health Organization.

“All the design and testing done by Stephen and Joseph at Western Michigan University have produced staggering results in a small amount of time,” Cheng marvels.

“I’m proud of what they’ve done and excited about the implications this will have for the medical practice available in underdeveloped places.”
WMU says goodbye to broadcast pioneer Carl E Lee

Kalamazoo broadcast pioneer Carl E Lee, who with his late wife Winifred Lee was the namesake for WMU’s honors college, died Feb. 22. He was 96.

A service to honor his memory was held in March at the Lee Honors College.

Lee worked for 60 years in the radio and television broadcasting industry and was president and CEO of Fetzer Broadcasting Co. He enjoyed a longstanding and strong relationship with the University, serving on the board of the WMU Foundation and actively supporting a number of initiatives.

In 1988, Lee and his wife, Winifred, who died in 2012, pledged $500,000 for construction of a home for what is now the Carl E and Winifred Lee Honors College. The building was completed in 1990, and in late 2012, a $1.1 million gift from the couple made possible a renovation and expansion of that original building.

“With the death of Carl E Lee, we have lost a great friend to Western Michigan University and a wonderful supporter who truly understood the value and need for a strong honors component to undergraduate education,” says WMU President John M. Dunn.

“We’ll remember him as a man who lived life fully and contributed so much to the betterment of all.”

He is survived by his daughter and son-in-law, Cheri and Jeffrey Weedman of Cincinnati, and two grandchildren.
Recent alumni Alex Anderegg and Patrick Schiffer are both on course to become F-16 fighter pilots and expect to fly this storied aircraft for units of the U.S. military.

Anderegg will be flying with the 100th Fighter Squadron in the Alabama Air National Guard in Montgomery while Schiffer will be flying for the 119th Fighter Squadron in the New Jersey Air National Guard, headquartered in Atlantic City.

“Pat and I have been good friends throughout college and as flight instructors. He and I dove into this process together about a year ago and within one month of each other we both got slots to fly in F-16 units,” Anderegg says.

They will first enter the Academy of Military Science at the Maxwell Air Force Base in Montgomery for eight weeks of officer training, possibly as soon as this summer. After officer training concludes and long before they progress to the F-16, the two have many other training stages ahead and many other military aircraft to learn to fly, but that just adds to the adventure toward their ultimate goal.

“Flying the F-16 had always been a dream of mine. I just never thought it was a realistic goal until my older cousin Mat began explaining the Air National Guard process,” says Schiffer, who began flying as a youth and whose long family history in flight also includes his grandfather and two aviation alumni on course to fly F-16s
Anderegg, who grew up in Muskegon, Michigan, about 10 minutes from an airport, says, “I still have every model he gave me.”

For the path they are now on, in addition to family influence, Schiffer and Anderegg give credit to the College of Aviation, where they were students and then flight instructors.

Anderegg graduated with a bachelor’s degree in aviation flight science in 2014. Schiffer earned his bachelor’s degree in 2012.

Anderegg says that he’s grateful to Dean David Powell, Chief Flight Instructor Tom Grossman and Program Manager Rob Bunday “for the opportunity to work at WMU, and for the guidance each provided me.”

“It will be a long and challenging journey before I even step into the F-16,” he says, “but I am extremely fortunate to have been given this opportunity to serve my country, and I am extremely grateful for everyone who has contributed to my career and helped me achieve this lifelong dream.”

Schiffer agrees that “none of this would be possible without the training that I received at the WMU COA.”

“I have many, many hours of bookwork, amazing flying opportunities and an infinite number of challenges ahead in my next five years. I am extremely excited for all that lies ahead,” he says.

There’s a lot of pride at the aviation college about the achievements of these two alumni.

“As dean of the WMU College of Aviation, I could not be more proud of Alex and Patrick,” Powell says.

“I’ve gotten to know both of them on a personal level and they are perfect examples of the kind of individuals we like to see protecting our country. As a former Air Force fighter pilot, I know what it takes to be successful. I have no doubt that these two young men will surpass the goals they have set for themselves throughout their aviation careers.”

father, a long time associate professor at the College of Aviation.

Schiffer’s cousin served on active duty flying F-16s for 15 years and he continues to serve, flying the aircraft as a reservist at Hill Air Force Base in Utah. When Schiffer completes his training, there will be one more F-16 pilot in his family.

Anderegg also began flying at a young age, taking his first solo flight at 16 and earning his private pilot’s license at age 17.

“My love for aviation started back when I was around the age of 3 or 4. I give credit to my uncle for being the one who really got me interested in flying,” he says.

As a pilot for Air Jamaica, his uncle would often send him model airplanes as gifts. Anderegg and Schiffer have set for themselves throughout their years. I am extremely excited for all that lies ahead,” he says.

There’s a lot of pride at the aviation college about the achievements of these two alumni.

“As dean of the WMU College of Aviation, I could not be more proud of Alex and Patrick,” Powell says.

“I’ve gotten to know both of them on a personal level and they are perfect examples of the kind of individuals we like to see protecting our country. As a former Air Force fighter pilot, I know what it takes to be successful. I have no doubt that these two young men will surpass the goals they have set for themselves throughout their aviation careers.”

Anderegg and Schiffer have set for themselves throughout their years. I am extremely excited for all that lies ahead,” he says.

There’s a lot of pride at the aviation college about the achievements of these two alumni.

“As dean of the WMU College of Aviation, I could not be more proud of Alex and Patrick,” Powell says.

“I’ve gotten to know both of them on a personal level and they are perfect examples of the kind of individuals we like to see protecting our country. As a former Air Force fighter pilot, I know what it takes to be successful. I have no doubt that these two young men will surpass the goals they have set for themselves throughout their aviation careers.”

Anderegg and Schiffer have set for themselves throughout their years. I am extremely excited for all that lies ahead,” he says.

There’s a lot of pride at the aviation college about the achievements of these two alumni.

“As dean of the WMU College of Aviation, I could not be more proud of Alex and Patrick,” Powell says.

“I’ve gotten to know both of them on a personal level and they are perfect examples of the kind of individuals we like to see protecting our country. As a former Air Force fighter pilot, I know what it takes to be successful. I have no doubt that these two young men will surpass the goals they have set for themselves throughout their aviation careers.”
Globally Engaged. Students from WMU’s College Assistance Migrant Program studied abroad in Querétaro, Mexico, at the Universidad Autónoma de Querétaro during spring recess. The students soaked up lectures on contemporary Mexican society through its historical, social, and political movements and institutions, among other topics. And they proudly displayed the “W” at landmarks, including at the Iglesia Santa María de la Asunción in the main plaza of Tequisquiapan, a town located about an hour from the city of Querétaro.