Our Robot Relatives

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The future of medicine
WMU’s Junior Analysts
Student-managed fund reaches more than $1 million

Digitizing History
WMU, Oxford to create online library of historical writings

Broncos on Broadway
...and other big stages

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Boosting Achievement
Project builds on culture of degree completion

A 21st Century Crisis
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The Bronco football team played in the Famous Idaho Potato Bowl on Dec. 20, falling to the Air Force Academy 38 to 24. In the 2014 season, the team carried out the best turnaround in program and Mid-American Conference history, going 8-4 for the season after posting only one win the previous season. In addition to bowl eligibility, many other recognitions came with this impressive turnaround. Head coach P.J. Fleck was named the MAC Coach of the Year. Freshman Jarvion Franklin was named as MAC Offensive Player of the Year and Rookie of the Year, and WMU had the top-scoring offense in the MAC.
**Dear Friends,**

With this new issue of the *Western Michigan University Magazine*, we also begin a new calendar year, a turning point often used to set goals for the future. But in moving forward, it is also important to remember what led to today, the foundation on which future promise unfolds.

More than seven years ago, we began exploring the possibility of establishing a medical school in the face of a looming national physician shortage and other critical issues in health care. After all, this is one of America’s top research universities in a community that also believes in education’s power to transform lives and meet society’s needs.

As we investigated, it became clear that a new world-class school of medicine could be established in this community, with many of the ingredients already in place—two highly regarded teaching hospitals in Borgess Health and Bronson Healthcare, a local legacy in life science and medical research, third- and fourth-year medical students already present in the area and WMU’s own array of health programs.

With our partners, we aspired to create a school with an innovative curriculum, training future physicians to be in sync with their patients’ needs while maintaining a full appreciation for the science and research that informs treatment.

Other visionaries stepped forward to make aspirations realities. Ronda Stryker, the granddaughter of the medical innovator, Dr. Homer Stryker, and her husband, WMU Trustee William D. Johnston, blessed us with an amazing foundational gift of more than $100 million.

William U. Parfet, great grandson of Dr. W.E. Upjohn, a physician who founded the Kalamazoo pharmaceutical company Upjohn Co., donated the building that is now the school’s headquarters.

Dr. Hal B. Jenson, founding dean, has led all aspects of the school’s development from the ground up. And hosts of others have joined this effort with their time, expertise and financial gifts. We are very grateful for all the incredible support.

Today, more than 50 high-achieving students are in their first year at the new Western Michigan University Homer Stryker M.D. School of Medicine.

These students have been rightly described as trailblazers. They are the promising future of medicine. And they will carry out our mission to transform lives. On the pages that follow, read more about these future doctors, the school of medicine and other developments at WMU.

Best regards,

John M. Dunn
President

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**Student ‘invisible’ needs met in new initiative**

Meeting critical unmet student need is the aim of a campus initiative that also intends to help advance the culture of giving at WMU.

Called the Invisible Need Project, the multifaceted initiative kicked off in the summer, with the initial focus of collecting food donations as well as establishing a Student Emergency Relief Fund to assist any WMU student facing immediate need.

“The project will engage WMU employees and purposefully include our students so they, too, can contribute to their fellow students but without an added financial burden,” says Julia P. Kuntz, a staff member in the Office of Development and Alumni Relations and one of the members of the committee of University employees spearheading the invisible need initiative.

The fund is accessible to all WMU students facing immediate financial need. To build the fund, students have been selling “Dunn Zone” T-shirts, a special T-shirt featuring the visage of WMU President John M. Dunn, for $10. All proceeds from shirt sales go to the Student Emergency Relief Fund.

Designed by WMU senior Cody Potter, the Dunn Zone shirt has been the official student shirt for home football games.

Alumni and others may purchase shirts online at MyWMU.com/InvisibleNeed and have it shipped for an additional fee.

This fundraiser is supported by the Office of the President, the Western Student Association and the Department of Intercollegiate Athletics.
WMU wins grants totaling $3.7 million for programs in blindness and low vision studies

The University’s Department of Blindness and Low Vision Studies has won four grants totaling $3.7 million aimed at filling a severe shortage of specialists trained to help people with vision problems live fuller, happier lives.

The personnel training grants are from the U.S. Department of Education and span five years. The grants will help prepare orientation and mobility specialists, vision rehabilitation therapists, rehabilitation counselors and teachers of children who are visually impaired.

Ultimately, the grants will help thousands of people who are blind and visually impaired by educating the next generation of specialists who will work with visually impaired youths and adults in schools and organizations, as well as recruiting scholars who represent the diverse populations they will serve.

The awards respond to severe personnel shortages nationally and statewide and address employment challenges faced by those with visual impairments.

WMU trustees extend president’s contract

“The WMU Board of Trustees has extended President John M. Dunn’s contract for an additional year, with that term now to end June 30, 2017.

As part of its resolution, the board also increased the president’s salary by 2 percent. In turn, Dunn affirmed his tradition of donating the new increase along with the amount of all previous salary increases he has received since 2007 back to the University for student scholarships. This means that this year, he donated more than $45,000 to be used for student scholarship aid.

Dunn, who has served as the University’s eighth president since 2007, was lauded by Board Chair James Hettinger, who praised the president’s performance and laid out the board’s commitment to leadership stability.

“ ’We have made huge progress in the past five years,’ Hettinger noted. ‘We are not only a Carnegie research institution, but we’ve now affiliated with a law school and added a med school, and we are playing at a whole different level than we were 10 or 15 years ago. Future leadership is going to be critical to this institution.’

Trustee William Johnston added his praise, thanking Dunn for agreeing to the extension and for ‘bringing great aspirations to the University, the University community and to the community at large.’

Dunn’s 2 percent salary hike is the same percentage increase awarded to employee groups who do not have union representation. The increase brings his annual salary to $390,431.

Michigan’s top ‘affordable, eco-friendly campus’

WMU has been named one of the nation’s top 50 most affordable, eco-friendly colleges by BestChoiceSchools.com.

Coming in at No. 13 on the list of affordable schools that are “recognized leaders in energy conservation and sustainability,” WMU is the top-placing college in Michigan. Rankings by the higher education website are based on broad recognition for sustainability efforts and annual tuition and fees or cost of attendance of less than $25,000.

More than 300 environmentally conscious schools were considered for the ranking, but only the most affordable colleges made the list. The 50 schools selected “have all been formally recognized for superior levels of sustainability and commitment to the green movement.”

Schools listed on the new Best Choice Schools ranking range from Berea College at No. 1 to Oregon State University at No. 50. Two other Michigan schools are on the list. Central Michigan University and Grand Valley State University, are listed at No. 22 and No. 37, respectively.

Mentor program earns statewide recognition

A statewide organization that promotes equal educational opportunities recognized a WMU mentorship program that bridges the gap between college life and the workplace for lesbian, bisexual, gay and transgender students and their allies.

This program was developed to help connect LBGTA professionals and WMU students to help address the unique challenges and barriers these students might experience in the workforce.

WMU’s Career Mentor Program for LBGTA students won an Equity in Education Award from the Michigan Association of Collegiate Registrars and Admission Officers. WMU mentor program administrators presented a one-hour workshop highlighting their program at the association’s annual conference, where the award was presented.

The mentor program, which completed its inaugural year in 2013-14, provides LBGTA undergraduate students with opportunities to connect with mentors in a safe, welcoming and supportive environment. The career-based program connects LBGTA students and mentors providing job shadowing, resume building and networking opportunities.

The program was nominated by WMU’s Office of Enrollment Management. For more information, contact Jennifer Hsu at (269) 387-2123 or visit wmich.edu/lbgt.
A ‘medical school of the future’ and its pioneering students

In the medical school’s virtual hospital, patients may be actual people—such as in the ultrasound practice room where residents work with women in the final month of pregnancy. But the school also has high-fidelity “manikins” that are programmed to talk, moan, scream, sweat and take IVs.
Jacqueline Dauch is fired up about her role as a trailblazer. “Here, our voices are heard,” says Dauch, a member of the pioneering class of students at the Western Michigan University Homer Stryker M.D. School of Medicine.

Their voices are heard in classroom discussions, during interactions with members of the Kalamazoo medical community and through the frequent surveys they are asked to take to monitor the effectiveness of the new school.

“We kind of get to pave our own way,” says Dauch, a 27-year-old Bloomfield Hills, Michigan, native and one of 54 new medical students who make up the Class of 2018.

The private, nonprofit medical school, a collaboration among WMU, Borgess Health and Bronson Healthcare, was in the works for nearly seven years before its 350,000-square-foot, high-tech educational facility on Portage Street opened in June.

The facility is a combination renovation and expansion of a former Upjohn Co. building on the first piece of property W.E. Upjohn purchased for the pharmaceutical company that bore his name for many years and is now part of Pfizer Inc.

School started Aug. 18 for the 24 women and 30 men who make up the medical school’s first class.

Dauch and fellow student Alan Hifko, 28, were drawn to the new school largely because of its team-based learning approach to education.

“When I learned there was going to be a lot of group involvement, that was important,” says Hifko, a Macomb County, Michigan, native who earned his undergraduate degree in biochemistry from WMU and a master’s in biomedical sciences in a combined program of George Mason and Georgetown universities.

Hifko is one of three WMU graduates in the inaugural class. There also are two Kalamazoo College graduates and one student who attended college as a Kalamazoo Public Schools Kalamazoo Promise scholarship recipient.

Dauch, Hifko and the other students aren’t the only ones excited about the new school.

“The faculty I have (hired) came here specifically because they wanted to be medical educators,” says Dr. Dale Vandre’, chairman of the biomedical sciences department.

“They like to teach.”

Before joining the staff of the new medical school in 2012, Vandre’ was an assistant dean in the College of Medicine at The Ohio State University.

One of his responsibilities at the new WMU Homer Stryker M.D. Medical School was to chair the admissions committee that selected the first class of students, who he says have lived up to his expectations for them.

“I’ve been very impressed with the students,” he says.

“It’s a much closer relationship with the students here,” he adds, noting that he gets more questions in a one-hour session in his new position than he did in several classes at OSU.

With team-based learning, students respond as part of a group to questions posed by faculty members from actual clinical cases, so they learn not only from their professors and from their own preparation, but also from classmates.

A 2009 graduate of the University of Michigan, Dauch spent the past five years as a researcher in neurology and diabetic neuropathy at her alma mater.

She discovered during her time as a researcher that students who worked with her did better in groups, so when she decided to go to medical school, that type of environment was the focus of her search.

Dauch and Hifko were among 3,571 applicants for the inaugural class. Of those, 333 were invited to Kalamazoo to interview for the school and 54 were selected.

In that final number, 23, including Dauch and Hifko, are from Michigan, 15 are from California and 16 come from 12 other states. They represent 35 colleges and universities from which they earned previous degrees.

The school, which its dean, Dr. Hal B. Jenson, has referred to as “the medical school of the future,” will expand the size of 2015’s incoming class to 60, and keep increasing the number until 2018 when it will be capped at 84 students.

In addition to the 54 new students at the medical school, more than 200 new doctors are occasionally at the downtown facility during their residency program training.

The residents, who have graduated from medical schools around the world, are receiving specialty training in one of the residency programs: emergency medicine, family medicine, general surgery, internal medicine, medicine-pediatrics, orthopedic surgery, pediatrics and psychiatry. Fellowship programs in emergency medical services and sports medicine also are offered, according to Constance Worline, clinical director for simulation at the school.
She and other medical professionals train residents and medical school students in real-life situations in the new building’s 25,000-square-foot simulation center, which includes a virtual clinic with 12 patient exam rooms and a virtual hospital with eight simulation rooms for everything from intensive care and surgery to labor and delivery.

Their patients may be actual people, such as in the ultrasound practice room where residents work with women in the final month of pregnancy. But they also work with high-fidelity “manikins” that are programmed to talk, moan, scream, sweat and take IVs.

Procedures in both the virtual clinic and the virtual hospital are monitored from control rooms.

The new med school students spent their first month in medical first-responder training, and later received hands-on experience in the patient exam rooms on communication skills.

The “patients” they interacted with there were hired and trained by the med school staff to exhibit various maladies similar to what the students will encounter when they become doctors.

The seed for the medical school was planted in October 2007 when WMU President John M. Dunn, during his first Academic Convocation and State of the University address, proposed the idea.

He noted that the building blocks were already in place in Kalamazoo with a prominent research university; two nationally recognized hospitals in Borgess Health and Bronson Healthcare; a major pharmaceutical company, Pfizer Inc.; an innovative medical-instruments manufacturer in Stryker Corp.; and decades of offering medical education in a variety of settings.

Within weeks, a Medical School Feasibility Committee was formed; several months later the committee concluded that Kalamazoo was ripe for starting a medical school.

Armed with a $1.8 million anonymous donation, the chief executive officers of Borgess Health and Bronson Healthcare, along with Dunn, began meeting to guide the development of the new medical school.

In January 2011, after an exhaustive search, Jenson was named founding dean of the medical school. He stepped into the job two months later on the same day that Ronda Stryker, granddaughter of Dr. Homer Stryker, who founded the Stryker Corp., and her husband, William Johnston, a WMU trustee, gave $100 million to WMU for the new endeavor.

That eventful year in the establishment of the medical school ended with yet another milestone event. That December, William U. Parfet, chairman and chief executive officer of MPI Research in Mattawan and a great-grandson of W.E. Upjohn, donated to WMU the downtown building that was subsequently renovated and expanded into what is now the medical school’s headquarters.
Medical Trailblazers

The WMU Stryker School of Medicine is a huge shot in the arm for the area, both from a medical standpoint and an economic standpoint.

—Ron Kitchens, chief executive officer of Southwest Michigan First

in Kalamazoo—voted to merge its institution, located on WMU’s Oakland Drive campus, with the nascent medical school.

With the merger came MSU/KCMS’s clinical education and patient-care programs, its 223 staff members, 61 full-time faculty members, 200 residents and 420 physicians in the community that served as clinical faculty members.

In addition, the medical school gained its Oakland Drive location.

In October of that year, a groundbreaking ceremony was held for the new medical school on what has become known as the W.E. Upjohn M.D. Campus downtown. That $68 million project was completed last June.

In March, as the medical school building was nearing completion, WMU announced it would be named in honor of Dr. Homer Stryker in appreciation for the contribution of Ronda Stryker and William Johnston, and also in gratitude to the Stryker Corp., which had provided a corporate gift as well as much of the medical equipment for the new school.

As a result of the generosity of the Stryker and Upjohn family members, the Stryker Corp. and others, the new school of medicine now stands as a jewel in the crown of downtown Kalamazoo.

In addition to the Simulation Center on the lower level, the building has a team-based learning hall, classrooms, group rooms, 340-seat auditorium, skyboxes overlooking the auditorium, digital library, fitness center and open seating area on the first two floors; faculty offices on the third floor; and a pathology department and four-county medical examiner’s offices on the seventh floor.

Much of the fourth, fifth and sixth floors, which are currently under construction, will be used for research.

Ron Kitchens, chief executive officer of Southwest Michigan First, which promotes economic development in the area, says the WMU Stryker School of Medicine is a huge shot in the arm for the community, both from a medical standpoint and an economic standpoint.

Short-term, the positive elements are an increase in students, faculty and staff, new facilities and a widespread awareness of Kalamazoo as a leader in medical education, all of which translate into “tremendous gain,” he says.

Mid-term, the area is likely to see growth in research and discovery as well as a continued increase in the number of students and faculty.

“There will be people whose lives are saved because of access to the level of health-care professionals coming into our community as educators and as practitioners,” he says.

Already the Kalamazoo community has shown that the new med students they are appreciated.

At a recent art event, Dauch met a local resident who invited her to dinner in appreciation for Dauch coming to Kalamazoo to study medicine.

“I am blown away with how the community has welcomed us with open arms,” she says.
WMU received more than $3.2 million from the U.S. Department of Education to use the unique opportunities afforded by the existence of the Kalamazoo Promise scholarship to build an institutional culture focused on increased access and degree completion for underrepresented, underprepared or low-income students.

The new grant is one of a small number of awards, and the only one made in Michigan, announced in the fall by the DOE and meant to create and validate through ongoing research, student success programs that can tackle the problem of low rates of degree completion.

The goal is to create programs that other universities can adopt, knowing there is sound research data behind the strategies embraced and replicated.

"After receiving nearly 500 applications from around the country, we're excited to announce Western Michigan University will receive a First in the World grant, funded for the first time this year," U.S. Secretary of Education Arne Duncan said in the September announcement.

"Each grantee demonstrated a high-quality, creative and sound approach to expand college access and improve student outcomes. We are confident these projects will have a positive impact on increasing access and completion and help us reach President Obama's 2020 goal, to once again have the highest share of college graduates in the world."

For WMU, the four-year project focuses on building a campuswide culture that uses mentoring relationships for first-year students to transform WMU's culture and structures to be more supportive of student persistence.

The work is being done with the input of students for whom the problem of affordability has been largely eliminated—Kalamazoo Promise students. The Promise is a nine-year-old initiative that provides up to four years’ tuition and fees at any Michigan public university or one of 15 private colleges for students who graduate from Kalamazoo Public Schools.

"Western Michigan University is in a unique position to help find what additional barriers to success exist for students, once the issue of affordability is removed from the mix," says WMU President John M. Dunn.

"About a third of students attending college through the Kalamazoo Promise choose WMU, and we have both a desire and a responsibility to find and change those things within our culture that still make it difficult for students to earn a degree, reach their full potential and succeed. What we learn will benefit all of our students."

Dr. Andrea Beach, professor of higher education leadership and director of faculty development at WMU, will co-direct the effort with Dr. Charles Henderson, a professor with a joint appointment in physics and the Mallinson Institute for Science Education. Together, the pair recently launched the Center for Research on Instructional Change in Postsecondary Education.

Beach says the project will use one of two strategies with groups of first-year students, and the project team will measure the relative outcomes. The first strategy involves connecting students to professional opportunities in the region by placing them with mentors from the local business community who can provide opportunities for career exploration and course content relevancy as well as a relationship with someone vested in their academic career. The second approach will be to build mentoring relationships through professional learning communities on campus comprised of the students plus faculty, staff and administrators and focused on identifying and addressing barriers to and supports for student success.

Incoming Promise students and others will be invited to be part of the project and will be randomly assigned to one of the two groups. Both approaches fall within the framework of WMU’s First Year Seminar offerings, so that students receive academic credit for their experiences.

The approach for the new work, says Beach, “is a different from ‘business as usual’ or even ‘research as usual’ and will take a great deal of institutional work,” but both Beach and Henderson point to the campuswide input they received in putting the plan together as evidence of the widespread and interdisciplinary nature of the interest faculty and staff have in the work.
The 40 members of the original planning group also showed commitment to rigorous analysis and research as the project moves forward.

Success at the end of the four-year effort, Beach says, “would mean a move toward transformation of the culture at WMU that is systematic and measurable, and transferable to other universities.”

“This is about connecting all the disparate initiatives aimed at student success that every institution has and turning them into one strong and successful effort,” Beach says. “The university itself needs to change. Actualizing student success requires integrated institutional transformation involving the whole campus.”

Additional principals on the effort are Dr. Martha Warfield, vice president for diversity and inclusion, serving as the project’s senior advisor; Dr. Stephen Magura, director of WMU’s Evaluation Center, who will serve as director of evaluation and oversee the overall scientific conduct of the effort; and Tim Terrentine, president of the Kalamazoo Regional Chamber of Commerce and executive vice president of Southwest Michigan First, who will lead the community mentor aspect of the project.
What began as a $500,000 fund is now more than $1 million thanks to the investment acumen of select business students schooled in finance by WMU faculty.

Financial analyst David Mange challenged Kyle Manninen to defend Amazon as his stock pick.

“Don’t just tell us the numbers, because we can all see the numbers,” Mange said to his team of junior analysts, each viewing Bloomberg financial reports and each with his or her own stock to recommend after scrutinizing Manninen’s proposal. “Tell us what to think,” Mange added, encouraging interpretation.

Manninen was making a case that investing in the Internet company could help increase the $1 million fund this team was charged with managing.

Among his arguments:

- Amazon is constantly innovating, pushing into new segments and consumer products.
- The company has seen an annual compounded growth rate of 22 percent in its active users. Similar customer metrics are also up. And its revenues are expected to rise by 19 percent annually through 2020.
- True, Manninen acknowledged, the stock value faltered in the third quarter of 2014, probably due to tepid consumer response to Amazon’s new cellphone Fire. But the company’s Kindle e-reader was similarly received years ago and now look at it.
- “Now seems to be the time to buy because (the stock price is) low compared to what it has been over the past year,” the MBA student argued. “I don’t see Amazon failing or going under anytime soon. It will keep going up from where it is now.”

Their investment decisions have the power to make this portfolio grow—or not. And grow, it has.

Thanks to successive classes of these select business students, what was initially a $500,000 portfolio in 2009 is now valued at more than $1 million.

Few other schools have a student-managed fund, says Dr. Devrim Yaman, chair of the college’s Department of Finance and Commercial Law.

“What’s unique about our Student Managed Investment Fund course is that it allows our students to have hands-on experience in the fiduciary management of investment assets.

“As a result of the expertise gained by our students who take this class, investment firms will likely view the students as attractive hires,” she says.

Undergraduate and MBA students apply to take the course. A faculty committee reviews those applications and only the best students are admitted, Yaman says.

Since the course was established at the business college, it has been taught by practitioners who manage funds on a daily basis as professional analysts.

Junior analysts

“I consider this kind of a laboratory,” says Mange, a chartered financial analyst who has taught the course for three years and whose full-time job is as a vice president and senior research analyst with Greenleaf Trust in Kalamazoo.

“The objective of the class is to move the students from having an academic understanding of financial analysis and investment markets to having a chance to practice it,” he says.

“They are building on the financial concepts that they already know and they are analyzing a company in depth and trying to put a value to the company. Most of the students say they haven’t done that before,” he says.
Mange emphasizes that the students make the investments choices, not him.

He guides his students and urges them to deeply research their stocks, but by the end of the course, the students vote on which stocks to buy and direct Mange to make those trades.

“That’s part of the reason I thought this class would be a cool opportunity,” says Sam Krygier, another MBA student.

“I don’t have a lot of experience investing and I wanted to get into it, get a knack for it,” he says. “It’s a good skill set to have in any kind of business you want to go into. Whether you’re starting a company, running a department or division of a company, if you understand money and where it’s going, you can be successful.”

The students only invest in large cap stocks, companies with a market value of at least $10 billion. They’re aiming to outperform the S & P 500, with a return on investment better than 10 percent.

However, reaching that threshold may be more difficult for the students managing the portfolio today than when the fund was initially established five years ago. In 2008 and 2009, the stock market was experiencing historic lows.

Continued on page 30
As fundamental as water is to life on earth, this natural resource is constantly making news, from cyanobacteria poisoning Lake Erie to limited water sources in drought-stricken California to citizen concerns about the impact of hydraulic fracturing on water quality in areas of the U.S.

"Some people have said that the 20th century was the century of oil and natural gas, but in the 21st century, water is the critical issue," says Dr. Phil Micklin, a WMU professor emeritus in geography and an expert in water resources.

“And there’s no substitute for water.”

WMU plays an important role in educating the next generation of experts who will take on these issues. Among the University’s latest efforts is a new degree in freshwater studies. WMU and Northwestern Michigan College have joined forces to expand the study of this critical natural resource.

The institutions have developed an interdisciplinary curriculum allowing students to earn a Bachelor of Science in Freshwater Science and Sustainability. Graduates of the program will be prepared for careers such as freshwater quality analysts, watershed managers, sustainability coordinators, and environmental consultants or advocates. The degree also prepares students to pursue graduate studies in the sciences and sustainability leadership.

Classes for this new degree program were offered this past summer in Traverse City, Michigan, but the program officially launched in September.

Students wishing to conduct all of their freshwater science and sustainability studies in Traverse City may enroll at NMC and earn an associate degree, then seamlessly transfer to WMU-Traverse City and complete the final two years of coursework required for the bachelor’s degree. Students also may enroll in the bachelor’s-only version of the program offered on WMU’s main campus in Kalamazoo.

The B.S. in Freshwater Science and Sustainability builds on NMC’s Freshwater Studies Program, which developed the first associate degree of its kind in the country and now offers an Associate in Science and Arts in Freshwater Studies or an Associate in Applied Science in Freshwater Studies.
Dr. Steven Kohler, professor of biological sciences and director of the Environmental and Sustainability Studies Program at WMU, says the new bachelor’s program has a unique curriculum that focuses on freshwater ecosystems and the environmental, social and economic issues of their sustainable use and management.

He says that NMC is a perfect institution for WMU to partner with to offer the new degree. “They have a strong track record in providing freshwater studies courses, are strategically located close to Lake Michigan and operate the Great Lakes Water Studies Institute, which has an on-site water analysis laboratory and uses a 56-foot research vessel as a floating classroom,” Kohler says.

WMU brings to the table all of the resources of a Carnegie-classified national research institution, including nationally and internationally recognized faculty researchers and a diverse array of research and creative activities on freshwater systems. “We also have one of the best-established environmental studies and sustainability programs in the country, and WMU is recognized as a national leader in sustainability,” he says.

Hans Van Sumeren, director of NMC’s Great Lakes Water Studies Institute, says the new bachelor’s degree program not only reflects an ideal use of both institutions’ assets, but fills an important educational niche as well.

The two institutions have been working together in various ways for some time, identifying collaborative research projects and co-teaching courses. In addition, both institutions share an academic interest in the Great Lakes. “The Great Lakes contain 20 percent of the world’s surface freshwater and Michigan has a tremendous diversity of lakes, streams and wetlands, so this is the place to study freshwater science and sustainability,” Van Sumeren says. “Water, energy and food are recognized as the most important factors facing future generations. We have an obligation to learn how to sustain those resources for those who come after us.”

For more information about the B.S. in Freshwater Science and Sustainability, contact Dr. Steve Kohler at steve.kohler@wmich.edu or (269) 387-2987.

Information about the Associate in Science and Arts in Freshwater Studies or Associate in Applied Science in Freshwater Studies is available by contacting Northwest Michigan College’s Great Lakes Water Studies Institute at (231) 995-3333 or visiting nmc.edu/water.
This past summer, Jesse Carpinello once spent hours monitoring a water pumping system in the dead of night in the middle of a field.

Another day, he wore a watertight head-to-toe plastic hazmat suit in the summer heat to protect himself from noxious “chemicals” as an exercise.

He also helped locate underground tanks, ostensibly containing contaminants that could leak into aquifers. Every day like this lasted from sun up to sundown.

And he loved every minute of it, mostly.

“It was intense. I don’t think you’d get a whole lot out of it if it wasn’t. It really pushed you,” he says.

Carpinello is one of the hundreds of students who have come to WMU over the years from around the U.S., and sometimes the world, to gain hands-on hydrogeology experience through a comprehensive field course.

“IT was the oldest, longest running six-week-long hydrogeology field course in the country. There are only a handful of others,” says Tom Howe, who coordinates the field course, a capstone class for WMU students earning a bachelor’s degree in hydrogeology.

Since 1987, WMU has offered this sought-after field experience that trains students, and often young professionals in their first jobs, who are pursuing disciplines involving geology, hydrogeology and environmental consulting.

Because there are so few such field courses in the country, students from other universities and colleges come to WMU for the training at the culmination of their degree programs.

“There’s always the dilemma of, ‘I need to get experience, but I can’t get hired because I don’t have the experience.’ Well, we provide the hands-on training that they can’t really get anywhere else,” Howe says.

Some students who took the course in the summer of 2014 landed jobs soon after, including at the U.S. Environmental Protection Agency.

Carpinello is a middle school math teacher in Pennsylvania, but is looking to pursue a career in hydrogeology because of his interest in water resources.

“What intrigues me so much about hydrogeology is that people are always going to need water. Understanding contaminants in the ground and understanding how contaminants interact with groundwater is so important. We need water to survive. We don’t need oil and gas to survive,” he says.

“We’re able to find where groundwater is located, how readily is it available and how it moves through the subsurface and what impact contaminants have on groundwater,” Howe says.

He says that geoscience in general is a booming field and the contributions of hydrogeology can’t be overestimated.

“Groundwater is a huge important resource. Half of all the water we use in Michigan is groundwater—for irrigation, drinking water and industry. And it’s also a major issue of concern globally. Nothing survives without fresh water,” he says.

Carpinello says he has noticed that many who go into geosciences are interested in the oil and gas industry.

“But when you think about oil and gas, it’s a nonrenewable resource and when that goes, what happens?

“What intrigues me so much about hydrogeology is that people are always going to need water. Understanding contaminants in the ground and understanding how contaminants interact with groundwater is so important. We need water to survive. We don’t need oil and gas to survive,” he says.

For more information on WMU’s hydrogeology field course, contact Tom Howe at thomas.r.howe@wmich.edu and visit wmich.edu/geology.
Revising history?

Professor says the new curriculum makes kids dig deeper into what happened and why.

A new history curriculum has sparked criticism in some circles over how and what children should be taught about American history.

Revamping the curriculum to encourage deeper thinking is a good idea, says Dr. Joseph Kretovics, a former history teacher and WMU professor of educational leadership, research and technology.

“I’ve interviewed thousands of kids across the country about school and in some cases about U.S. history,” Kretovics says. “And one of the first things that they say is that it’s boring. And it is, because the interesting stuff isn’t that superficial junk that we cover in U.S. history textbooks.

U.S. history textbooks are so watered down and so benign, all they want kids to do is memorize and be able to recite dates and names of people and that’s not what U.S. history is about.”

Kretovics says the new curriculum makes kids dig deeper into what happened and why.

“I think if you look at the curriculum it requires kids to really do some research, to dig in, to go deeper, which is really what we want kids to do,” Kretovics says. “If we’re just talking about memorizing facts and dates and names of people and all of those types of things, they’re going to forget them, probably before the end of the year.”

Kretovics says most people can’t name the capitals of all 50 states, and it’s not really necessary to—all one has to do is look them up. What kids need to know is how to think critically, he says.

“You really need to understand the issues and understand them deeply, understand both sides or multiple sides of many of the issues and make an informed choice,” Kretovics says. “Right now, teachers are just rushing to cover the material and they’re not allowing kids to really think about it.”

Kretovics says the countries that are beating the United States in academics are doing it by allowing teachers to do authentic assessments, not bombarding them with tests. The key to academic success and shaping children into contributing members of society is teaching them to think for themselves.

“To live the American dream you need to get a good education,” Kretovics says. “But to get a good education, you have to be able to think. We need to teach kids how to think, not what to think.”

“We need to teach kids how to think, not what to think.”

—Dr. Joseph Kretovics, education professor
Student Sarah Spohn shot this beautiful winter scene on campus near Sprau Tower. The sophomore is pursuing a bachelor of fine arts degree with an emphasis in photography and intermedia.
Upon learning that their research involves robots—social robots designed to interact with people by approximating and catering to human social behavior—many assume that Drs. Autumn and Chad Edwards are engineers or computer scientists.

But these associate professors of communication at WMU are interested in how humans and social robots communicate with each other, a focus that they say is as important as the mechanics and programming of robots.

This past fall, they launched the Communication and Social Robotics Labs in collaboration with Dr. Patric Spence, who has a matching lab at the University of Kentucky. Each lab has a small family of robots, of varying sophistication, used for the labs’ emergent body of research.

The professors plan to pursue several lines of inquiry, including how the rise of social robots may alter the way humans interact with other humans.

At the center of their work is this question: “How do we take what we know about being a good communicator and apply it to robot interactions?” Chad Edwards says.

“What we’re trying to do is to learn how to use them better.” Edwards predicts that over the next five to 10 years, social robots will become increasingly common.
“There are robots being used now to teach second languages. This is happening especially in Europe and Asia. Take Japan, there are social robots used ... in elder care,” he says.

“A few years ago, if you read all the aggregate news articles on robots, you might see an article every few days. You do that now, you see a different robot story every day.”

Among those headlines in recent months, from the BBC: “Are we ready for the rise of social robots?” A recent cover of Popular Mechanics featured a bot named JIBO, marketed as a personal assistant.

Internet behemoth Google received a surge of media attention after buying up several robotics companies, leaving technology analysts speculating about the company’s plans.

“Social robotics are here and they’re coming. That’s why it’s so important to study,” Chad Edwards says.

The lead researchers do slightly different kinds of study in communication.

Chad Edwards’ scholarly interest is in instructional communication. Autumn Edwards’ focus is on interpersonal communication and communication theory, and Spence researches risk and crisis communication.

“But we all want to know: Is it possible for humans and robots to truly communicate? When you ask people, they’ll give you different answers,” Autumn Edwards says.

“If you think communication is just transferring information, you’d probably say, ‘Yes.’ But other people aren’t so sure. When communication means you have mutual understanding or you share meaning, it gets trickier. People begin to say, ‘You can talk to it, it’s like communicating with a dog. But it’s not what you could get from a full-fledged person.’

“So part of the research is about identifying, where is that bright line? How much can we do with a machine and where does it break down and people begin to feel like they’re losing something?” she says.

‘A someone, not a something’

Films such as “Terminator” or “I, Robot” may bring to mind a future in which artificially intelligent, maybe even malevolent, social robots outsmart and then turn on their human progenitors.

In reality, the capabilities of today’s social robots are much more modest. But they exist and are getting more advanced all the time.

Take PARO, the therapeutic robot used in some places in elder care with patients suffering from dementia. The robot looks like a baby harp seal. Among its other capabilities, PARO can detect touch, sound and temperature.

The plush robot coos, moves and bats long eyelashes over its dark round eyes, interacting with and comforting its users. Makers say the cuddly robot reduces stress for patients and their caregivers, and has other psychological benefits. But it doesn’t speak.
What robots reveal about us

This inclination among people who’ve had brushes with JIBO seems to be a reflection of human nature, Chad Edwards says.

“We try to humanize everything we can. We do this with pets. We give them human characteristics. We treat them as ‘fur babies.’ We spoil them,” he says.

It may seem counterintuitive, but the researchers say that part of the reason they’re studying robots is to shed light on human behavior.

“It’s teaching us and our students about what we expect of person-to-person communication when we try to do it with a robot and things go wrong,” Autumn Edwards says.

The robots in the Communication and Social Robotics Labs are nowhere near as sophisticated as Pepper or JIBO, but the professors say they are advanced enough to support their research.

At WMU, there’s Olivia and Herman, telepresence robots that are basically mobile screens with conveyances that allow them to be piloted remotely from the lab’s headquarters in Sprau Tower.

Meanwhile, the stationary bot JIBO does verbally communicate. It resembles a large Magic 8 Ball swiveling on a stand, allowing it to react to the movement and the faces around it.

In a promotional video, a voiceover describes JIBO as the “world’s first family robot,” not a thing, not a member of your human family, “but somewhere in between.”

JIBO is shown interacting with its owners in several scenarios in the promotion, autonomously tracking faces and snapping pictures at a family gathering in one scene, politely relaying a message in another—“Excuse me, Ann. Melissa just sent a reminder that she’s picking you up in half an hour to go grocery shopping.”

In 2006, French robotics company Aldebaran introduced NAO, a 22-inch tall humanoid robot created to be a daily companion. The company claims NAO has been used in more than 70 countries in science and computer classes, helping students learn programming as they code the bot to complete a variety of actions.

The company’s latest droid is Pepper, designed to “converse with you, recognize and react to your emotions, move and live autonomously.”

These machines are just a few examples of social robots, but there are others. The WMU researchers anticipate social robots becoming more popular, perhaps approaching the prevalence of home computers in coming years, living alongside us as “co-beings.”

JIBO project head, Dr. Cynthia Breazeal of the Massachusetts Institute of Technology, has remarked that, “People want to treat JIBO like a someone, not a something.”

French robotics maker Aldebaran has developed what it calls a family of robots. Its latest robot is Pepper. Company officials describe the machine as a “social robot able to converse with you, recognize and react to your emotions, move and live autonomously.”
As they tool around Brown Hall or elsewhere, they get mixed reactions.

“Some people think it’s really cool. They want to kneel down and interact. Others do a kind of sideways walk around it to get away from it,” says Brett Stoll, one of the communication graduate students who works with the lab.

“There’s research that says some people will be creeped out by robots. Especially if they get to be too human, people will back away from it. That’s the uncanny valley.”

The lab’s latest robot is a small machine called JD, their only “humanoid” bot. And this spring, the lab expects to bring home its most sophisticated robot yet, a machine being built in collaboration with a design team at the University of Illinois at Chicago.

We try to humanize everything we can. We do this with pets. We give them human characteristics. We treat them as ‘fur babies.’ We spoil them.”
—Dr. Chad Edwards, WMU communication professor

Robo research

The researchers have three basic studies that begin to plumb how credible people consider robots to be in comparison to humans, including in the role of a teacher.

In one study, they had a human teacher deliver a scripted lesson on business communication to a class of study participants via Skype. Then, another group heard the same scripted lesson, but this time from what they believed was an autonomous robot.

The real person in the study was rated as having a higher level of character and caring than the robot, but in competency, they came out equal.

“Which is pretty amazing,” Chad Edwards says.

“It tells you that for some tasks, robots will be very good. We’re certainly not advocating putting robots in the classroom as teachers, but it does mean in some cases, the robot” could be used to assist a teacher.

As the capabilities of robots become more advanced, the Edwards have different perspectives on the potential rise of social robotics in society. They say those views bring a counterbalancing strength to the research team.

Chad Edwards is a self-confessed “Star Wars kid” who has always loved robots. Autumn Edwards is more cautious about innovations to come, pointing to how the pervasiveness of cellphones has changed human interaction.

“Every step for progress, we lose a little bit of an older way of living. And with some of that I don’t think we’re going to be happy if we march on without stopping to think about what we’re giving up,” she says.

“What’s going to change about how we communicate with other people when we start to communicate with machines all the time?”

Using a mobile device, view a video of JD the robot performing Michael Jackson's “Thriller” dance. His moves were programmed by a student.
It’s not often that a performer gets to help develop the ground-level choreography of a Broadway-bound production and then when it’s cleared to hit this celebrated stage, be invited to join the official cast—no re-audition required. But that’s what happened to Mikey Winslow, from a pre-Broadway lab to “a phone call saying, ‘We’re going to Broadway!’”

The 2009 graduate of WMU’s music theatre performance program is part of the Broadway revival of “On the Town,” a musical comedy that first appeared on Broadway in the 1940s. The show opened in October at New York’s Times Square and runs through March. Appearing in Broadway productions, co-starring with veteran performers, touring the country and getting cast on a hit television show—it’s the stuff of dreams for many and there are alumni of WMU’s music theatre performance program living the dream.

After graduation, Winslow moved to New York City and was cast as Big Deal in “West Side Story,” also on Broadway. When the show closed in 2011, he found himself performing alongside Green Day frontman Billie Joe Armstrong in the musical “American Idiot.”

At the initial audition for “On the Town” just more than a year ago, the choreography was quick, Winslow says, and full of technical elements that many were struggling to perfect. Following the audition, he was offered a role in the pre-Broadway lab for the show and helped create steps and vocabulary for music that still needed to be filled in as the production developed.

When the cast performed the show for industry officials, Winslow says, “it was incredibly well received.” But he still wasn’t sure a theater would accept the production.

“In late April, I got a call from my agent and was told that it was, in fact, coming to Broadway and we would start rehearsals in August. What a dream come true,” he says.

The ‘never-ending cycle’ of a working actor

Audiences throughout America and in Canada are seeing Caitlin Lester-Sams, a 2007 WMU alumna, as she travels with the tour of “Flashdance the Musical” through April.

For several years, this actress, singer and dancer has performed in regional theatre and touring shows, including in “Cabaret,” and “Urinetown.” She’s also graced New York stages, where the opportunity to perform in the musical version of “Flashdance” presented itself.

Beyond her memories of seeing the movie years ago, Lester-Sams—not yet born when the “Flashdance” film premiered in 1983—says she knew little about the show adapted from the film. But after reading descriptions of “Flashdance” characters in the casting publication Backstage, a few roles sounded just right for her, she says.

Both the movie and the musical tell the story of a woman who is a welder by day, dances at a bar at night and dreams of becoming a professional performer.

“I went to the open call for singers they were having in New York. It was a little bit of a shot in the dark, but I figured I had nothing to lose,” Lester-Sams says.

She read and sang for the show’s casting director as well as for casting consultant David Alpert, another WMU alumnus. And after a series of callbacks, the WMU alumna secured the role of
Miss Wilde, an administrator at an eminent arts school. She also is the understudy for two principle roles in the show.

“Flashdance the Musical” has taken Lester-Sams across North America to Arizona, Texas, Louisiana and parts of Canada, with upcoming performances in Florida, South Carolina, Indiana, Tennessee, New York and elsewhere.

Though the actress says life on the road can be tough, “this is an incredibly supportive cast and creative team. And everyone ultimately has the same goal, which is to make the show as great as it can possibly be.”

“With a show this big, it’s very humbling for me to see how many people are working so hard to make it possible for me to go on stage and do what I love. I find that part of touring very rewarding…

“As for what’s next for me, hopefully more of the same. I’ll be on tour through April and after that it will be back to auditions to start the whole process over again. That cycle in the life of a working actor never ends,” she says.

**Alongside veterans**

“Bright Star,” a new musical authored by comedian/actor Steve Martin and singer/songwriter Edie Brickell, featured two WMU alumni, Hannah Elless and Joe Jung this fall.

Elless was the lead ingénue in the show that ran for several weeks at San Diego’s The Old Globe theatre and concluded in November. Jung was part of the ensemble.

Elless—an accomplished actor who has also been in Broadway productions, appeared on the television show, “Glee,” and in film—was asked to audition for the role in “Bright Star.” The show is set in the 1940s and awash in bluegrass music, both of which Elless says, “fit her like a glove.”

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Not only an actress, but a musician who plays six instruments, Elless says she accompanied herself on mandolin at the audition, “and sang the very first bluegrass song my dad ever taught me.”

One callback later, she was offered the part in “Bright Star” and was pinching herself for landing the part thereafter.

Jung says that being in a show written by Martin, one of his idols, was an incredible experience.

“I’ve been watching his movies since I was a kid, mimicking his jokes, learning his monologues… So, to get to be in the room with him—and he was in the room every day diligently writing, tweaking, observing, chatting with the cast—was inspiring,” says Jung, whose credits also include a Broadway production, “Bloody Bloody Andrew Jackson,” and many other regional theatre shows, including “Herman Hesse’s Siddhartha” and “The Crucible.”

Following “Bright Star,” Jung punctuated his 2014 performance season on a 30-day, 20-city tour playing in “Ghost Brothers of Darkland County,” which he describes as a medicine show/radio play/rock concert written by author Stephen King and musician John Mellencamp.

“I’ve been playing guitar and writing songs for as long as I’ve been acting, so it’s really fun to live like a rock star for a month,” he says.
WMU partners with OXFORD to digitize historical writings

The $779,072 grant covers the cost to assemble a digital library and interactive web portal of historical religious philosophical writings in partnership with University of Oxford, the oldest and one of the most prestigious universities in the English-speaking world.

Also joining the project is Texas A&M University, which will handle much of the digitization of historical philosophical materials. The John Templeton Foundation, a philanthropic organization working as a catalyst for discoveries relating to the big questions of human purpose and ultimate reality, is appropriating a little more than $2.3 million to the project altogether.

The project is essentially the brainchild of Dr. Timothy McGrew, WMU professor of philosophy, who will work closely with Oxford’s Bodleian Library to access philosophic religious writings from about the late 1600s through the early 20th century. The Bodleian Library is one of the oldest libraries in Europe and in Britain is second in size only to the British Library with more than 11 million items.

A key element of the project is not just the digitization of records, but the linking of writings with other writings that influenced them or they were responding to, placing them in their proper historical context, McGrew says.

“There are some issues that are always interesting, always sort of hot-button issues—existence of God, miracles—that’s always going to get people going from one side or another,” McGrew says.

“What the Templeton Foundation said was, ’Look, what’s the current state of discussion on this, professionally speaking, and what could be done to make it better, more interesting and more available to people?’”

McGrew was among a group of researchers summoned to Oxford a little more than a year ago. It was there that McGrew floated the idea of unearthing philosophical and religious writings that have not been refuted, but have long since been forgotten, leaving gaps in the historical record.

Thanks to Google Books and Microsoft’s Internet archives, researchers have a better idea of what’s out there, McGrew says. The trouble is finding writings of interest from among the hundreds of millions of manuscripts.

“How do you find the 5,000 or 2,000 resources you really need?” McGrew says. “Where’s that needle in the haystack?”

For quite a number of years, McGrew has been combing archives and libraries, obtaining copies through interlibrary loan, scanning writings and amassing a database. The database includes all sides of a given issue, so that the writings of Christian theologians are included along with skeptics, atheists, deists and others.

McGrew noticed webs of interconnectedness within the religious writings, so that one author was responding to, refuting or was being influenced by another.

“What I said to Templeton was, you should make this conversation something that’s available and can be mapped and traced by people who have just a personal interest in it or a scholarly interest in it,” McGrew says. “And they bit.”

The grant will fund the three-year, online digital humanities project, paying for a visiting assistant professor for two years, one-quarter of the cost of a sabbatical year for McGrew, as well as hiring a graduate assistant and research assistant. It is hoped the database will be up in time for McGrew to use it as a tool in a class for religious and philosophy scholars that he will teach next summer.

“If we do this right, no one will be able to do scholarship on this issue without using our tool... It will become indispensable.”
—Dr. Timothy McGrew, professor of philosophy

“If we do this right, no one will be able to do scholarship on this issue without using our tool ever again, because the interconnections will be mapped out so thoroughly,” McGrew says.

“Not that we’re going to replace what other people have done, but we’re going to supplement it in a way that it will become indispensable and could become a model for digital humanities projects.”
Thanks to the digitization efforts of Western Michigan University Libraries, thousands of artifacts are within easy reach of anyone in the world who has Internet access and wants to study the material.

Letters written by U.S. Civil War soldiers, medieval manuscripts, examples of World War II propaganda, historical maps, photographs and other items from WMU collections have been reproduced in digital form.

“The materials we put (in digital collections) are out there because there is interest, and we hope that many, many people access them.”

—Dr. Sharon Carlson, director of the WMU Archives and Regional History Collections

“Digitization does two things. In some cases, it’s a preservation tool,” says Dr. Sharon Carlson, director of the WMU Archives and Regional History Collections.

“With our oral histories, many of these are in formats that are not going to last. For example, we know that cassettes have a limited life span.

“The other thing that it does is it makes (items) far more accessible. So you don’t need to travel here or work within our hours” to make use of them, she says.

University Libraries has maintained a digitization operation since 2000.

Many of the items in the virtual repository—including U.S. Civil War diaries and letters, its most comprehensive collection—are from the University's

Continued on page 26
“There’s a lot of value-added to that collection,” says Paul Howell, digitization and systems manager for University Libraries. “It has images, but also it has transcriptions. And there are also ways to search the material.”

The eight diaries and 29 letters in this collection have been coded to bring attention to the various subjects that may be of interest to researchers studying this period in U.S. history.

“Of course that all requires the intervention of librarians and metadata specialists,” Carlson says.

The expertise of WMU librarians and other specialists also come into play with the maintenance of the virtual versions of artifact collections.

“Once you’ve scanned them, the work has only just begun,” Carlson says.

“You need to plan for migration of these formats for years to come, and in order for these to be found, you need the right cataloging and metadata people to (work with) the material.

“You’re also making a commitment to storing it on servers and having backups. I think everybody can identify with having a photo they somehow lost—the computer crashed, the phone died or the file got corrupted. And so you need to take all of these things into consideration,” Carlson says.

Most of what University Libraries digitizes is accessible on its website. Explore the collections at wmich.edu/library/collections/digital/collections.
**In Tempo: WMU Musicians**

Among the latest works from WMU's talented music faculty

**“Fourward”**

*Vertical Voices*

With WMU alumni Jennifer Barnes and Greg Jasperse, assistant professor of vocal jazz and director of Gold Company, Vertical Voices released “Fourward,” the group’s first CD. This bold leap of vocal jazz defies expectations with wordless vocals, non-traditional harmony and adventurous improvisation. The work features the music of Pat Metheny, the Yellowjackets and Nando Lauria, as well as compositions and arrangements by the group. It can be found online at iTunes and CD Baby.

**“Gran Danzón”**

Martha Councell-Vargas, assistant professor of flute

With a pop-art cover that tips the hat to the glitzy 1940s and 1950s pin-up culture of Cuban dance records, Martha Councell-Vargas pays homage to the festive spirit that bonds the American continent. The works presented—featuring composers from Mexico, the U.S., Peru and Cuba—are unified not only by their common American heritage, but their juxtaposition of Euro-classical form with the American dance tradition, resulting in what Councell-Vargas calls a “universal Americanism.” The album was released on the Blue Griffin label—Gran Danzón (BG 307).

**“Free Fall”**

*Western Jazz Quartet*

“Free Fall” is the WJQ’s sixth CD, and the first with the group’s new configuration of WMU music professors Andrew Rathbun, Jeremy Siskind, Tom Knific and Keith Hall. The CD consists of all-original music composed by Rathbun, Siskind and Knific. The work was inspired by Felix Baumgartner’s epic dive to earth from 128,000 feet in 2012. This recording marks a major turning point in the quartet’s artistic direction. The WJQ had CD release concerts in New York, Chicago and on campus. Free Fall is released on BluJazz Records.

**“Shadowcatcher”**

*Robert Spradling and the University Symphonic Band*

Featuring the University Symphonic Band, Western Winds and Western Brass

**“Numbers & Letters”**

Andrew Rathbun, assistant professor of music, saxophone and Jazz Studies

Released in June by Danish label SteepleChase, “Numbers & Letters” is a journey through the many shades of parenting Rathbun’s two children. The aesthetic of the ensemble is at times melancholy and romantic as well as bold and voracious. The themes on this album, built on unusual and independent-flowing harmonies, merely enhance the appeal and unity of the band. A well-suited cast of players interprets the compositions on the recording: drummer Bill Stewart, bassist Jay Anderson and pianist Phil Markowitz.

**“Gran Danzón”**

Martha Councell-Vargas, assistant professor of flute

With a pop-art cover that tips the hat to the glitzy 1940s and 1950s pin-up culture of Cuban dance records, Martha Councell-Vargas pays homage to the festive spirit that bonds the American continent. The works presented—featuring composers from Mexico, the U.S., Peru and Cuba—are unified not only by their common American heritage, but their juxtaposition of Euro-classical form with the American dance tradition, resulting in what Councell-Vargas calls a “universal Americanism.” The album was released on the Blue Griffin label—Gran Danzón (BG 307).

**“Travel Notes”**

*University Jazz Orchestra*

“Travel Notes” is the Jazz Orchestra’s seventh CD, and the second under the direction of Tom Knific, professor of Jazz Studies and bass. The Jazz Orchestra won its third DownBeat magazine award with music submitted from this recording. All of the music on the CD resulted from collaborations with the composers who were guest artists at WMU during the 2012–13 season: John Clayton, Tim Hagans, and Alon Yavnai. The CD also features the premiere of Knific’s “That Day In May.” “Travel Notes” is the first collegiate CD ever released on BluJazz Records.
College of Engineering and Applied Sciences
Researcher studying systems that allow vehicles to ‘talk’ to each other

Dr. Ala Al-Fuqaha, associate professor of computer science, is the co-principal investigator on a project researching intelligent transport systems that will enable vehicles to autonomously “communicate” with other nearby vehicles. In this endeavor, funded by a $900,000 grant from the Qatar Foundation, Al-Fuqaha is partnering with Dr. Bharat Bhargava of Purdue University and the project’s lead investigator, Dr. Elyes Ben Hamida of the Qatar Mobility Innovations Center. Intelligent transport systems, through the use of wireless technologies, allow vehicles to “talk” to each other or to road infrastructure. With this technology comes the potential to accelerate the use of applications that improve driver safety.

Their project aims to establish long-term and multidisciplinary research and development efforts between Qatari and U.S. research centers and universities.

Ultimately, the project will result in a set of active, small-scale road safety applications in Doha, Qatar.

College of Health and Human Services
A ‘Living Legend’ in nursing

The founding director of the WMU Bronson School of Nursing was one of four selected as 2014 Living Legends of Nursing by the American Academy of Nursing. Dr. Bernardine M. Lacey was one of four extraordinary nurse leaders honored for their contributions to nursing and health care over the course of their careers. The 2014 Living Legends were recognized during the academy’s Transforming Health, Driving Policy Conference in Washington, D.C., in October. Lacey is credited with starting the movement to include care of the underserved in the nursing curriculum. Because of this movement, the profession is better prepared to care for the most vulnerable in American society.

Lacey served as the Bronson School of Nursing’s director for five years, helping to shape a vision of community nursing at the newly established school. She left the University in spring 2000.

Lee Honors College
Anita Hill first speaker in Raise Your Voice series

Anita Hill, an academic and attorney who entered the national consciousness in the 1990s in the wake of sexual harassment allegations presented during the confirmation hearings of then-Supreme Court nominee Clarence Thomas, is set to speak on Tuesday, Feb. 3, as part of a program called Raise Your Voice. The Lee Honors College is partnering with departments, colleges and groups across campus for this series that will present nationally known artists, activist, writers and scholars actively working to end hostility and violence against women.

The yearlong series of events intends to explore the roots of the problem, challenge the status quo and inspire bold and courageous action in the service of social transformation.

Hill’s public lecture will take place at 7 p.m. at Chenery Auditorium, 714 South Westnedge Ave. in Kalamazoo. Today a professor and a special advisor to the provost at Brandeis University, Hill’s story is captured in the 2014 documentary, “Anita: Speaking Truth to Power.” In the lead up to her appearance, the documentary will be screened at 5:30 and 8 p.m. Jan. 29 at Kalamazoo’s Alamo Drafthouse. Find the list of Raise Your Voice events online at wmich.edu/honors/events/raise-your-voice.

College of Arts and Sciences
Prof wins NSF grant to study youth stress in rural Kenya

An anthropology professor has been awarded a $135,891 National Science Foundation grant to study the impact of intercommunity violence on young people in rural northern Kenya.

Al-Fuqaha

Dr. Bilinda Straight is one of two principal investigators involved in the project along with Dr. Ivy Pike, associate professor of anthropology at the University of Arizona. Together they will assemble a research team studying the stress levels of young people living in communities at war with each other.

The total award for the project, which builds on previous research conducted from 2008-11, is $293,395. The research team will revisit the Kenyan ethnic groups known as the Samburu, Pokot and Turkana. In earlier studies, Straight and her colleagues had assessed members of the pastoral ethnic communities for mental and physical impacts of violence across the age spectrum from babies to the very old. This time, they will have a closer look at the impact of violence on young people ages 10 to 19.
Haworth College of Business

Top winners in national sales competition

A team of two WMU sales and business marketing students was named the overall winner in the 2014 State Farm Marketing and Sales Competition, held at the University of Central Missouri, and brought home $4,000 in scholarships.

Seniors Hope Burnham, from Kalamazoo, and Caleb Ross, from Mattawan, Michigan, earned the top place after a semester of preparing for the competition that included two rounds of sales role plays followed by a 20-minute marketing presentation.

In addition to the overall win, Ross took second place in the individual competition as well as third place in the sales role plays category and earned a $3,000 scholarship. Burnham also participated in the individual competitions and earned a $1,000 scholarship.

Assistant professor of marketing, Dr. Kelley O’Reilly, who coached the students, says their strength across both sales and marketing events led to the win.

Graduate College

Graduate Student Association honored

WMU’s Graduate Student Association has been named the 2014 Midwest Chapter of the Year by the National Association of Graduate-Professional Students. The award was given based on GSA’s outstanding service to graduate students at WMU and for its engagement in the Midwestern region.

Several initiatives garnered attention from the organization, including the WMU graduate group’s hosting of a well-organized NAGPS conference that brought graduate students from all over the country to WMU in 2013.

Also, under the leadership of GSA President Damon Chambers and Vice President Amaury Pineda, the association developed GRAD Talks. Modeled on the popular TED Talks series, the program gives graduate students a forum to present their research.

Additionally, GSA instituted the Make a Difference award for graduate students, which recognizes graduate students making a difference in the lives of other graduate students.

College of Fine Arts

Recent WMU grad a top choreographer in Chicago

Alumna Connor Cornelius was one of four Chicago-based choreographers selected to participate in the 2014 DanceWorks Chicago DanceMoves choreography competition.

The competition’s goal is to identify Chicago’s top choreographers and showcase their original “solo-centric” works inspired by the Windy City. Connor’s dance premiered on Oct. 3, with an additional showing in November at the Joffrey School in Chicago.

“I became interested in this dance company in my sophomore year at WMU,” says Cornelius, an Oak Park, Illinois, native who graduated from WMU in 2014 with a Bachelor of Fine Arts degree in dance. Through WMU’s Great Works Dance Project, “I had the opportunity to perform with DanceWorks Chicago and have reached for every opportunity to maintain my connection with the company ever since,” she says.

College of Education and Human Development

Alumna named art teacher of the year in Michigan

Dr. Cindy Todd, an alumna of the college’s doctoral degree in educational studies, has been awarded with two of the highest honors for art educators in Michigan.

The Michigan Art Education Association has named Todd its Educator of the Year and Higher Education Art Educator of the Year for 2014. Todd is chair of the art education program at the Kendall College of Art and Design of Ferris State University.

“In the day-to-day life of an educator, you’re not thinking about an award or some other recognition for your work; you’re really just doing the work because it needs to be done,” Todd says.

College of Aviation

Marking 75 years in aviation

The College of Aviation completed a yearlong celebration of its 75th anniversary at an October gala with hundreds of alumni, donors, University and community leaders, faculty and staff members, and students marking this important milestone together.

The gala featured the induction of the 12th and 13th members of the College of Aviation Hall of Honor—Curtis “Doc” Swanson, WMU associate professor emeritus of aviation sciences, and Clarence “Pappy” VanDeventer, WMU associate professor emeritus of transportation technology. And Albert Glenn, a captain for FedEx Express and member of the Tuskegee Airmen, was presented with this year’s Excellence in Diversity award.

The program also included an official announcement of the Daniel L. Van Dyke Memorial Scholarship and the Duncan Aviation, Inc. Aviation Maintenance Scholarship.

Keynote speaker for the event was Nicole Barrett-Sabourin, a technical specialist in the Air Navigation Bureau of the International Civil Aviation Organization.

Gala guests were presented with “Ascending Higher,” a commemorative book recognizing the college’s long history, and a 75-year coin. Anyone interested in purchasing “Ascending Higher” may do so by contacting the college at (269) 964-9678.
“Back then, you could pick a lot of stocks that could do that”—exceed a 10 percent return rate over time, Mange says. “Now we have to be a lot more selective.”

That excites rather than intimidates Manninen, who estimates that he spent 20 hours researching Amazon’s financial outlook.

“It’s a safe environment to learn about this stuff,” he says. “We can’t do too much damage, but we can wind up making some money for the University. So that’s kind of nice.”

David Mange, a chartered financial analyst, has taught the course for three years. His full-time job is as a vice president and senior research analyst with Greenleaf Trust in Kalamazoo.

**Trading room brings Wall Street to WMU**

A major gift has injected some of Wall Street’s hustle and bustle into the Haworth College of Business.

In the Greenleaf Trust Trading Room, located in the main corridor of Schneider Hall, students experience the excitement of a Wall Street trading floor, including stock prices scrolling across an electronic ticker, Bloomberg and Morningstar terminals providing real-time data on market movements and world news updates on large screens in the front of the room.

“The facility improves student readiness for careers in the financial sector through an enriched classroom experience, and it allows students to heighten their analytical skills,” says Dr. Kay Palan, business college dean. “We are so grateful to Greenleaf Trust for making this space a reality.”

Students participate in hands-on learning in the trading room, using the hardware and software commonly used by finance professionals; analyzing the latest stock quotes; building and testing investment portfolios; comparing currency exchange rates; and scrutinizing company fundamentals.

Interactive market boards outside the room and a stock ticker display raise awareness of real-time business activity for all students, faculty, staff and visitors to the college.

“This space transforms what we are able to do with our students in terms of teaching about the financial markets,” says Dr. Devrim Yaman, chair of the Department of Finance and Commercial Law.

“And with the U.S. Department of Labor predicting employment in investment and related fields will expand 25 percent by 2020, it is critical that we fully educate our students in the wide range of financial assets available for trade and the globalization of securities markets.”

Including the Student Managed Investment Fund, many classes will call the Greenleaf Trust Trading Room home.
1961 - 2014

Dick Pond, BS ’61, was chosen for the WMU Athletic Hall of Fame class of 2014 for his outstanding record in men’s track and field during the 1960-61 season.

AUDREY E. FITZGERALD, BA ’56, MA ’58, has been recognized by Strathmore’s Who’s Who Worldwide for her contributions and achievements in the field of education. Now retired, she was the owner of Reading Learning Lab, a national learning lab focused on reading and student achievement in all subject areas.

CARL WENZ, BBA ’51, is a board member for Porter County (IN) United Way. He is the co-founder and chief financial officer of Green Sense Farms in Portage, IN.

DAVID MATUREN, BBA ’70, MPA ’78, has been elected to the Michigan House of Representatives for the 3rd District, which covers several townships east and south of Kalamazoo.


Larry Massie, BA ’72, MA ’74, has written his 12th book in the Voyages Into Michigan’s Past Series titled “Blue Water, Red Metal & Green Gold: The Color of Michigan’s Past.” Vignettes in the book include stories of shipwrecks, tales about the copper rush and lumberjacks.

EDWARD J. GOLDA, BS ’73, BS ’78, was the first person to be inducted into the Window Film Hall of Fame at the 2014 National Window Film Conference and Tint-Off. He is the owner of Michigan Glass Coatings in Auburn Hills, MI.

Chuck Cory Jr., BBA ’74, recently celebrated the 40th anniversary of his family company, Blissfield Financial Services, based in Blissfield, MI.

JAMES P. KELLY, BS ’74, MA ’77, is a clinical professor of neurosurgery at the University of Colorado School of Medicine and director of the National Intrepid Center of Excellence at Walter Reed National Military Medical Center in Bethesda, MD.

JUDY SNYDER, BS ’74, has co-written the lyrics to a song titled “If I Call A Name At Night,” released by Bono Spirit Award to Dr. Marty Blakey of the University of Chicago.

Jesse Lothamer, MSA ’75, has been elected to the Olivet (MI) College Board of Trustees. He is president and chief executive officer of Lothamer Tax, a company headquartered in Lansing, MI.

DALE SHUGGARS, BBA’75, was elected to the Kalamazoo County Board of Commissioners.

LADISLAV HANKA, BS ’78, MFA ’82, exhibited his three-dimensional artwork titled “Great Wall of Bees: Intelligence of the Bee Hive” at the 2014 Artrage competition in Grand Rapids, MI.

DANIEL MAY, BBA ’81, was elected to the Cedar Rapids, IA school board, an area that covers parts of Cass and St. Joseph counties in southwest Michigan.

MICHAEL REDELL, BS ’10, is the new basketball coach for Belding (MI) High School.

CINDY TOTH, PhD ’10, has earned two awards from the Michigan Art Education Association — the 2014 Educator of the Year award and Higher Education Art Educator of the Year. She is chair of the art education program at Kendall College of Art and Design of Ferris State University.

LAUREN AXT, BS ’11, is a Spanish teacher at Ada (MI) Elementary School and at Thornapple Elementary School in Grand Rapids.

CHRISANNA M. COLLETTA, MS ’11, is the new fitness director at the NASA Exchange, Johnson Space Center in Houston, TX.

COURTNEY PHILLIPS, BS ’12, has been promoted to personal lines account manager for Keyser Insurance Group in its Kalamazoo office.

CHRISTOPHER BOLT, MPA ’13, is the new managing director of road operations for Calhoun and Jackson counties in Michigan.

Oneka Hutcherson, MA ’13, is a first grade teacher at Reeths-Puffer Elementary School in Muskegon, MI.

COLIN KOLKEMA, BS ’13, is a chemistry teacher at Oakridge High School in Muskegon, MI.

BRAD McDougall, BS ‘13, is the head coach of the WMU men’s lacrosse program.

MARY SCHWARTZ, BS ’14, is the new family and consumer science teacher at Helly (MI) High School.

Send submissions to: teresa.ventimiglia@wmich.edu. Include your name (first, middle, last, maiden), degree(s), year(s) graduated and a daytime phone number by which we can reach you. We will publish photos as space permits.
Due to human error in records, alumna Jane M. (Howard) Smith erroneously appeared in the fall edition's “In Memoriam” section. The WMU Magazine is happy to report that Ms. Smith is alive and well.
Tonya Noble became a first generation college student when she enrolled at Western Michigan University in the early 1990s. She chose the electrical engineering program, deciding not to listen to the people who said she couldn't do it.

Today, Noble works at Boeing, leading the execution and delivery of flight simulation and training solutions for the military as the director of strategic training systems, a business that enables military customers to train and perform operational missions with sophisticated training devices.

Out of her 17 years at Boeing, Noble has spent more than 10 years in supervisory or leadership roles.

As a professional, her hard work and determination have earned her prestigious recognition by her peers through honors such as the Outstanding Woman in Technology award at the 2014 National Society of Black Engineers Annual Convention and a Technology All Star award at the 2012 Women of Color Technology Awards Conference. Additionally, Noble was selected as one of 2007’s “Top 40 Under 40” by the St. Louis Business Journal, and was featured in Ebony Magazine as a leader to emulate.

Noble is proud to say that the foundation for her success was formed by her hard work and dedication in the College of Engineering and Applied Sciences at WMU.

“Admittedly, as a first-generation college attendee and graduate, I wasn’t very familiar with my options,” Noble says. “I was always astute in math and science, and I had a strong interest in computers as a kid. It was also my major at Cass Tech, the college prep high school that I attended.”

With the help of her parents and WMU recruiters, Noble decided to major in electrical engineering.

“I remember shortly after declaring my major, I would hear from naysayers telling me that it was one of the hardest engineering majors and I should consider changing to something easier;” Noble says. “I would hear that many engineers who tried it switched. I would hear that engineering is not ideal for women. These opinions made me want to pursue it more, and I’m so glad I did.”

Noble is most proud of graduating with a degree in electrical engineering and from WMU’s Lee Honors College.

“This was the first major goal I set for myself and I achieved all on my own,” she says. “Accomplishing this gave me the reassurance that I really can achieve challenging goals, even when they may seem unachievable initially.”

And she encourages others to stick with it, especially to the young women who may have little representation in their classes.

“Early into the engineering program, I remember being the only female and the only minority in many of my classes,” Noble says. “I often felt intimidated and sometimes isolated.”

She dealt with it by reaching out to professors during office hours and joining engineering organizations to network with others. These activities helped her build confidence, while providing the support she needed to succeed.

Noble also is very thankful to the faculty of the Electrical and Computer Engineering Department, not only for providing a quality education, but for allowing her to remain engaged with the Industrial Advisory Board as an alumna. Noble is also currently serving her second term as a director for the WMU Alumni Association Board of Directors. She enjoys inspiring others to attend WMU, including her sister who also graduated with an engineering degree.

“I spent some of the best years of my life at WMU. I made great friends. I earned my engineering degree. WMU had a huge impact on shaping me to be who I am. So, my continuous involvement with WMU and the Alumni Association board is the least I can do,” says Noble. “I am a lifelong Bronco and envision myself remaining involved with WMU for many years to come.”

Noble also holds a Master of Science in Computer Science from Webster University, and completed a Master of Business Administration from Washington University through the Executive MBA program.

Part of her story can be viewed in “Inspiring Minds: African Americans in Science and Technology,” a permanent exhibit at the Charles H. Wright Museum of African American History in Detroit.
These works were among several art pieces on display in the fall as part of the annual Gwen Frostic School of Art Faculty Exhibition. At left is “In Search of Lost Time, Experiment #2” by Adriane Little, associate professor of art, and photography and intermedia area coordinator. At top right is “A Crow a Day: September 2014” by Karen Bondarchuk, associate professor of art and foundation area coordinator. At bottom right is “Subdivision” by Patrick D. Wilson, assistant professor of sculpture and integrated media, and sculpture area coordinator.