





elcome to the 2015-2016 edition of the UM President's Report. We have chosen the title "Greater Heights" to reflect the talent, the fresh energy, the ambition and the optimism that abound at the University of Montana. We are all here because we believe that education is among the most important functions of our society, and we are all rewarded by giving the next generation opportunities that allow them to be more and to become more. Truly, this is a place that launches lives.

UM began the 2015-2016 academic year with news of several record-breaking achievements. Our outstanding faculty brought in nearly \$83 million in research awards last year - an all-time record for us. The University of Montana Foundation received private support from 14,272 individual gifts in fiscal year 2015, with contributions totaling \$52.6 million. That level of philanthropy was just shy of our all-time high from the previous year. And in August, our campus had a national platform of 1 million households to start the academic year, with an ESPN-televised football game where the Grizzlies defeated the four-time national champion North Dakota State Bison in the final seconds.

Surely future successes await as we look to our strategic plan, "UM 2020: Building a University for the Global Century," to guide our decision-making. This plan, paired with our annual institutional assessment reports, helps gauge our success as we strive toward the ambitious goals we set for ourselves. The following pages illustrate some of our metrics using the heart of UM - our students - with all their studies, their career goals and their dreams.

I believe the next five years present a tremendous opportunity for UM. We have embarked upon a bold journey to be among the nation's most distinctive and effective public universities. We will build from our unique combination of this magical place, the Montana work ethic, our expansive thinking and our inclusive worldview. We will continue to focus on leadership at every turn - among our students, our faculty and our programs. The UM experience transforms our students, UM research changes our lives, and UM graduates are changing the world.

Roya C Engstrom

### **UM Strategic Issues**

- 1. Partnering for Student Success
- 2. Education for the Global Century
- 3. Discovery and Creativity to Serve Montana and the World
- 4. Dynamic Learning Environment
- 5. Planning-Assessment Continuum

### **Core Values**

- 1. Leadership
- 2. Diversity
- 3. Engagement
- 4. Sustainability

For more information about the strategic plan and online academic assessment report, visit umt.edu/plan.

For current University news, visit umt.edu.

Produced by University Relations, the President's Office, the Provost's Office, the Office of the Vice President for Integrated Communications, and Printing & Graphic Services. Printed on recycled paper with eco-friendly inks. Call 406-243-5914 or email cary.shimek@umontana.edu for more information.



M junior Tony Lin spent eight years in the Marines, including three deployments to Afghanistan. When his service ended, he decided to pursue a college degree. He needed to find a campus that would make adjusting to civilian life easier.

"It's not just like changing a job, but your whole social system," Lin says. "You go from your whole life being structured at a 100-mile-per-hour pace, to your life not being as structured anymore and moving a lot slower."

During a cross-country road trip in 2013, Lin, who originally is from Madison, Wisconsin, visited UM. He liked the slower pace and close-knit vibe of the

### 'This campus provides a welcoming environment'

campus community. Today, he is working his way toward a degree in accounting. Along the way, Lin has taken advantage of the UM Veteran's Education and Transition Services Office, which was launched in 2011 to provide veterans with the tools and

opportunities they need to succeed at the college level.

"The VETS Office gives me a good way to network with other vets, to provide that sense of camaraderie that you get in the military but not as much with civilian life," Lin says.

Around 5 percent of UM students are veterans, and the VETS Office does everything from helping them maximize their VA benefits to providing computers they can use to complete homework assignments.

Earlier this year, the University was recognized for its efforts to support veterans with a designation as a Purple Heart University. UM is among a handful of select universities to receive the honor and the only one in the Northwest.

"This campus provides a welcoming environment for our veterans," says Shawn Grove, VETS Office director. "We work closely with our students today to ensure future veterans have a place they can be successful."

**Undergraduate Degrees Awarded** 2015 STATUS: 2,089; 2020 TARGET: 2,100



#### **Major Gift Bolsters** Law School

support three areas: consumer law and

### **Athletes Benefit** From New Center

UM's new Student-Athlete Academic Center opened its doors in September, offering academic support to all of Montana's 300-plus studentathletes. Those students already posted an average springsemester GPA of 3.14, with 10 of the athletic department's 13 programs earning team GPAs of 3.0 or better.

### **Fundraising Posts Strong Year**

UM logged another remarkable fundraising year in FY2015 with private support totaling \$52.6 individual gifts. For the 2015-2016 to UM students, an increase of \$800,000 in scholarship dollars in the past two years. Learn more at http://



he low-lying marshes of Vietnam's Mekong Delta don't seem to have much in common with the high plains and towering mountain ranges of Montana. But as UM graduate student Shanti Johnson learned, people in both regions should be concerned about increasing soil salinity.

"It makes it a lot harder to grow the crops that many living in both places depend on economically," says Johnson, who is pursuing her master's degree in environmental

### 'The Vietnam program offers them an opportunity to test themselves'

science and natural resource journalism. "Both Vietnam and Montana face issues that will take a lot of creativity and thinking outside the box to come up with solutions that actually work and that appeal to the masses."

Johnson explored the effects of increasing salinity and the many other consequences of climate change the two regions share during a 24-day studyabroad experience in Vietnam, a joint program coordinated by UM's Maureen and Mike Mansfield Center, College of Forestry and Conservation, and Environmental Studies Program. (The facing image shows Johnson with a Mansfield statue.)

In its sixth year, the global climate change exchange program with Can Tho University is open to students across all majors seeking to research issues dealing with natural resources, climate change, sustainable agriculture and rural development in a global context. Students spend winter session focusing on the climate change impacts and adaptations of Vietnam, as well as its culture, ecology, economy and history.

"As UM prepares students for professions in the global economy, the Vietnam program offers them an opportunity to test themselves under the guidance and expertise of Nicky Phear and Dan Spencer, the educators who lead the exchange," says Deena Mansour, Mansfield Center associate director. "Exploring monumental questions of our time while adapting to new languages, cultures and climates pushes students out of their comfort zones and into the gratifying realization that their UM experience has positioned them for future success."

> **Global Leadership Initiative Enrollment** 2015 STATUS: 468; 2020 TARGET: 800



### **Conference Connects** Asia, Montana

Leading experts, government officials, business leaders and civic officials from Montana, the U.S. and Asia convened at UM in April. Individuals such as Norman Bay, chairman of the Federal Energy Regulatory Commission (left), discussed issues surrounding the future of energy and how it shapes our world during the Mansfield Center's "Asia-Montana Energy Summit."

### **Peace Corps Ranking Jumps**

UM was named the No. 6 medium-sized university for producing Peace Corps volunteers in 2015, making a big jump up from its 2014 ranking at No. 12. Since 1961, 832 UM alumni have served in the Peace Corps.

### Students Learn **Hindi Language**

UM's South & Southeast Asian Studies program was awarded a Fulbright instructor to teach Mishra, a native Hindi speaker, is teaching the two-course sequence. UM offers 10 modern and classical

# DISCOVERY AND CREATIVITY

TO SERVE MONTANA AND THE WORLD



o make a big impact on the world, Reuben Darlington actually has to think small.

A UM graduate student, Darlington is researching how to further miniaturize an instrument called the iSAMI, a device that affordably, accurately and efficiently measures ocean acidity.

"Right now, the instruments are designed to be deployed for a year, but they're big," says Darlington, who works for Missoula's Sunburst Sensors, a company born from UM research. "We want to make them small and inexpensive enough that they

### 'They topped competition from world-class scientists across the globe'

can be deployed on non-recoverable drifters, so researchers can toss them out in the ocean and get satellite data back. You'll be getting ocean acidification data back from some of the most remote places on Earth."

In July, two of Sunburst's devices took home a pair of \$750,000 grand prizes - one for affordability and one for accuracy - during the \$2 million Wendy Schmidt Ocean Health XPRIZE competition. The competition challenged teams of engineers, scientists and innovators worldwide to create a precise pH sensor to measure ocean chemistry.

"With this award, we will have more resources to bring these new devices to market," says UM chemistry Professor Mike DeGrandpre, who launched the company in 1999. "This new, reliable and less-expensive technology can help researchers gain a better understanding of ocean acidification and its consequences."

Sunburst Sensors is just one of several companies developed from UM-based research and nurtured at UM business incubator MonTEC. Others include Rivertop Renewables, which develops eco-friendly detergents and corrosion inhibitors, and Agile Data Solutions, which provides data collection, review and production tools and services.

"Sunburst is a great example of how UM research can impact not just Missoula or Montana, but the world," says Joe Fanguy, UM director of technology transfer. "Their devices to measure ocean pH began with research at a university in a landlocked state, but they still topped competition from world-class scientists across the globe."

**Volume of Grant and Contract Expenditures** 2015 STATUS: \$64.6M; 2020 TARGET: \$100M



#### **Major Grant to Study Evolution of Life**

A UM team led by biology Professor Frank Rosenzweig won a five-year, \$8.2 million NASA grant to study how life evolved and became more complex on Earth. NASA officials believe that a better understanding of how life arises, propagates and becomes increasingly complex will help them find and recognize it elsewhere in the universe.

### NFL, GE Sponsor **UM Researchers**

to receive \$500,000 from the

#### **UM Research Boasts Award Record**

The research enterprise at UM received nearly \$83 million in research awards during fiscal year 2015 - an all-time record for the institution. The total of \$82,964,694 surpassed the previous awards record of \$71 million set in 2009. UM research expenditures also were up \$58.3 million in fiscal year 2014 to \$64.6 million in 2015.

# DYNAMIC LEARNING

ENVIRONMENT

rowing up in Browning, Destini Vaile recalls her elders passing down traditional Blackfeet star stories about how the constellations were formed. Her favorite is the story of the Seven Brothers, who were the children of the Sun, their father, and the Moon, their mother. They helped the Sun kill the Moon's friend, so she chased them across the Earth and into the sky. The brothers tossed back objects, creating the Earth's oceans, canyons and other natural formations. The Seven Brothers form what many people today call the Big

### 'It's easy to form a connection with the stars'

Dipper, which the Blackfeet used to tell hourly and seasonal time.

"The sky is so unobstructed and wide open in Blackfeet lands," says Vaile, a senior pursuing dual degrees in

physics and creative writing. "It's easy to form a connection with the stars, which is probably why they are so important to Blackfeet culture."

Now, she's using this part of her cultural heritage to design presentations showcasing the rich tradition of Montana tribal astronomy in UM's Star Gazing Room, located in the Payne Family Native American Center. The planetarium, which opened in 2014, serves as both a dynamic learning facility for physics and astronomy students and as a way to provide educational outreach to the broader community.

The Star Gazing Room is an example of the interactive learning tools integrated into the curriculum of UM's growing physics and astronomy program. Another is Project MINERVA, a dedicated observatory that engages undergraduates in the search for Earth-like planets orbiting nearby stars. UM, through a grant funded by NASA, owns and operates one of four telescopes in the MINERVA array, located in Arizona. Students operate the telescope remotely and generate original, publishable research from their observations.

"Physics and astronomy undergrads are fully engaged in exoplanet science at UM," says Associate Professor Nate McCrady, who supervises the students operating the telescope. "MINERVA offers our students the opportunity to do cutting-edge science and to work directly with research colleagues at our partner institutions."

**Montana Digital Academy Enrollment** 2015 STATUS: 7,111; 2020 TARGET: 15,000



### **Gift Boosts** Liberal Arts Building

Thanks to gifts from UM alumnus Dennis Eck and his wife, Gretchen, UM's Liberal Arts Building now has some of the most advanced technology on campus. The Ecks' contributions were used to create a technology corridor of "smart classrooms" in the building. The upgrades began during summer 2015.

### **Leadership Center Rising on Campus**

on the Gilkey Center for Executive Education. The center will house the School of Business as well as two executive classrooms. several conference rooms and a 150-person auditorium. The building opens in spring 2016.

### 2017 Opening Planned for Missoula College

Building continues at the new Missoula College site on East Broadway. The college is the two-year unit of UM, and its new 109,500-square-foot, four-story building will house 30 Missoula College programs and serve more than 2,500 students when it opens in fall 2017.

# PLANNING-ASSESSMENT

CONTINUUM

'It helped me figure out what would work best for me'

uring her college career, UM senior **Jordan Frotz** has volunteered more than 300 hours helping students throughout Missoula. An education major, she has spent most of those hours either tutoring local elementary schoolchildren in reading and math or lending a hand at the Missoula Flagship afterschool program.

Frotz discovered both of these opportunities through UM's Office for Civic Engagement. Her involvement with the office not only fostered her sense of civic responsibility, it also helped her determine how best to shape her future career in elementary education.

"It's given me an avenue to get into volunteer positions and to meet teachers and principals and experience different teaching styles," Frotz says. "I've now worked

with three different teachers and experienced three different styles. It helped me figure out what would work best for me."

So far in 2015, 3,070 UM students participated in service learning, contributing 204,995 volunteer hours to the campus and Missoula communities. Those numbers have doubled during the past four years.

Tracking student service hours is just one of the data points UM uses to measure its progress and identify its successes and opportunities for improvement as part of the Planning-Assessment Continuum. The nearly 140 metrics currently being tracked by the Assessment Committee are wide-ranging and include everything from graduation and retention rates and research volume to facilities-related data, instructional expenditures and progress on the University's climate commitment.

**UM Foundation Endowment** 

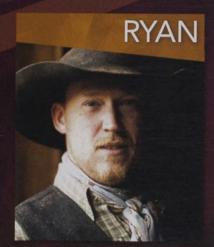
2015 STATUS: \$166M; 2020 TARGET: \$220M

# STRATEGIC ACHIEVEMENT REPORT CARD

MEASURE	2015 <b>STATUS*</b>	2020 TARGET
PARTNERING FOR STUDENT SUCCESS Six-year Graduation Rate Annual Retention Rate Average High School GPA of Entering Freshmen Undergraduate Degrees Awarded Missoula College Degrees Awarded Persistence Rate	50% (+2%) 73% (↔0%) 3.31 (+.04) 2,089 (+22) 506 (+38) 87.7% (+.1%)	60% 83% 3.50 2,100 500 70%
EDUCATION FOR THE GLOBAL CENTURY Graduate/Advanced Degrees Awarded Study Abroad Experiences Participation in Service Learning Underrepresented Student Body Ethnic Groups Global Leadership Initiative Enrollment International Students	850 (+ 51) 383 (+ 21) 3,070 (+ 79) 12.1% (+.6%) 467 (+18) 627 (+98)	850 600 2,000 10% 800 600
DISCOVERY AND CREATIVITY Volume of Grant and Contract Expenditures Peer-reviewed Publications (ISI Citations) Patent Applications, Invention Disclosures, License Agreements	\$64.6M (+\$6.3M) 600 (+68) 42 (+11)	\$100M 750 40
DYNAMIC LEARNING ENVIRONMENT  Dual-credit Enrollment Student:Faculty Ratio Online Student Credit Hours Montana Digital Academy Enrollment	468 (+27) 18:1 (↔0) 28,116 (+997) 7,111 (+773)	18:1 15,000
PLANNING-ASSESSMENT CONTINUUM Instructional Expenditures UM Foundation Endowment  *Most recent fiscal/academic year data	51% (+1.3%) \$166M (+\$24.4M)	50% \$220M

↑ improved from last year, ↓ declined, ↔ no change

# FACES OF STUDENT SUCCESS



Ryan Bell earned his master's in nonfiction creative writing from UM in 2014. In 2015, he was awarded a coveted Fulbright-National Geographic Digital Storytelling Fellowship. Bell serves as one of five Fellows, selected out of a pool of more than 400 applicants, who undertakes an in-depth research project on a globally relevant issue, comparing and contrasting how it is experienced across borders. His project, "Comrade Cowboys," examines how Russia and Kazakhstan are rebuilding their cattle industries in the wake of the Soviet Union's collapse. In September 2015, Bell started traveling through rural Russia and Kazakhstan, documenting the resurgence of a pastoral way of life that was nearly decimated under the Soviet Union.

### RACHEL



Rachel Dickson is UM's 16th Goldwater Scholar - the top national award for undergraduate research in science, math and engineering. As a Junior Scholar one of just 260 - Dickson is entitled to two years of funding up to \$7,500 per year for tuition, fees, books, and room and board. Dickson, a sophomore from Missoula, majors in biology and environmental studies. Her special research focus is on native pollinators. Dickson will use the scholarship to conduct research in Argentina. While there, she will examine how the invasive nectar-robbing bumblebee is disrupting the relationship between hummingbirds and native flowers. Dickson aspires to teach environmental biology at the university level. Outside the classroom she is involved with organizaions such as the Blue Skies Campaign.

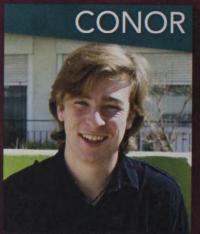
### PEREGRINE



Peregrine Frissell is a senior pursuing a journalism degree. The Polson native spent summer 2015 working in Nepal for the Nepali Times in Kathmandu. He arrived after the earthquake and covered Nepal's recovery process. He helped tell an important story about how everything was not destroyed by the quake in a country so reliant on tourism. After graduation, Frissell aims to work as a reporter. He is particularly interested in investigative journalism but also is pondering studying law. In addition to being a UM honors college student. Frissell is a news editor for the Montana Kaimin student newspaper, a member of the Global Leadership Initiative and an Eagle Scout.

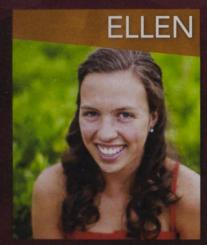


Montana Hodges is a doctoral candidate from Sloughhouse. California, who studies paleontology through UM's interdisciplinary studies program. After publishing a story on dinosaur bones and earning a master's from UM in 2012, she decided she wanted to do more than write about the subject, so she applied to be a doctoral student under geosciences Professor George Stanley, Now her scientific work in the field is being recognized. She and Stanley recently found the fossil record of the earliest North American coral species that reappeared after the Triassic-Jurassic mass extinction event. Her work was featured on the cover of the October 2015 issue of GSA Today: A Publication of the Geological Society of America. She aims to land a postdoctorate position as a researcher in the same field



Conor Hogan, a fourth-year student from Portland, Oregon, is pursuing a double major in creative writing and Spanish and a double minor in Latin American studies and international development. During fall semester 2015, Hogan studied philosophy and literature in Buenos Aires, Argentina. While abroad, he also volunteered for a homeless-outreach organization called Fundacion Si. Once a week he walked the city with a small group to pass out food and coffee to people sleeping on the streets, establishing a human connection with people who often feel overlooked or intentionally ignored. He blogged about his experiences. Before leaving Missoula for Argentina, Hogan was vice president of the UM Jesters club rugby team. He continued to play on a team in Buenos Aires. After graduation Hogan has his eye on the Peace Corps.

## FACES OF STUDENT SUCCESS

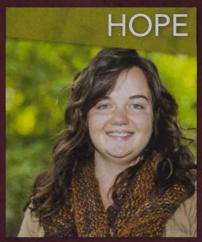


Ellen Ipsen, a junior studying history, attended the Fulbright UK Summer Institute for Undergraduates, a program that fosters relations between the United States and the United Kingdom and teaches American students about the United Kingdom, During the summer the Missoula native chose the Fulbright Institute at the University of Bristol to study "Slavery and the Atlantic Heritage." While abroad she learned more about the African, European and American perspectives on slavery and witnessed the impact of the slave trade on modern British culture. During fall semester 2015, Ipsen studied Dutch culture. art history and the history of Japan at Leiden University in the Netherlands. In addition to being involved with UNICEF International, UM Advocates and UM Cycling, she enjoys running, backpacking, reading and music. After graduation she is looking to attend law school or become a history professor.

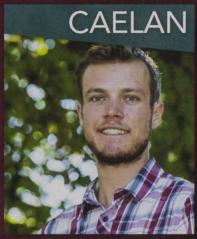
### **ROLAND**



Roland Jackson is a second-year creative writing master's student who left his teaching and advising job at Madison College in Madison. Wisconsin, to return to school to hone his writing. Jackson earned the Timothy O'Leary and Michelle Cardinal Scholarship in Prose, which aims to bring creative people to UM. Jackson currently writes shortform fiction. He aims to complete 10 well-done stories so that he can compile a short-story collection. His favorite authors include Raymond Carver, James Baldwin and Edward P. Jones. He is passionate about literacy and in the past ran an antirecidivism program to help people stay away from crime. In addition to his studies. Jackson teaches undergraduates writing and creative writing fiction. Off campus, he plays competitive soccer and is an aspiring bow hunter.



Hope Radford, a senior from Colorado Springs, Colorado, won a second \$5,000 Udall Scholarship, which supports her studies for the 2015-2016 academic year. She is the 38th UM student to earn this prestigious scholarship. Radford is majoring in resource conservation with minors in climate change studies, environmental studies and international development studies. She spent spring term 2015 studying sustainable agriculture in Chile and Argentina and plans a career in sustainable international agriculture. Radford works for UM Dining as its student sustainability coordinator and piloted a campus farmers market, through which students can use their meal plans to buy fresh, local produce.



Caelan Simeone, a senior majoring in geosciences, is from Bozeman. As a Davidson Honors College student with an interest in geomorphology and how who shines on the court and in water is affected by environmental and human factors, Simeone works with UM Professor Andrew Wilcox to study how a Missoula stretch of the Clark Fork River is affected by groundwater. As a junior he studied abroad in Chile. While immersed in Chile's diverse natural landscapes, he gained a deeper Richardson earned Academic Allperspective and understanding of how changes in landscapes affect inhabitants. Simeone came to UM as a Presidential Leadership Scholar and since has earned several other academic scholarships. When not researching in the field or dedicated -to his classroom studies. Simeone loves to climb, ski and backpack. He also volunteers as a study abroad ambassador for the Office of International Programs and serves as a student at large for the Kless Revolving Energy Loan Fund committee.



Capri Richardson, a senior from Cheltenham, Maryland, is an exceptional student-athlete the classroom. Richardson, a Griz volleyball player, is a double major in psychology and dance. When Richardson isn't - as her coach put it - "bringing immense athleticism to the court," she is doing modern, hip-hop or jazz dance. In 2014, Big Sky Conference honors, and she also serves as the president of the UM Black Student Union. As a student-athlete, Richardson has participated in many community service activities. Among her favorites were helping build houses for Habitat for Humanity and helping the Missoula Food Bank prepare for Thanksgiving. After graduation Richardson aims to play volleyball overseas for one year and gain internship experience in clinical psychology.

# **GREATER HEIGHTS**

PRESIDENT'S REPORT 2015 - 2016



Cover: UM geography students greet the dawn from a hilltop in Yellowstone National Park as they watch wolves and grizzly bears compete for a bison carcass. The students used Yellowstone as an outdoor classroom during a course on mountain geography. (Photo by Susie Graetz)