June 2020 news releases

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June 2020 News

06/30/2020 - UM Big Sky Poll: Montanans Share Favored Political Candidates - Sara Rinfret

06/26/2020 - UM Family Medicine Residency Program to Graduate 10 New Family Physicians - Nathan Gilliam

06/26/2020 - UM Information Technology Launches Program for Distance Learning - Zach Rossmiller

06/25/2020 - UM Alumna Wins Competitive U.S. Critical Language Scholarship - Clint Walker

06/24/2020 - UM Researcher Helps Reveal Changes in Water of Canadian Arctic - Michael DeGrandpre

06/23/2020 - UM Signs Agreement with Institute in Bhutan - Sarah Halvorson

06/16/2020 - UM Law Professor Receives Fulbright Scholar Award to Study Indigenous Justice - Andi Armstrong

06/15/2020 - Montana Museum of Art and Culture Opens Student-Curated Exhibition - Rafael Chacón

06/15/2020 - UM Big Sky Poll: Montanans Identify Barriers, Opportunities for Civic Engagement - Dr. Sara Rinfret

06/15/2020 - National Search Yields New UM Forestry Dean - Paula Short

06/12/2020 - UM Presents Honorary Doctorate Via Virtual Ceremony - UM Office of the President
MISSOULA - The University of Montana

Big Sky Poll recently asked 517 registered Montana voters, if the election were held today, how would they vote? In a series of head-to-head matchups, participants were asked to pick their preferred candidate.

U.S. President

- 52% favor President Trump. (These results indicate a 4% decrease in support for President Trump from a February 2020 poll.)
- 38% favor former Vice President Joe Biden.
- 10% do not know.

U.S. Senate

- 47% favor Gov. Steve Bullock.
UM Big Sky Poll: Montanans Share Favored Political Candidates - UM News - University Of Montana

- 43% Sen. Steve Daines.
- 10% do not know.

**U.S. House of Representatives**

- 45% support Montana State Auditor Matt Rosendale.
- 37% favor Kathleen Williams.
- 18% do not know.

**MT Governor**

- 36% favor Lt. Gov. Mike Cooney.
- 18% do not know.

“Many voters are still undecided for key races across the state, indicating tough races this November,” said Sara Rinfret, co-director of UM’s Big Sky Poll.

Rinfret also is a professor and chair of UM’s Department of Public Administration and Policy. She and Justin Angle, associate professor of marketing in UM’s College of Business, co-direct the poll, which provides experiential learning opportunities at UM and is a fellowship opportunity for students in UM’s Master of Public Administration, law and Master of Science in Business Analytics degree programs.

The UM Big Sky Poll was conducted online from June 17 to 26, with 517 randomly selected registered Montana voters. The poll has a margin of error of +/- 4.31 percentage points at a 95% confidence level. Survey results were weighted by geography, gender and education level to more accurately reflect characteristics of the registered voter population in Montana.

The survey was commissioned with support from UM’s Max S. Baucus Institute, housed in the University’s Department of Public Administration and Policy.

Use of findings require attribution to UM Big Sky Poll. **Full results from this poll are available on the UM Big Sky Poll website:** [https://www.umt.edu/bigskypoll/Polls/default.php](https://www.umt.edu/bigskypoll/Polls/default.php). More information on the Big Sky Poll is online at [http://www.umt.edu/bigskypoll/](http://www.umt.edu/bigskypoll/).

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**Contact:** Sara Rinfret, professor and chair, UM Department of Public Administration and Policy, 406-243-4702, sara.rinfret@umontana.edu.
MISSOULA – Medically underserved areas in Montana, Alaska, Idaho will gain 10 new family medicine physicians when the University of Montana’s Family Medicine Residency of Western Montana graduates its fifth class on Sunday, June 28. Seven of the graduates are planning to practice in Montana.

Montana continues to experience physician shortages, with 52 out of 56
counties considered “underserved,” and 11 counties typically having no physicians of any kind. When FMRWM accepted it first class in 2013, Montana ranked 50th in the nation for graduate medical education positions per capita. The creation of FMRWM has helped move the state to 46th for resident physicians per capita and substantially increased the pipeline for communities to recruit doctors.

“We are proud to congratulate our graduates and welcome them as new family physician colleagues,” said Dr. Robert Stenger, FMRWM program director. “As in prior years, about three-quarters of FMRWM graduates remain in practice in Montana. This year’s graduates will enter practice in Browning, Ronan, Kalispell and Missoula, as well as rural communities in Alaska and Idaho.”

The FMRWM class of 2020 with future practice sites are: Katie Camarata, DO (Cascade, ID); Chris Hallberg, MD (Nome, AK and Missoula); Amanda Hartman, MD (TBD); Jonathon James, DO (Missoula); Charlie Jose, MD (Ketchikan, AK); Alyssa Lautenschlager, MD (Browning); Amy Richmond, MD (Missoula); Isaac Billings, DO (Ronan); Brandon Bilyeu, DO (TBD); and Stella Hutchins, MD (Kalispell).

Based in Missoula and Kalispell, FMRWM is sponsored by UM and affiliated with the University of Washington Family Medicine Residency Network. The program is accredited by the Accreditation Council for Graduate Medical Education. Residents are involved in continuity clinic training at Partnership Health Center in Missoula and Flathead Community Health Center in Kalispell.

“A key initiative at UM across the training of a contemporary healthcare workforce is interprofessional education,” said Reed Humphrey, College of Health dean, UM acting provost and head of UM Health and Medicine. “The family medicine residency program has been invaluable to realizing this initiative. We are pleased to be able to sponsor and work closely with the residency program.”
FMRWM works with an extensive rural training network of 16 sites: Barrett Hospital and HealthCare, Dillon; Blackfeet Community Hospital, Browning; Central Montana Medical Center, Lewistown; Clark Fork Valley Hospital, Plains; Community Hospital of Anaconda, Anaconda; Deer Lodge Medical Center, Deer Lodge; Eureka Healthcare-North Valley Hospital, Eureka; Madison Valley Medical Center, Ennis; Marcus Daly Memorial Hospital, Hamilton; Northwest Community Health Center, Libby; Providence St. Joseph Medical Center, Polson; Ruby Valley Medical Center, Sheridan; St. Luke Community Hospital, Ronan; St. James Medical Group & Southwest Montana Community Health Center, Butte; Stoneybrook Medicine, Stevensville; and Tribal Health of the Confederated Salish and Kootenai Tribes, St. Ignatius.

For more information visit: http://health.umt.edu/fmrwm/

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**Contact:** Nathan Gilliam, program coordinator, UM Family Medicine Residency of Western Montana, 406-258-4451, nathan.gilliam@mso.umt.edu.
MISSOULA – When Montana Gov. Steve Bullock issued a “Stay-at-Home” order this spring due to the COVID-19 pandemic, students were unable to access the University of Montana’s traditional computer laboratories and academic- and research-focused hardware and software.
Zach Rossmiller, UM executive director of cyberinfrastructure, brought together Information Technology staff from across campus to investigate solutions to enable students to access these critical technology resources. The effort resulted in the Advancing Student Success through Innovative Scalable Technology (ASSIST) project.

“This was a collaborative effort from many IT leaders across campus,” Rossmiller said. “We knew that some students would not have access to certain software resources generally available in our computer labs. The ASSIST project provides a way for students to continue their studies and projects.”

Taking advantage of existing hardware, ASSIST is architecting a virtual lab environment for students to use remotely. It will provide UM an opportunity to pilot new technologies (i.e. virtual desktop instances or VDI) that allow students to use specialized software with the same performance and experience as working physically in a computer lab.

The performance of graphic-intensive software, such as ArcGIS and AutoCAD, can struggle in this type of environment. So for the project, UM IT systems administrators Antony Jo and Jon Robinson identified solutions to enhance the student experience by including additional graphics processing units, funded through a grant from the Student Computer Fee Committee.

UM Chief Information Officer Renae Scott was instrumental in obtaining additional funding for this project, and she is pleased with the effort.

“Being able to provide virtual computer labs for students during remote teaching, learning and working was vital for the students’ success and completion of their coursework,” Scott said. “I am thrilled that we were able to obtain funding to meet the needs of our students.”

Shawn Clouse, a professor in UM’s College of Business, worked with IT on the project and offers several courses that immediately benefited from ASSIST. His Business Application Development course (BMIS 365) uses Microsoft
Visual Studio to develop programs in Visual Basic, and his Project Management course (BMIS 476) uses Microsoft Project to design, develop and implement software solutions for area businesses and nonprofits.

Many students had used the Gallagher and Mansfield computer labs to conduct their projects and complete homework, and they found it difficult to finish the two classes when on-campus labs closed due to the COVID-19 pandemic. ASSIST provided an online environment for students to complete their coursework.

“Having this resource available at UM was extremely valuable for my students,” Clouse said. “It was easy to use, and many of my students used the virtual labs to complete their work in the two courses. Having a traditional computer lab available remotely through the power of virtualization was very impactful to me and my students.

“I want to say a special thanks to UM IT employees from across campus, Antony Jo, Zach Rossmiller, Jon Robinson, Thomas Crane, Wesley Samson and Renae Scott, for making the virtual labs possible.”

Rossmiller will evaluate the ASSIST project through usage statistics and student feedback surveys.

“ASSIST is an ongoing project and has the potential to revolutionize the traditional computer lab,” he said.

Contact: Zach Rossmiller, UM executive director of cyberinfrastructure, 406-243-6556, zachary.rossmiller@umontana.edu.
MISSOULA – The U.S. Department of State has awarded recent University of Montana graduate Courtney Bentz a highly competitive Critical Language Scholarship to study Russian this summer.

Bentz, from Billings, graduated this spring with a degree in Russian and a minor in European studies. She hopes to pursue a graduate degree and use her passion for the Russian language to help in diplomatic exchanges.

The U.S. Department of State sponsors and oversees the CLS Program as part of a larger U.S. government effort to expand the number
of Americans studying and mastering foreign languages that are critical to our national security and economic prosperity. Worth around $5,000 to $7,000 the scholarship typically covers airfare, tuition and all living expenses, but because the U.S. Department of State has canceled all in-person activities and travel due to the COVID-19 pandemic, Bentz will continue her studies virtually.

“The aspect of CLS I was most excited about initially was the homestay with a Russian family, but now with the institutes being virtual, I’m definitely most excited to have a language partner,” Bentz said. “I love connecting with other Russian speakers, and the opportunity to do so with a native speaker will be incredibly beneficial to my understanding of Russian, both as a language and as a culture.”

Bentz said she realized her interest in working with diverse peoples in Central Asian post-Soviet republics while studying abroad in Bishkek, Kyrgyzstan, in summer 2018 on a Gilman Scholarship. The $3,000 scholarship allowed her to study advanced Russian at the London School of Languages and Cultures, as well as meet with Fulbright Commission staff and Department of State representatives.

“A CLS provides me the opportunity to continue my language studies, with the virtual institute encouraging me to take a creative and flexible approach to improving my Russian outside of a formal class setting,” Bentz said.

The CLS program seeks participants with diverse interests and a wide range of fields of study and career paths, with the purpose of representing the full diversity of the U.S. Participants are selected based on their commitment to language learning and plans to apply their language skills to their future academic or professional pursuits. Read more on the Critical Language Scholarship website at https://clscholarship.org/.
Contact: Clint Walker, UM associate professor of Russian, 406-243-2501, clint.walker@mso.umt.edu.
MISSOULA – Melting of Arctic ice due to climate change has exposed more sea surface to an atmosphere with higher concentrations of carbon dioxide. Scientists have long suspected this trend would raise CO₂ in Arctic Ocean water.

Now University of Montana researcher
Michael DeGrandpre and his patented sensors have helped an international team determine that, indeed, CO₂ levels are rising in water across wide swaths of the Arctic Ocean’s Canada Basin. However, some areas have exhibited slower increases, suggesting other processes – such as biological uptake of CO₂ – have counteracted expected increases.

The work was published this month in the journal Nature Climate Change. The study is online at https://www.nature.com/articles/s41558-020-0784-2.

DeGrandpre is a UM chemistry professor, and in 2015 he and the company he founded, Sunburst Sensors, won two coveted XPRIZE awards for developing inexpensive, durable sensors to better understand ocean acidification. Sunburst Sensor technology also was used in this recent study for a CO₂ measurement system placed on board a Canadian icebreaker, the CCGS Louis S. St. Laurent.

DeGrandpre said ocean measurements are taken while the icebreaker is underway, sometimes crashing through ice one to two meters thick. DeGrandpre and UM research associate Cory Beatty have participated in these research cruises since 2012 with support from the National Science Foundation Office of Polar Programs.

"Because of the inaccessibility of the Arctic and the typically harsh work conditions, we really need a world-class icebreaker to access these areas," DeGrandpre said. "It also has given us a high-quality, consistent dataset, which really helped with this latest study. Most Arctic CO₂ datasets are from infrequent cruises that do not visit the same locations year to year."

He said the new study combines sporadic data dating back to
1994 with the more-frequent data they have collected since 2012. DeGrandpre said their consistent dataset will only improve, as NSF recently awarded them an $890,000 grant to continue the icebreaker project through 2023.

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**Contact:** Michael DeGrandpre, UM chemistry professor, 406-243-4118, michael.degrandpre@umontana.edu.
UM Signs Agreement with Institute in Bhutan

June 23, 2020

MISSOULA – The University of Montana has renewed a memorandum of understanding with the Ugyen Wangchuck Institute for Conservation and Environmental Research in Bhutan, a Buddhist kingdom in the eastern Himalayas known for its monasteries, fortresses and dramatic
UM Signs Agreement with Institute in Bhutan - UM News - University Of Montana

UWICER is housed in Bhutan's Ministry of Agriculture and Forests Department of Forest and Parks Service and is the country’s premier institute for forest and conservation research.

Reinforcing UM and UWICER’s mutual relationships, the memorandum confirms a formal commitment between the two organizations to work together to advance research and shared academic objectives for the next five years. It includes exchanges for faculty, researchers and students; capacity building of UWICER’s faculty; organizing joint research projects; and exchanging data, information and publications.

“Bhutan has a whole new procedure for reviewing MOUs signed with external entities. This went all the way to the top level of the Bhutanese Cabinet,” said Sarah J. Halvorson, a professor of geography in the W.A. Franke College of Forestry and Conservation who was instrumental with the memorandum agreement. “That would be like our Congress or Presidential Cabinet reviewing a MOU with a university. It was a pretty involved process on the Bhutanese side. This MOU really represents a strong commitment to scientific exchange and collaboration.”

UWICER and the University have a long history of partnership, and this memorandum renews a previous five-year agreement that expired in 2016. Collaboration between UM and Bhutan began in the early 2000s.

In 2002, a UM student study-abroad program sponsored by the Environmental Studies program and accompanied by Halvorson went to Bhutan. A few years later, forestry and conservation college Professors Jill Belsky and Steve Siebert, who specialize in international conservation and development, were invited by the Bhutanese government to advise on the establishment of an institute that would eventually become UWICER. For a month in 2006, they assisted with participatory stakeholder meetings in the country, involving a diverse range of Bhutanese educators, scientists and members of the business and NGO worlds, to identify topics and pedagogy relevant to the particular path of development and conservation favored in Bhutan.

These experiences and others
kicked off nearly two decades of graduate education, research, student study groups and professional connections between UM and Bhutan – arguably one of the country’s strongest connections with a United States university.

“It's really exciting,” Halvorson said. “Several graduate students who came to UM had affiliations with UWICER. Connections with these individuals have strengthened UM faculty members’ connections with this research organization. The Bhutanese, after 10 to 20 years, have greatly enhanced their own internal capacity for wildlife, rural and environmental change and other topics related to Bhutan's conservation concerns by these collaborations. They return to Bhutan to work as conservation leaders in their country.

“The top tiger biologist in Bhutan, for example, did his doctoral degree at UM in wildlife biology,” she said. “He went back to Bhutan and has since started a tiger conservation center. It's a legacy of training and trust and high level of expectations and just outstanding faculty mentorship.”

Several UM graduate students also have done field research in Bhutan. And Halvorson says the next push is to hopefully create more opportunities for undergraduate interactions and exchange.

“The partnership between UM and UWICER has been successful because it’s based on close relationships built over the years between faculty at both institutions, as well as similar values and mountain landscapes and livelihoods, which make the Bhutanese feel at home while studying at UM,” Belsky said. “In particular, both institutions are committed to identifying and supporting land uses and livelihoods that nurture both the people and the particular places of Bhutan and Montana.”

“This MOU is with UWICER, but there are other interactions going on,” Halvorson said. “The MOU helps to strengthen our collaborations, and they’re expansive in nature.”

The Bhutanese government and scientists also have sought the expertise of UM’s Wildlife Biology faculty, inviting at least six faculty members to teach research techniques and advise wildlife and fish conservation projects in Bhutan.
UM wildlife biology Professor Scott Mills, who currently serves on the scientific advisory board of the Washington, D.C.-based Bhutan Foundation, has mentored Bhutanese master’s and doctoral students studying snow leopards and tigers.

While living for six months at UWICER in 2010, Mills taught conservation biology and assembled a hands-on wildlife research training workshop that included both Bhutanese and UM wildlife biology researchers and students.

“It has been easy to build powerful Bhutan-UM teams to foster wildlife conservation,” Mills said, “because we share a deep appreciation for mountainous environments that include charismatic wildlife in remote places.”

Bhutanese graduate students also have studied journalism and music at UM. Halvorson said the most famous folk musician in Bhutan, Goen Tshering, the vice principal and program coordinator of Bhutan's Royal Academy of Performing Arts, did his master’s at UM in music.

Recently, UM Professor Emeritus Steve Running helped advise the country of Bhutan on climate science and how to approach analysis of the country’s vast climate science dataset.

“The national philosophy of Bhutan is to maximize gross national happiness rather than economic growth,” Running said. “I think many, maybe most, Montanans live to a similar philosophy. Few of us are getting rich, but we stay for the happiness!”

Donna Anderson, executive director of UM's Global Engagement Office, said UM’s partnership with UWICER is a beautiful example of a long-lasting, fruitful and successful international collaboration.

“When I talk with faculty like Sarah Halvorson, it is clear that the personal connections and relationships between UM and UWICER run deep,” Anderson said. “Some of those relationships are now 20 years old and still going strong. The joint research achieved over the years is so significant to Bhutan as a country, it is no wonder the highest level of the Bhutanese government approved the continuation of this important and special relationship with UM.”

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Contact: Sarah Halvorson, UM geography professor, 406-243-2793, sarah.halvorson@mso.umt.edu.
MISSOULA – University of Montana law Professor Jordan Gross has earned a Fulbright U.S. Scholar Program award to serve as a research chair in Indigenous Public Policy and Criminal Justice at the University of Guelph, Ontario.

Gross, who teaches in UM’s Blewett School of Law, is one of over 800 U.S. citizens who will teach, conduct research and provide expertise abroad for the 2020-21 academic year through the Fulbright Program. Recipients of Fulbright awards are selected on the basis of academic and professional achievement, as well as record of service and leadership in their respective fields.
Gross teaches and researches comparative federal, tribal and state court systems, with an emphasis on criminal jurisdiction and procedure and interdisciplinary criminal justice reform.


As part of her research, Gross will visit indigenous justice forums and mainstream courts in Canada. She also will explore ongoing collaborations with Canadian scholars, including designing a seminar class on comparative indigenous criminal justice traditions that will be co-taught with faculty from her host institution and offered to UM and Canadian students through remote instruction.

"I'm honored to receive this Fulbright Award and grateful for the opportunity to add an international dimension to my teaching, research and service," said Gross.

Through her participation in the Fulbright program, Gross hopes to serve Montana's Constitution by committing educational resources to the preservation of the cultural heritage of American Indians.

Gross serves on the President's International Council and on the Steering Committee for UM's Justice, Policy and Public Service Community of Excellence. She looks forward to representing the UM abroad and using her Fulbright experience to support ongoing efforts to internationalize institutional engagement and outreach.

The Fulbright program is the U.S. government's flagship international educational exchange program and is designed to build lasting connections between the people of the United States and other countries.

For more information about the Fulbright Program, visit https://www.cies.org/.

###
Contact: Andi Armstrong, director of marketing and communications, Blewett School of Law, 406-243-6509, andrea.armstrong@umontana.edu.

The exhibit was previously scheduled to open in March, but the opening was delayed due to COVID-19 concerns. Curated by UM students in UM adjunct assistant art professor Reilly Shwab’s art history, the exhibit features multiple types of prints from the MMAC.

Shwab said the show examines European and American prints from the 17th to early 20th
“Focusing on the myriad historical functions of the printed arts along with the diverse techniques used to create them, student-curators selected and researched the works on paper and wrote the discursive wall labels,” Shwab said. “This show begins to bridge the gap between ephemeral visual culture, including newspaper cartoons, playing cards and fashion plates, and the fine arts prints of old masters and avant-garde artists.”

MMAC Director Rafael Chacón said the museum is proud to host the experimental exhibition curated by UM’s own art history students.

“They had the unique experience of confronting works of art and important documents to history and sharing their discoveries, while also highlighting a particularly rich part of our permanent collection,” he said.

View the exhibition in the south lounge on the third floor of the University Center.

###

Contact: Rafael Chacón, MMAC director, 406-243-2019, hrafael.chacon@umontana.edu.
MISSOULA – The University of Montana’s Big Sky Poll recently conducted a yearlong investigation with more than 940 participants to understand how and why individuals participate in public policymaking.

More than 40% of participants were young people in Montana, including the unique
perspective of Native American youth in the state. Funded by the Headwaters Foundation, the research found:

- Time is one of the most significant barriers to voting.
- 17% met with someone in the state Legislature within the last 12 months.
- 28% would only attend a public meeting in their town.
- Only 20% of participants would be willing to travel anywhere in the state to participate in civic engagement activities.
- 77% have never considered running for elected office.

Participants also suggested approaches to increase their engagement:

- 61% would attend a public meeting or legislative hearing if it was hosted on Facebook Live or a similar format.
- More than 70% of participants said they would be more likely to vote if the State of Montana sent out a voter information guide for general and primary elections.
- Approximately 51% of participants stated they would be more likely to vote in mail-in-only elections.
- More than 70% of

![In a study of 942 Montanans](image)

- 85% believe their vote matters.
- 53% believe they have a big or moderate impact on their community.
- 23% have considered running for office.

### Participation Barriers

- **Time**
- **Work**
- **Resources**

### Pathways to Increased Participation

**People are more likely to vote if:**

- **80%** A reminder was sent saying when and where to vote.
- **76%** The State of Montana sent a voter information guide.
- **51%** The State of Montana moved to a mail-in voting system.

**People are more likely to engage in their community if:**

- **68%** Courses on community engagement were offered by someone you know in your community.
- **66%** Local meetings are streamed on social media.
- **65%** My county had a community engagement liaison who helped me to participate.
participants would vote if a mailed reminder was sent.

The poll is directed by Sara Rinfret, a professor and chair of UM’s Department of Public Administration and Policy, and Justin Angle, a UM associate professor of marketing.

“The results offer valuable insights into why individuals participate, offering our state lessons on pathways forward to increase participation,” Rinfret said.

The survey was commissioned with support from the Headwaters Foundation. Use of these findings requires attribution to UM Big Sky Poll. Full results from this research are available on the UM Big Sky Poll website at http://www.umt.edu/bigskypoll/. More research from this project will be released in July to evaluate the impact of COVID-19 on public participation in Montana.

Rinfret said the Big Sky Poll is an example of the experiential learning opportunities for students available at UM. The poll is a fellowship opportunity for the Master of Public Administration, law and Master of Science in Business Analytics degree programs.

More information on the Big Sky Poll is online at http://www.umt.edu/bigskypoll/.

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**Contact:** Dr. Sara Rinfret, professor and chair, UM Department of Public Administration and Policy, 406-243-4702, sara.rinfret@umontana.edu.
MISSOULA – Dr. Alan Townsend, an ecosystem ecologist who previously led distinguished programs at Duke University and the University of Colorado Boulder, will join the University of Montana as dean of the W.A. Franke College of Forestry and Conservation. Townsend will start his new duties Oct. 1.

“We are thrilled to welcome Alan Townsend to the University of Montana,” said Jon Harbor, UM executive vice president and provost. “His expertise in the environmental sciences and inspiring academic leadership experience are well matched to the legacy of UM’s W.A. Franke College of Forestry and Conservation. I am very excited about Dr. Townsend’s vision for the college’s future.”
Originally from Missoula, Townsend is an ecosystem ecologist who studies how ecosystems work, how they change and what those changes might mean for society. His internationally prominent research includes work on nutrient cycling and biogeochemistry in tropical forests, as well as global-scale analyses of human impact on major element cycles.

Townsend holds a Ph.D. in biological sciences and currently serves as provost of Colorado College. He spent 17 years on the faculty at the University of Colorado Boulder before becoming dean of the Duke University Nicholas School of the Environment in 2014.

He returned to CU Boulder early in 2017 as the associate vice chancellor for research, working to advance the university's $500 million research mission. He also was a Research Fellow in the Institute of Arctic and Alpine Research and professor of environmental studies. He became the first provost of Colorado College in 2018.

“I'm honored and humbled to join the W.A. Franke College of Forestry and Conservation –one of the very best colleges of its kind and a place I've known and admired for years,” Townsend said. “UM and Missoula have been tied to our family for decades, and we can't wait to return home.”

The W.A. Franke College of Forestry and Conservation is so named to recognize transformative support from the Franke family. In 2016, the family pledged $24 million focused on students and programs in the college and in support of UM’s Global Leadership Initiative. The gift created several endowments that support ongoing environmental research and opportunities for undergraduate and graduate students to explore society's most pressing questions, combining local and global hands-on practical experiences with classroom education.

To foster the University's engagement of a visionary leader for the college, Bill and Carolyn Franke and their family recently pledged $1.25 million to establish the W.A. Franke Professor of Forestry and Conservation. The endowment created by their gift annually will support part of the salary and benefits for the dean position, as well as funds the dean can direct to support the college's programs and initiatives.
“The research and scholarship occurring within the college is vital to our expanding knowledge of climate, ecology and for preparing students to be leaders in these areas of global importance,” Bill Franke said. “Dr. Townsend will be leading a team of nationally renowned scientists in one of the preeminent forestry and conservation programs in the world.”

UM President Seth Bodnar echoed enthusiasm for Townsend and also for the new endowment created by the Franke family.

“Dr. Townsend’s research in ecosystem ecology is highly regarded, as is his leadership in a variety of roles within the academy,” Bodnar said. “I’m thrilled that our College of Forestry and Conservation will have a leader of Alan’s caliber at its helm. I’m also grateful for the support of this new endowment from the Franke family to enable us to attract such world-class leaders to the University of Montana.”

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The 2016 and 2020 Franke family pledges are part of Campaign Montana, a comprehensive seven-year fundraising campaign that is inspiring more than $400 million in philanthropic giving to benefit UM through Aug. 31, 2020. Donors will help achieve UM’s vision of a university that puts student success at the forefront, driving excellence and innovation in teaching, research and learning. Campaign Montana is a collaborative effort undertaken by UM and the UM Foundation. Visit www.campaignmontana.org to learn more.

**Contact:** Paula Short, UM spokesperson, associate vice president of University Relations and Strategic Communications, 406-243-5806, paula.short@umontana.edu.
UM Presents Honorary Doctorate Via Virtual Ceremony

June 12, 2020

MISSOULA – In a sign of the times, the University of Montana presented an honorary doctorate virtually for the first time in its 127-year history. The online honor went to William Yellow Robe Jr., a noted playwright, author, poet and educator.

Born in Poplar, Yellow Robe is an adjunct
faculty member at the University of Maine. His plays include "The Star Quilter," "Rez Politics," "Sneaky," "A Stray Dog" and "Mix Blood Seeds," among many others. An enrolled member of the Assiniboine Tribe of the Fort Peck Indian Reservation, he is known for mentoring Native students and playwrights and boosting the prominence of American Indian theater in the United States.

UM presented the Honorary Doctorate of Fine Arts on June 12 via a choreographed virtual ceremony. The event involved many of Yellow Robe's friends and colleagues across the country, an honor song performed live from eastern Montana and a video spanning the honoree's life and career. Speakers included UM President Seth Bodnar, Provost Jon Harbor and interim arts and media Dean John DeBoer – all dressed in their traditional Commencement regalia.

"An honorary doctorate is the highest honor a university can give," Bodnar said, "and we want to congratulate you on the distinction of being the first to receive our highest award over a virtual platform."
Yellow Robe seemed moved by the event, especially when Marty Reum and Donovan Archambeault from the Fort Peck Indian Reservation – both recent UM graduates – prepared to sing an honor song.

“What a surprise,” Yellow Robe said. “This is a great honor – the best gift I’ve had all day!”

He had intended to receive his doctorate in person May 9, but UM canceled its traditional Commencement ceremonies due to COVID-19 concerns. When campus officials asked Yellow Robe when and how he wanted to receive his doctorate, he suggested sooner rather than later, and the virtual ceremony was born. (The other honorary doctorate recipients, Bill Franke and the late Bonnie HeavyRunner, will be celebrated at a later date – potentially during in-person ceremonies.)

Since 1985, Yellow Robe Jr. has authored a robust collection of short stories, full-length plays, one-act plays, poems and essays. During the course of his distinguished career, he has received numerous awards, including the Lifetime Achievement Award of the Native Writers’ Circle of the Americas, as well as several notable residencies. He is the author of three books, the latest of which, “Restless Spirits,” was released by the SUNY Press last month. The Fort Peck Tribal Executive Board passed a unanimous resolution supporting Yellow Robe’s candidacy to receive an honorary doctorate from UM.

During his remarks, Yellow Robe talked about being the target of racism growing up. “I don’t feel angry toward the people who used to use race to attack me,” he said. “They have a sadness to them.”

As a champion of Native theater, he also revealed his dream to one day return to Montana and tour with a Native American theater production.

The virtual ceremony went well overall, but there were some standard online glitches. People spoke before unmuting their audio. Mortar board hats disappeared into virtual backgrounds. Somewhere a pet dog barked in a far-flung living room. There was silent online clapping. But for the participants, it was all part of the new normal.

The event concluded with UM’s president stepping outside Main Hall with his phone to allow Yellow Robe to hear “Up With Montana” performed in his honor on the clock tower carillon bells.

And the congratulations kept coming the entire time: “We’re proud of you. You come from us.” “You are such an inspiration, Bill. Thank you.” “We are so grateful for your contributions and so, so proud on this important day.”

Yellow Robe said, “I never thought this would ever happen.”

###

**Contact:** UM Office of the President, 406-243-2311, thepresident@umontana.edu.
MISSOULA – As mountain watersheds store and release water, the Earth’s shape changes ever so subtly. The University of Montana Department of Geosciences now can track those changes by GPS, thanks to a $1.4 million cut of a multi-institutional collaborative award from the National Science Foundation.

The total value of the award, part of the NSF’s Frontier Research in Earth Sciences program, is $2.43 million.

The project is headed by UM Geosciences Assistant Professor Hilary Martens, who has a background in space science, planetary science and geophysics. After earning not one but...
three prestigious scholarships – the Presidential Leadership, Marshall and Goldwater – at UM, she received masters' degrees in space science at University College London and volcano seismology at Cambridge.

Martens earned her doctorate in geophysics and geodesy from the California Institute of Technology in 2016, where she used GPS to measure how Earth’s surface depresses and rebounds with cyclical ocean tides. She will apply the same concept to measuring ground deformation in mountain watersheds.

For the new project, the team will use GPS to track changes in the shape of the Earth from the storage and flow of water. GPS receivers can determine sagging of Earth’s surface under the weight of water to the accuracy of 1 mm, and the team will use that information to estimate the total amount of water added or removed from a watershed daily or over a period of years. Martens will process and analyze the GPS data, as well as develop models to predict changes in the Earth's shape due to the differing water amounts.

“Deepening our understanding of water in mountain watersheds is crucial, because mountain watersheds serve as critical reservoirs of fresh water for human communities and other natural ecosystems worldwide,” Martens said.

Other UM Department of Geosciences researchers on the project include Assistant Professor of Hydrology Payton Gardner, Professor of Geophysics Rebecca Bendick, graduate students Mason Perry and Noah Clayton and postdoctoral scholar Lia Lajoie.

Perry, who will complete a Ph.D. soon, uses GPS to study long-term tectonic deformation and how snow loads influence earthquakes in the Northern
“I’ve been lucky to do a lot of field work in my time at UM, and my experience in the field installing and maintaining GPS stations will hopefully allow for the project to get up and running relatively quickly,” Perry said.

He will help with GPS processing in the NSF-funded watershed project.

Zachary Hoylman, a research scientist in UM’s W.A. Franke College of Forestry and Conservation, and Zachary Rossmiller, the executive director for cyberinfrastructure at UM, also will contribute to the project.

The Scripps Institution of Oceanography at the University of California-San Diego and the NASA Jet propulsion Laboratory have teamed up with UM for the project to bring more expertise.

“The project is multi-disciplinary by design to push the boundaries at the frontiers of Earth sciences,” she said. “We have specialists in hydrology, geodesy, meteorology, computer modeling, Earth structure, and water management participating in the project. The project would not be possible without such a diverse team.”

The project investigates three watersheds: the Selway-Lochsa in Montana and Idaho, Russian River in California and the Upper San Joaquin River in California. The team will measure crustal displacement, streamflow, snow depth, precipitation and atmospheric conditions at all locations.

“I’m really excited to see what comes out of this project,” Perry said. “I think GPS has huge potential to monitor hydrologic processes at watershed-size spatial scales, and it’s really exciting to play a role in cutting-edge research that is expanding the capabilities of a tool that I use regularly.”

Martens hopes the information from the project will assist local communities in managing water resources and using GPS to forecast flood and flash drought risks.

“With increasing demands on water resources from human consumption coupled with rapid changes in global climate, new advances in water-resource prediction and management are essential for socioeconomic sustainability
and prosperity,” she said.

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**Contact:** Hilary Martens, UM assistant geosciences professor, 406-243-6855, hilary.martens@umontana.edu.
UM Plans Temporary Detour to M Trail

June 11, 2020

MISSOULA – The University of Montana’s popular M Trail will get a makeover this spring and summer. As part of this effort, a temporary detour to reach the trailhead will start Monday, June 15, and last about two weeks.

Marilyn Marler, UM's natural areas specialist, said the re-route will take hikers through UM’s Peony
Garden near peak bloom.

“We ask walkers and hikers to stay on the sidewalk – not the beds – and enjoy the show,” Marler said. “Please don’t pick the flowers. Leave them for the next person to enjoy.”

She said this is the third year for the Howard and Chinwon Reinhardt Peony Garden on campus, “and it’s looking great!”

Marler requests that all visitors leash their dogs in the area at least through June, as many baby animals are found in the grasslands adjacent to the trail.

“The fawns and ground-nesting birds really need our help,” she said. “Overly enthusiastic dogs can really hurt wildlife. Additionally, we have two bighorn sheep that are hanging around the M Trail and even visiting campus. Off-leash dogs can chase them deeper into town, which is not ideal. We want the rams to move up and over Mount Sentinel, where they can feel safe.”

For more about the M Trail renovation project, visit https://bit.ly/376mlEi.

###

Contact: Marilyn Marler, UM natural areas specialist, 406-544-7189, marilyn.marler@mso.umt.edu.
MISSOULA – Imagining a flagship for America’s future is the core mission of the University Design Team, a group of University of Montana employees newly charged with charting the University’s future trajectory.

The committee was created by UM President Seth Bodnar to position UM for long-term success and impact, and represents a cross-section of campus personnel and disciplines, including student representation.
Spurred by the COVID-19 pandemic and rapid changes in higher education and technology, the UDT ultimately is tasked with delivering a strategic vision for Montana’s flagship public research institution – one that serves students of the future and parleys UM’s people, programs and places into national prominence.

“We see the committee’s work as an opportunity to think deeply and critically about UM’s role in expanding our conception of what higher education can and should be,” said Paul Gladen, UDT co-chair and director of UM’s Blackstone LaunchPad and Accelerate Montana. “Given the changing patterns of education, we have an immense opportunity to reimagine the possibilities and innovate our strengths into a model of the future.”

Drawing upon the perspectives of the UM campus community, as well as public stakeholders that include statewide community leaders, business leaders, admitted students and prospective students, UDT will consider the challenges and opportunities in higher education and will identify design principles and potential strategies to position UM for thoughtful change, impact and continued relevance. Most notably, the UDT will build upon recent years' worth of strategic planning at UM, including an institutional strategic vision put forth by UM’s former Strategic Planning Coordinating Council.

Adrea Lawrence, dean of the UM Phyllis J. Washington College of Education and UDT co-chair, said a transformative vision of higher education is due.

“The current pandemic is only one of many illustrations of the acceleration and change across higher education — shifting curricula and operations that have been largely in place for a century,” Lawrence said. “With the thoughtful feedback and work alongside our campus and community partners, we view the UDT as an opportunity to understand what University stakeholders want and need, and how we might identify meaningful, agile ways to respond.”

Lawrence said the team is committed to transparency and collaboration during its process. Organized in three phrases and aided by market-informed research, the UDT will identify and recommend strategic adoptions for the University this fall. There will be several opportunities for campus engagement, including listening sessions and open forums before final recommendations are delivered to University administration.
“We are the fortunate beneficiaries of the efforts of earlier generations who guided our flagship through many challenges across its 127-year history,” Bodnar said. “It is now our turn to thoughtfully, strategically and courageously design the continued and new characteristics that should embody a flagship of the future. I look forward to engaging with our community stakeholders using the results from the thoughtful work from the UDT.”

For more information on the UDT visit https://bit.ly/3cSlyqO.

Contact: Paul Gladen, University Design Team co-chair, Blackstone LaunchPad and Accelerate Montana director, 406-396-3534, paul.gladen@umontana.edu; Adrea Lawrence, University Design Team co-chair, UM Phyllis J. Washington College of Education dean, 406-243-5054, adrea.lawrence@umontana.edu.
UM Journalism Student Wins National Multimedia Championship

June 11, 2020

MISSOULA – Jiakai “JK” Lou, a student in UM's School of Journalism, was named the overall national multimedia champion of the annual Hearst Journalism Awards Program on June 5.

Often described as the college Pulitzers, the Hearst competition involves 104
accredited member universities of the Association of Schools of Journalism and Mass Communication. Lou’s award comes with a $10,000 first prize.

An international student from Zhejiang province, China, he won the top award for a 6-minute film titled “A Quarantine Story about Jiakai Lou.” The piece describes his inability to return home and struggle with isolation during the COVID-19 pandemic. It is online at https://bit.ly/2zjzHAu.

“I do know a few things,” Lou said in the video. “Through all this uncertainty, we are all the same no matter where we are from. We all have mothers and friends and want to be the best for ourselves and those that we love.”

Contest judge Brian Storm, founder of MediaStorm, said, “Jiakai's film is an intimate view of one man's coping with quarantine. His talent as a filmmaker is evident throughout the film as he shares his personal experience of being far from home and those he loves the most.”

Jeremy Lurgio, a UM associate professor of photojournalism and multimedia, said he speaks for all faculty members in the journalism school when he says Lou was a joy to work and collaborate with.

“We are so incredibly proud of Jiakai and all of the amazing work he has done during his tenure at the School of Journalism – both in class, out of class and for the Montana Kaimin [student newspaper],” Lurgio said. “Winning the national championship is a huge honor and accomplishment for him – a testament to his hard work and talent.”

Lurgio said Jiakai possesses great vision and creativity in his video storytelling.

“He is an incredibly humble, dedicated, hard-working, compassionate and talented student and journalist,” Lurgio said. “The sky is the limit for this young man.”

Lou earned a chance to compete for the Hearst multimedia championship by winning an earlier tier of the competition (and $3,000) with his documentary “32 Below,” an intimate look into the hard work, dedication and
passion of one ranching family as they tend their cows and calves in Helmville during the depth of winter. The film was selected for the annual Big Sky Documentary Film Festival in Missoula this past winter, and the Kaimin has it online at [https://bit.ly/2YpVtej](https://bit.ly/2YpVtej).

Lou said he came to Montana for the outdoor activities and American western lifestyle. At first, he didn’t know what to study at UM, but he soon rediscovered his love for documentaries.

“I gradually found my passion for visual storytelling when I was a sophomore,” he said. “Then I heard the School of Journalism at UM is one of the best in the country. I decided to dive in.”

Lou began his mini-doc as a project in a class taught by last spring’s distinguished T. Anthony Pollner Professor Preston Gannaway. The class focused on in-depth, long-form journalism and took place during a historically cold winter.

“I was wondering what ranchers were doing in that cold weather,” Lou said. “I heard from an old friend that ranchers in Montana were preparing for the upcoming calving season. It soon caught my attention and made me think of documenting it for my class project.”

This was the 60th year of the Hearst Journalism Awards Program. UM School of Journalism students placed in the top 10 in four categories and in the top 20 in four more competitions. More information is online at [https://bit.ly/3cSSSig](https://bit.ly/3cSSSig).

###

**Contact:** Jeremy Lurgio, associate professor of photojournalism and multimedia, UM School of Journalism, 406-243-2601, jeremy.lurgio@umontana.edu.
UM Leads Effort to Assist Montana Reservation with Pandemic Protective Equipment

June 09, 2020

By Susan Cuff
UM News Service

MISSOULA – The tight-knit community that is Montana has pulled together during the pandemic. The University of Montana recently exemplified this by answering a call for personal protective
Staff from Accelerate Montana’s Rural Innovation Initiative at UM, who support entrepreneurship in rural areas and on reservations, became aware of the need and connected reservation representatives with UM’s Innovation Factory (IF). This launched a unique collaborative effort.

The project was coordinated by School of Visual and Media Arts Professors Brad Allen and Elizabeth Dove. The pair are the founding co-directors of IF and helped launch the new organization in UM’s University Center last fall. Allen describes IF as an “innovation ecosystem, where the seeds of entrepreneurship and design are planted and nurtured into reality.”

The collaborative environment of IF was the perfect channel for the mask project, which would need a broad-based network of expertise. The Fort Belknap Reservation health care community needed 200 protective masks and 30 face shields to distribute to workers. Allen and Dove went to work, identifying resources across the state. IF, a facilitator of research design and fabrication, already was working on pandemic response equipment prototypes, and was prepared to jump on the project.

Originally, the idea was to 3D print a mask designed from facial scans produced by a doctor in Billings. After some research, Allen and Dove instead decided to seek out local manufacturing connections and explore the possibility of thermoforming or injection-molding more flexible and better-fitting elastomers (plastic masks) instead of rigid 3D prints.

They contacted Brad Reid, an engineer and the owner of Diversified Plastics Inc., as well as a network of manufacturers across Montana through the Montana Manufacturing Extension Center at Montana State University. MMEC serves as a communication and partnership organization of state-based businesses. Diversified Plastics donated mold materials to an injection molding facility in Bozeman, Spark R&D, so that production could begin quickly at the height of the crisis.
Several thousand reusable, flexible base masks were produced, a direct result of collaboration by all partners.

In the meantime, IF staff members also researched the most effective material available for the mask filters. Still another Montana partner, Lorri Birkenbuel, assistant professor of safety, health and industrial hygiene at Montana Tech in Butte, was asked to test the fit and efficiency of the mask design and other materials that IF identified as having surgical mask-like qualities.

The filter materials were thoroughly tested for micron particle size. IF then produced the face shields and headbands requested by Fort Belknap by 3D-printing a file available online. IF also developed a quality-control system to avoid coronavirus contamination throughout the product manufacturing and shipping.

Although the initial request was to supply masks to the health care workers and law enforcement on the reservation, those two entities have since secured their own supply, said Tonya Plummer, business development officer with Island Mountain Development Group, which requested the protective supplies. The masks likely now will go to the four senior centers on the reservation, workers from a summer food program and a nonprofit summer camp if it operates this year.

“We were very grateful and humbled by the offer,” Plummer said. “We didn’t want to ask for more than we should.”

Some of the masks also may be distributed to Island Mountain employees, but Plummer said they want to meet the community’s needs first – especially since the reservation remains in total lockdown due to the pandemic.

The statewide networking and collaboration developed through this project will provide benefits for both UM and the broader Montana community in the future.

“I’m grateful for the communication track that exists in case of a second wave of coronavirus,” Allen said. “I’m also grateful we had the opportunity and continue to model statewide connectivity and partnerships, using IF as a hub.”

“The University has an attitude of service,” Dove added. “It’s Montana resourcefulness. We see what we have and solve a problem based on that.”

Through this and other projects, IF is gaining credibility and awareness, Allen said.

“The project is a demonstration of the potential of the Innovation Factory,” he said. “That potential includes UM’s ability to develop partnerships, connect resources and offer expertise.

While the face mask project was not a student project, the success of the Innovation Factory will result in internships, job placements and ongoing experiential project-based learning for students. Students also may earn a 12-credit certificate in innovation here at IF.”

For more information on IF, visit https://www.umt.edu/innovation-factory/.

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**Contact:** Elizabeth Dove, UM Innovation Factory co-director and art professor, 406-243-5723,
UM Leads Effort to Assist Montana Reservation with Pandemic Protective Equipment - UM News - University Of Montana

elizabeth.dove@umontana.edu; Brad Allen, IF co-director and UM art professor, 406-243-5723, bradley.allen@umontana.edu.
MISSOULA – Montana Public Radio’s annual spring fundraiser, delayed two months due to the COVID-19 pandemic, concluded this week with over $610,000 in listener pledges.

At the end of the pledge drive at 9 a.m. Monday, the tally reached $613,156, concluding the six-day
Montana Public Radio Concludes Delayed 2020 Spring Pledge Week - UM News - University Of Montana

event that raised more than 94% of the $650,000 goal. There were 4,495 listener pledges during the on-air fundraiser, which ran June 3-8.

“We are so thankful to our dedicated listeners who pledged their financial support to MTPR,” said Anne Hosler, MTPR’s membership director. “We are powered by them and will continue to produce great radio for them.”

“We are humbled by the support of our MTPR listeners,” said Ray Ekness, director of the University of Montana Broadcast Media Center. “They have truly made MTPR what it is today with outstanding news, music, information and children’s programming.”

The drive included the popular “Pet Wars,” where owners donated in honor of their beloved animals. Dogs returned to the top by outnumbering cats 645 to 412. The pet competition also included many pledges for chickens, buzzards, turkeys, owls and more.

“These funds will help us continue production of so many Montana-made programs,” said Michael Marsolek, MTPR program director. “We will continue to work hard for our listeners.”

MTPR needs to raise more than $2 million – 75% of the station’s total operating budget – from listeners, sponsors and events during its fundraising year. Listeners can continue to contribute online or via the mail if they missed making their pledge of support last week.

Montana Public Radio is a public service of UM and broadcasts on 89.1 Missoula (KUFM); 91.5 Missoula, city (K218AI); 91.9 Hamilton (KUFN); 89.5 Polson (KPJH); 90.1 Kalispell, Whitefish, North Valley (KUKL); 90.5 Libby (KUFL); 91.7 Kalispell, city (K219BN); 101.3 Swan Lake (K267BJ); 91.3 Butte (KAPC); 91.7 Helena (KUHM); 91.7 Dillon (K219DN); and 89.9 Great Falls (KGPR).

Learn more at http://mtpr.org.

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Contact: Anne Hosler, MTPR membership director, 406-243-4214, anne.hosler@umontana.edu; Michael Marsolek, MTPR program director, 406-243-4096, michael.marsolek@umontana.edu; Ray Ekness, Broadcast Media Center director and MTPR general manager, 406-243-4154, ray.ekness@umontana.edu.
UM to Renovate Popular M Trail

June 05, 2020

MISSOULA – In celebration of National Trails Day on June 6, the University of Montana has announced that one of the most popular hiking trails in Montana – the M Trail – is getting a makeover.

UM’s iconic M Trail, which starts at the base of Mount Sentinel on the eastern edge of campus, serves up to 1,000 hikers daily on sunny weekends. In order to keep the trail in good working order, some major improvements are necessary to control erosion and improve access for users.

The M Trail Project is a two-year plan
to repair the trail. Marilyn Marler, UM’s natural areas specialist, said the trail has experienced significant erosion over the past few years. Steps at the trailhead and beneath the M also need to be replaced.

“It is necessary to install a retaining wall directly under the M,” Marler said. “The entire trail needs to be renovated and steps at each of the 11 switchbacks along the ¾-quarter-mile trail need to be redone. In order to assure the trail is accessible and user-friendly to people of all ages who climb the steep, zigzag path to the M, this restoration project is a necessity.”

UM is actively raising money for the project, having secured grants from the Montana Fish, Wildlife and Parks Recreational Trails Program and REI, as well as a generous donation from Run Wild Missoula.

“The Run Wild Missoula board of directors was thrilled to be able to support this project,” said Tony Banovich, Run Wild’s executive director. “This is a trail segment that is loved by our club members and the larger Missoula community. We strongly support the planned trail improvements and encourage others to contribute to this effort.”

A generous grant from REI was made on behalf of local REI members. “REI is committed to protecting and maintaining the local trails and outdoor spaces our members love,” said Shannon Dickerson, REI outdoor programs and market outreach coordinator. “The M Trail is among the most iconic trails in Missoula, and we are proud to support the much-needed restoration work for this beloved landmark.”

Marler and Dr. Steve Gaskill, UM Professor Emeritus of integrative physiology and athletic training, will lead the
renovation project.

“One of my goals as a retired professor in my field is to continue facilitating increased physical activity by Missoula residents to improve long-term community health,” Gaskill said. “The M Trail is an iconic Missoula landmark and possibly the most popular trail in Montana. It simply makes sense to keep it functional, maintained and accessible.”

“We had planned for a series of large community volunteer days this summer and fall, but unfortunately the COVID-19 crisis requires a different approach,” Marler said. “Instead, we are looking for small teams of volunteers – two to four people at a time – who are interested in taking on small projects under Dr. Gaskill’s mentorship.”

Here are some specific dates when volunteers are needed:

- **Friday, June 12**, 9 to 11 a.m. Hearty hikers are needed to carry timbers from the trailhead to the fifth switchback. Some timbers can be carried by one strong person, and some will take two people.

- **Monday and Tuesday, June 15-16**, 9 a.m. to noon both days. Three to four strong volunteers are needed to help remove existing stairs at the main trailhead. Tools will be provided, but bring gloves and wear boots.

Then in late June and into autumn, small groups of friends or family members will be needed for fence projects. Email steven.gaskill@umontana.edu to assist with any of these volunteer efforts.

“We'll just have to be creative and celebrate National Trails Day and National Public Lands Day throughout the seasons, instead of just on their traditional dates,” Marler said. “Hopefully by late fall, we can host a modest but more traditional style volunteer day on the mountain. We look forward to that happening again – they are some of my favorite times on Mount Sentinel.”

The UM Foundation is raising money for the renovation and seeks donations from the wider community. To this end, an iron ranger has been installed at the base of the M Trail to collect contributions. To learn more about the project or to make an online donation, visit http://hs.umt.edu/umnaturalareas/mTrail.php.

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**Contact:** Marilyn Marler, UM natural areas specialist, 406-544-7189, marilyn.marler@mso.umt.edu.
MISSOULA – Margaret Schaefers, a 2019 graduate of the University of Montana’s World Languages and Cultures department, has been awarded a prestigious Fulbright Scholarship to study in Uruguay during the 2020-21 academic year.

Schaefers, who majored in Spanish, is one of six former and current UM students to receive a Fulbright Scholarship this year. Her research project in South America will investigate factors that lead to gender disparity in the classroom and how these gender disparities affect girls’ educational experience.

“Uruguay is an excellent country to conduct this research, as gender equality efforts have already taken root, which will provide a great opportunity to observe and evaluate the
effectiveness of the strategies being employed," she said. "I feel incredibly grateful and so excited to have the opportunity to teach, learn, eat and research in a country as culturally rich and progressive as Uruguay."

Schaefers completed a Teaching English to Speakers of Others Languages (TESOL) during her time at UM. After graduation, she used this certification to teach English in the Basque Country of Spain.

A native of Eugene, Oregon, she is the daughter of Bill and Sherry Schaefers.

"In the future I would like to learn more about progressive education and education policy and use this knowledge with non-governmental or governmental organizations such as the Learning Policy Institute or the United Nations Girls' Education Initiative," Schaefers said.

She and the other recipients continue UM's legacy of securing Fulbright Scholarships, said Clint Walker, the UM Fulbright adviser and an associate professor of Russian.

“We had a 50% success rate this year,” Walker said. “This percentage is well above the national average and speaks to the high quality of our UM applicants for Fulbrights.”

The Fulbright U.S. Student Program offers opportunities for students and young professionals to undertake international graduate study, advanced research, university teaching and primary and secondary school teaching worldwide.

For more information about the Fulbright Program, visit https://us.fulbrightonline.org/.

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Contact: Clint Walker, UM Fulbright adviser and associate professor of Russian, 406-243-2501,
Students Make UM Spring Semester Dean’s List

June 03, 2020

MISSOULA – At the University of Montana, 2,869 students made the spring semester 2020 Dean’s List or President’s 4.0 List. To qualify, students must be undergraduates, earn a semester GPA of 3.5 or higher and receive grades of A or B in at least nine credits. Students who receive any grade of C+ or below or no
credit (NC/NCR) in a course are not eligible.

Double asterisks after a name indicate the student earned a 4.0 GPA. A single asterisk indicates a GPA greater than 3.5 but less than 4.0.

This information is grouped by hometowns and alphabetically by first name online at https://www.umt.edu/urelations/info/deanslist.php.

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**Note:** The University is prohibited from publishing information about students who signed the Student Request to Restrict Release of Directory Information form through the Registrar’s Office. If their name is not included on either list and they believe it should be, email the Registrar’s Office at grading@umontana.edu.

**Contact:** UM Registrar’s Office, grading@umontana.edu.
MISSOULA – High-demand jobs of the future include investigating large-scale impacts of cyberattacks, creating stories for professional video games and analyzing big data for government and business. As the world continues to rely on digital technology, the U.S. Bureau of Labor Statistics estimates a 28% growth in the field, with more than 500,000 new jobs for workers with skills in cloud computing, the collection and storage of big data and information security.

When it comes to technology in the Big Sky State, Montana’s high-tech industry is growing seven times the overall Montana economy, paying twice
the median wage and generating more than $1 billion in annual revenue, according to the University of Montana Bureau of Business and Economic Research.

Now, UM students have the option to explore some of the most in-demand technology skills for the future workforce. The Montana University System Board of Regents recently approved three new degree options in software engineering, data science and algorithm design — each offered in UM’s Department of Computer Science.

The increased awareness and demand for cybersecurity, data design and information systems professionals is an opportunity for UM to innovate and respond, UM President Seth Bodnar said.

“Software engineering, data science and algorithm design are among the most in-demand careers for which there are significant workforce shortages,” Bodnar said. “UM students will benefit from these new degree options and be positioned for exciting careers in the digital technology sector. Look for UM to continue to innovate our degree offerings to prepare our students for cutting-edge tech careers now and for the future.”

Created with input from UM’s Department of Computer Science advisory board with support from the Montana High Tech Business Alliance, the new degree concentrations will be offered this fall and are tailored to the needs of Montana’s high-tech employment sector.

Jesse Johnson, UM professor and chair of the department, said the new programs expand the accessibility of the computer science profession to a greater percentage of the student population, particularly those lacking some of the training in formal mathematics.

“While the classic computer scientist, highly skilled and well versed in mathematics, continues to be an important part of the workforce, so too does the software engineer,” Johnson said. “The software engineer makes informed decisions about the suitability of existing software libraries for solving a particular problem. The training in the new software engineering program will stress practice over theory; primarily for development, operation and maintenance of software.”

The new programs complement UM’s robust undergraduate technology certificates in cybersecurity and big data.
analytics, and master’s degrees in business analytics and data science. Additionally, UM offers undergraduate options in game design and interactive media through the College of The Arts and Media.

Michael Cassens, assistant professor in UM’s School of Media Arts and director of UM Esports, said while the gaming sector is growing by leaps and bounds, UM’s game design program is committed to developing a well-rounded student who can “connect the dots” between practice and theory. Some of that training includes students building applications for local nonprofits, providing students an experience creating something both fun and useful.

“There’s a lot more to game design than just the entertainment side, which is important, but there’s so much more to it,” Cassens said. “We teach our students how to be good writers so they can create a compelling narrative, and we teach them how to create a visual aspect and incorporate sound so that an emotional connection is created.”

Cassens said his program focuses on the programmatic side for the web, mobile, as well as virtual and augmented realities.

“We want our students to push the limits and put it all together and have knowledge in all of these areas, and that’s what we do best,” he said. “Our students come out of the program able to have an intelligent conversation about all of these aspects and build real-world applications.”

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**Contact:** Paula Short, UM spokesperson, associate vice president of University Relations and Strategic Communications, 406-243-5806, paula.short@umontana.edu.
FLATHEAD LAKE – Large-scale, rapid advances in wastewater treatment systems are on the rise all over the world. However, the impact on the balance of key nutrients in the waterbodies that these wastewater treatment systems feed into...
rarely has been examined on a broad scale over a long period of time.

In a recent study published in the Proceedings of the National Academy of Sciences, an international team of researchers discovered a link between the dramatic improvement in wastewater treatment and potentially harmful changes in nutrient ratios that could threaten the biodiversity and ecosystems of freshwater lakes.

The team included Jim Elser, director of the University of Montana's Flathead Lake Biological Station.

“We know from recent studies in lakes that not only the absolute concentrations of nutrients like nitrogen and phosphorus matter for the health of a lake,” Elser said. “It is also important to pay attention to their relative concentrations. Strongly imbalanced ratios of N and P can have unappreciated and undesired outcomes.”

Analyzing continuous lake monitoring data from 46 lakes in China over a 10-year span, scientists found that the ratio between nitrogen and phosphorus concentrations increased in 24 of the 46 lakes. The ratio between nitrogen and phosphorus decreased in only three of the 46 lakes.

This discovery is important because food webs in lakes work best when there is a balanced supply of nitrogen and phosphorus. If that balance is altered – if, for example, a local wastewater treatment plant is extremely effective at removing phosphorus but not nitrogen from the water it returns back to the lake – then the microorganisms at the bottom of the food web have a change in their nutrient diet. This, in turn, can impair the performance of organisms higher in the food web.

Researchers involved in the study emphasize that improving municipal wastewater collection and treatment worldwide remains an important and worthy target within the 17 sustainable development goals presented by the United Nations.

However, given the potential ecological impacts on biodiversity and ecosystem function of altered nutrient ratios in wastewater discharge, researchers do suggest that long-term strategies for domestic wastewater treatment not only focus on the total reduction of nutrient discharges but also should consider maintaining the appropriate nutrient
balance for the respective body of water.

For this study, researchers primarily relied on data from highly productive lakes in China’s more populated regions. But Elser believes the study’s findings may also apply to Flathead Lake here in lightly populated western Montana. He currently is working on a new manuscript that examines the concentrations and ratios of nitrogen and phosphorus in Flathead Lake over the past few decades to determine the impact of local wastewater treatment on Flathead Lake’s food web.

“Flathead Lake has low nutrient levels due to its relatively pristine watershed, as well as the implementation of wastewater treatment, which is great,” said Elser. “However, Flathead Lake also has imbalanced concentrations of nitrogen and phosphorus, which may possibly be a result of stringent removal of P but not N in those treatment plants. Our emerging paper explores this and describes some of the potential consequences.”

Other authors on the study include Yindong Tong, Mengzhu Wang and Xueyan Liu from Tianjin University in China; Josep Peñuelas from CREAF in Spain; and Hans Paerl from the University of North Carolina-Chapel Hill. The full study is online at https://www.pnas.org/content/117/21/11566.

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UM Launches New Environmental Science and Sustainability Degree

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MISSOULA – The University of Montana has created a new undergraduate degree program: Environmental Science and Sustainability.

Housed in the W.A. Franke College of Forestry and Conservation, the ESS program provides an innovative, interdisciplinary
education focused on environmental science and a range of problem-solving skills to prepare students for careers in this growing field. This Bachelor of Science degree connects science and practice, so students graduate with the knowledge and skills to solve complex environmental problems and advance sustainability.

The new program brings together courses and expertise from all four departments in the forestry college, building on its 100-year history of teaching and practicing environmental science and sustainability. Students take courses across relevant disciplines, learning from experts in ecology, environmental planning, climate science, environmental policy, natural resource conservation, water management and more.

“Montana’s Constitution includes ‘the right to a clean and healthful environment,’ and the state’s leading industries, from agriculture to tourism, depend on sustainable use of natural resources,” said Chad Bishop, interim dean of the college. “Environmental science supports evidence-based practices that ensure we manage and use resources in ways that sustain our communities, economies, resources and ecosystems.

“As the state of Montana’s only college of forestry, we are uniquely positioned to deliver coursework focused on the most important environmental and natural resource issues in the state,” Bishop said. “The courses in this curriculum and the research conducted by our faculty build the capacity of the state to tackle key issues such as energy and natural resources, fire and rural communities, land and water management, and drought and agriculture.”

Connecting science to management and policy is at the heart of environmental science and sustainability, and ESS graduates will be trained to understand and use science to address fundamental societal challenges.

ESS students can specialize in ecosystem science and restoration, environmental policy and planning, climate science and environmental change, sustainable livelihoods and communities, and water resources. Or they can use the highly flexible resource conservation option to work closely with a faculty adviser to design an individualized program of study based on their interests and goals.

Students in the program also can specialize by completing a minor or certificate in the Franke College in fire science
and management, geographic information systems, geography, outdoor leadership, wilderness studies or wildlife biology. ESS students participate in field labs, field courses, internships, study-abroad programs, capstone projects and independent research to better understand how science and practice come together to build a more sustainable world.

“Environmental science and sustainability is a growth area across the U.S., with the number of programs and courses at the university and high school levels on the rise,” said Laurie Yung, ESS program director. “The demand for students with the training to connect science to sustainability challenges is also growing. The ESS program will provide students with the skills to connect scientific evidence to problem-solving for the betterment of communities in Montana and beyond.”

ESS merges two existing Franke College programs into one degree, the B.S. in Ecosystem Science and restoration and the B.S. in Resource Conservation. This change will not impact students currently enrolled in Ecosystem Science and Restoration or in Resource Conservation degree programs. ESS now is enrolling its first cohort of students for fall 2021.

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