

CAMPUS REPORT

DATE: October 9, 2014
TO: Board of Regents
FROM: Donald M. Blackketter, Chancellor, Montana Tech
RE: Campus Report for the November 20-21, 2014 Board of Regents' Meeting

- Montana Tech is ranked 6th in nation for graduates earning highest salaries, according to the Washington Post.
- Washington Monthly magazine released its annual College Guide and Rankings, and Montana Tech—the only Montana university to break the top 50—ranked 12th on the list of 2014 Baccalaureate Colleges. Montana Tech surged from its 41st position in Washington Monthly's 2013 Guide. Washington Monthly's new college rankings measure institutions based on three criteria: civic engagement, research and social mobility.
- Money magazine has named Montana Tech the 23rd best public school and the 66th overall in its inaugural value ranking of U.S. colleges and universities. Money magazine awarded Montana Tech a value grade of "B+."

STUDENT ACHIEVEMENT

- Twenty Montana Minds student scholars visited the Idaho National Lab on October 2nd with Dr. Doug Coe, Dr. Amy Kuenzi, Dr. Doug Cameron and Annette Kankelborg. Students were able to see the latest research in advanced technology and Nuclear Energy and the research opportunities, internships and possible future jobs available to them.
- Biological Sciences Professor Martha Apple, Biological Sciences undergraduates Lindsay Carlson and Macy Ricketts, and U of M Environmental Journalism graduate student Nicky Ouellet conducted field research at Glacier National Park in the summer of 2014, which was the second field season for the study: Measuring Impacts on Rare Arctic-Alpine Plants at the Edges of Snowfields and Glaciers that are Retreating Due to Climate Change at Glacier National Park. Funded by RM-CESU.
- Graduate students Heather Boese and Nicole Brancheau, along with undergrad Bob West, presented papers at the Montana American Water Resources Association (AWRA) conference in Kalispell, MT, Oct. 9-10.
- Dr. Courtney Young, Dept Head and Professor of Metallurgical & Materials Engineering, wrote three papers with UM-Missoula IIP PhD student, Robert "Nick" Gow. "Spectroelectrochemistry of Enargite I: Reactivity in Alkaline Solutions" and "Spectroelectrochemistry of Enargite III: Alkaline Sulfide Leaching" will both be published in the Minerals & Metallurgical Processing Journal (M&MP). The third paper, "Spectroelectrochemistry of Enargite II: Reactivity in Acidic Solutions", appears in the proceedings of the Hydro 2014 International Conference held in Victoria BC, June 22-25, 2014. Co-authors of the papers include Dr. H.H. Huang of M&ME, Dr. Greg Hope of Griffith University, Brisbane, Australia and Dr. Yasushi Takasaki of Akita University, Akita, Japan. Montana Tech maintains international agreements with these universities.
- Research involving multiple Montana Tech students, faculty, and staff was recently published: "Iron-doped apatite nanoparticles for improvement of phage therapy," J. M. Andriolo, R. M. Hensleigh, C. A. McConnell, M. Pedulla, K. Hailer, R. Kasinath, G. Wyss, W. Gleason, and J. L. Skinner, Journal of Vacuum Science and Technology B, Vol. 32, September 2014.

FACULTY EFFORTS

- Dr. Gordon Flanders, Associate Professor of Business (Business & Information Technology), gave an invited talk titled "The effect of Gateway Course Completion on Freshman College Student Retention" at The Gateway Course Experience Conference sponsored by the John W. Gardner Foundation in Indianapolis, March 2014.
- Dr. Steve Parker (Chemistry and Geochemistry) gave a talk on his recent research on biogeochemical cycling of organic and inorganic carbon in Georgetown Lake, Montana at the Montana American Water Resources Association (AWRA) conference in Kalispell, MT, Oct. 9-10.

- Dr. Gordon Flanders, Associate Professor of Business (Business & Information Technology), presented a talk on “Using and Applying Peer Review of Faculty” at the Marketing Management Association Fall Educators Conference in San Antonio, September 2014.
- Dr. Gordon Flanders, Associate Professor of Business (Business & Information Technology), was invited to give a talk at the TEDx event sponsored by the Butte Silver Bow Public Library. Dr. Flanders talk was titled “Set goals and be the person you want to be,” June 2014.
<http://www.youtube.com/watch?v=cIleIMhMT7Q>
- Biological Sciences Professor Martha Apple presented an invited seminar on Alpine Plants and Climate Change at the Norwegian Reindeer Center in Dovrefjell, Norway in June, 2014.
- Prof. Jack L. Skinner gave an invited presentation at the first annual MUS Materials Science Ph.D. meeting: “Materials and devices from nanofabrication methods: Bringing nanotech to Montana Tech,” Materials Science Under the Big Sky, Montana University System Materials Science Ph.D. Program Annual Meeting (Invited), Fairmont Hot Springs, MT, September 2014.
- Prof. Jack L. Skinner gave an invited seminar at Stanford University: “Nanofabrication for modified plasmonic and electronic properties: The convergence of need, expertise, and facilities,” Special Seminar - Advanced Materials and Structures (Invited), Department of Aeronautics and Astronautics, Stanford University, Stanford, CA, October 2014.
- Professor Julie Hart presented a lecture on crystalline silica toxicity at the Edison Electric Institute’s Fall Occupational Safety and Health Committee Conference September 30th at Big Sky, Montana.
- Dr. Henrietta Shirk, Professional and Technical Communication Department, presented a paper titled “Hunter's Hot Springs: A Milestone on the Yellowstone” on September 20, at the 41st Annual Montana History Conference, sponsored by the Montana Historical Society in Helena, Montana.

HIGHLANDS COLLEGE

- Highlands College held the first meeting of its External Advisory Board. According to campus leaders, the Board will advise Tech and Highlands on ways to keep the 2-year college closely attuned to the needs of business, industry, students and the community; and ensure that the programs and activities of Highlands College are of high quality and productive.
- Highlands College Director of Business and Community Outreach Evan Barrett is producing a Montana historical film series entitled “In the Crucible of Change.” Consisting of 30 one-hour films focused on the period of change in Montana between 1965 and 1980, it is supported by grants from Humanities Montana, Montana Historical Foundation and the Greater Montana Foundation. All films will be available for online streaming through Digital Commons at Montana Tech. Ten of the thirty films have wrapped, and the series will be completed Spring 2015.
- Highlands College has been awarded the Perkins Vocational Education Grant of \$108,175 for fiscal year 2014-2015.
- Montana Tech has successfully completed four tobacco-free years.
- Montana Tech and Safe Space, Inc. partnered together to exhibit the *Montana Silent Witness Initiative* at Highlands College, whose mission is to “promote peace, healing and responsibility in adult relationships in order to eliminate domestic murders in the United States by the year 2020.” The event coincides with National Domestic Violence Awareness Month.
- Montana Tech’s Pearson VUE Testing Center, located at Highlands College, is now authorized to deliver Microsoft Certification exams. The Center is certified by Pearson Education as an official testing location for many industry exams including the Fundamentals of Engineering (FE) Exam, the Graduate Management Admissions Test (GMAT) and the 170 + Microsoft Certification exams, among others.
- Highlands College held a September 11th Day of Service and Remembrance. In honor of those lost and in support of those citizens and veterans who served, students, faculty and staff were encouraged to write a personal “I WILL PLEDGE” to do service for the community, and hang the pledge on a Tree of Hope. During the event, the flag was raised and lowered to half staff by a student veteran and “I WILL” pledges were read.

STAFF AND PROGRAMS

- Montana Tech’s Graduate School enrollment is up 28 (17%) from Fall 2013 to 194. Significant growth occurred in the on-campus Geoscience MS (up 11 or 37%) and in the distance Industrial Hygiene master’s professional track (up 11 or 17%). Of the nine students in the first cohort of Montana’s new Materials Science Ph.D. program, four are enrolled at Montana Tech.

- The Academic Center for Excellence celebrated National Tutor Appreciation Week culminating with an Appreciation Party including a speech from Dean of Students Paul Beatty. Tutors received individual letters of appreciation from Chancellor Blackketter and Carrie Vath, Director of Student Success.
- Montana Tech was listed by the American Indian Science and Engineering Society (AISES) magazine, "Winds of Change", among the best 200 campuses for American Indians interested in STEM.
- Montana Tech's institutional repository Digital Commons now contains 500 items, which range from historical Bachelors theses to peer-reviewed journal articles published by Montana Tech faculty. In August 2014, Digital Commons had 1178 full-text downloads from across the globe. Individuals from South Africa, India, Germany, France, South Korea, and New Zealand viewed and downloaded items. All items in Digital Commons are indexed in Google. The resource allows MT Tech research and publications to reach a global audience.
- The second cohort of the math/ science partnership project, "Montana Partnership with Regions for Excellence in STEM" (MPRES) launches at Montana Tech October 10th. This cohort is comprised of 60 teachers representing 20 counties in the state of Montana who will receive training regarding the Next Generation Science Standards and K-12 Framework for Science Education through Cfwep's MPRES project. This is a partnership project with Montana Tech, Montana State University, and Montana State University-Billings.
- Montana Tech Career Services held the largest Career Fair to-date in September, with 123 companies attending and over 1,000 students participating. Career Services Director Sarah Raymond said the Career Fair also facilitated individual interviews - 64 companies conducted over 1,000 interviews with approximately 447 students.
- Recruiting for teachers in grades 5-12 for the National Institute of Health project—Bringing Research into the Classroom (BRIC) is currently open. Dr. Marisa Pedulla and Rayelynn Connoles are recruiting 30 teachers to engage in four years of professional development and classroom visits for the BRIC phage-discovery research project to serve Southwest Montana.
- The Clark Fork Watershed Education Program (Cfwep.Org) of the Institute for Educational Opportunities was awarded funding in the amount of \$23,500 to host the Intermountain Junior Science and Humanities Symposium (IJSHS) on February 25-26, 2015. The IJSHS – a science, technology, engineering and math (STEM) competition for MT, ID, UT, CO, and NV high school students conducting original research – will occur in conjunction with the Montana Tech Regional Science and Engineering Fair and will showcase Montana Tech labs and research as well as Butte history and industry.

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

- In July 2014 Dr. John Metesh, MBMG Director and State Geologist, was appointed to a two-year term on the Board of Directors of the Western States Seismic Policy Council (WSSPC). WSSPC develops seismic policies and shares information to promote programs intended to reduce earthquake-related losses.
- On August 15, 2014 the State-Map Advisory committee met to evaluate progress to date in MBMG's geologic mapping program, set goals, and provide direction for the fiscal year 2015 proposal to the U.S. Geological Survey. Committee members represent state and federal agencies, consulting geologists, and mining companies.
- On August 27, 2014 MBMG released MBMG 652, *Hydrogeologic investigation of the Four Corners study area, Gallatin County, Montana, Groundwater Modeling Report* by MBMG hydrogeologists Mary Sutherland, Tom Michalek, and John Wheaton. Also in August 2014, MBMG released MBMG 654, *Hydrogeologic investigation of the North Hills study area, Lewis and Clark County, Montana, Technical Report* by MBMG hydrogeologists Andrew Bobst, Kirk Waren, James Swierc (Lewis and Clark County Water Quality Protection District) and Jane Madison (Department of Environmental Quality).
- MBMG hydrogeologist Andrew Bobst presented an update on the Upper Jefferson Groundwater Investigations to the Upper Jefferson WaterShed Council, in Whitehall, Montana, on September 4.
- Montana Tech Mineral Museum manager John Foley and MBMG Economic Geologist Stan Korzeb attended the Denver Mineral Show on September 8-12, 2014. The show presents opportunities for the museum to trade and purchase specimens to enhance Montana Tech's collection and is also a focal point for economic geologists to discuss mineral deposits.
- The U.S. Geological Survey invited Dr. John Metesh to join a national working group charged to establish a new five-year plan for the National Geologic and Geophysical Data Preservation Program

(NGGDPP). The NGGDPP provides funds to states to help rescue geologic data in danger of becoming lost. In June 2014, the program granted MBMG funds needed to rescue scientific data pertaining to the New World project, a gold mine that had been proposed in the 1990s near Yellowstone National Park.

- The Technical Working Group established by the Montana Water Policy Interim Committee and led by Dr. John Metesh completed its review of hydrologic data and models that provide the basis for defining water-rights within the proposed Confederated Salish Kootenai Tribes Compact with the state. Dr. Metesh presented the group's *Report of Findings* to the Water Policy Interim Committee on September 8.
- MBMG Research Division Chief Thomas Patton attended a meeting of the Subcommittee on Ground Water (SOGW) in Reston, VA, in September 2014. SOGW reports to the Advisory Committee on Water Information which is a Federal Advisory Committee to the U.S. Secretary of the Interior. SOGW discussed the impending implementation of a National Ground Water Monitoring Network. The Montana Bureau of Mines and Geology was a pilot project partner during the SOGW's development of the National Ground Monitoring Network Framework report.
- On September 26, 2014 MBMG Senior Research Hydrogeologist, Thomas Michalek, presented a lecture on the *Hydrogeologic investigation of the Four Corners Study Area, Gallatin, County, Montana* to a Montana State University Honors College, Climate Science and Policy class.
- Director of Earthquake Studies Mike Stickney helped to plan and organize the upcoming Great Montana ShakeOut, a state-wide earthquake drill scheduled for Wednesday October 22, 2014 at 10:22 a.m. More than 120,000 Montana residents have registered for this exercise sponsored by nine Montana organizations, including the Montana Bureau of Mines and Geology and Montana Tech.
- On September 25, 2014 MBMG Hydrogeologists Jon Reiten and Kevin Chandler presented to the Conservation District's Area-2 Group meeting in Miles City, Montana a discussion about groundwater development related to energy and the potential impact on eastern Montana's Fox Hills-Hell Creek aquifer system.