



Greetings from Montana Technological University,

I am excited to share our 2021-22 Year-In-Review! Despite the uncertainty in our world, Montana Tech has achieved many notable accomplishments. We continue to have the highest retention rate in the state of Montana, along with the highest return on investment and lowest debt upon graduation. These things, coupled with outstanding faculty and staff, solid programs, and committed and talented people, make for a winning combination.

Following are some highlights from the year, but this list is not exhaustive. There are numerous research projects, talent performances, poster sessions, names on patents, club activities and much more that are points of pride. Despite the challenges presented by the pandemic, we have continued to adapt and excel.

Our new strategic plan—deliberately distinct—articulates what Montana Tech is. What we do matters. Our goal is to provide our students with a transformative experience that prepares them to be leaders in their careers and community and that's exactly what we are doing. We have momentum on our side and are moving at the speed of success.

We will continue to adapt to meet the challenges we inevitably will face. What will not change is our mission to provide a transformational student experience that prepares leaders in science, engineering, and technology with the purpose of benefitting humanity while meeting the changing needs of society. We are determined doers, and the world needs us and the work we do now more than ever.

Thank you,

Les

Les P. Cook
Chancellor, Montana Technological University





LESARS IMPACT MONTANA TECH NURSING

Dave and Sherry Lesar made the **most significant gift in the history of the university** this past year. The gift was announced during a press conference in front of a packed room of faculty, staff, students, friends, and community members. The donation named the Montana Tech Nursing Department, the Sherry Lesar School of Nursing. The donation will grow and sustain the nursing program's quality and impact the students, faculty and curriculum. Funds from the endowed gift will be used to provide student scholarships, professional development opportunities for faculty, leadership training, and advanced degrees including a plan to offer a master's degree in nursing education in the next five to seven years. The donation from the Lesars will also support the operation of the Lesar Family Nursing Simulation Center on campus.

[Read more](#)





CHANCELLOR'S AWARD OF DISTINCTION

The university awarded the **first-ever [Chancellor's Award of Distinction](#)** to alumnus Ryan Lance. The new award is the highest honor conveyed by Montana Tech in recognition of an alumnus or friend of the university whose outstanding personal and professional accomplishments and community service have brought distinction to Montana Tech. The award is given at the sole discretion of the Chancellor.

Ryan was featured in the [fall 2021 edition of MNews](#). The story written by David McCumber of the Montana Standard talks about Ryan's impact and leadership.



GOLDWATER AWARDEE

Montana Tech undergraduate Baylie Phillips was awarded the **2022 Barry M. Goldwater Scholarship** and the **Montana Student Volunteer Award**. The Goldwater Scholarship is the most prestigious undergraduate scholarship awarded in the natural sciences, mathematics, and engineering in America. Phillips also received the Montana Student Volunteer Award by the Governor's Office of Community Service. Phillips, a junior majoring in Metallurgical and Materials Engineering, is mentored by Jerry Downey, Professor and Department Head of Metallurgical and Materials Engineering; Avimanyu Das, Associate Professor in Metallurgical and Materials Engineering; and Zach Cordero, Assistant Professor in the Department of Aeronautics and Astronautics in the School of Engineering

at Massachusetts Institute of Technology. Her research has encompassed a broad array of disciplines but is focused on exploring the complete life cycle of material, from fabrication, testing and evaluation, secondary processing techniques, and ultimately removing materials from environmental systems. After completing her degree programs, Baylie plans to pursue a doctorate in Materials Science.

[Read more](#)



RESEARCH UPDATE

Externally-funded research projects in FY22 rose to almost \$32M, which represents a four-fold increase over FY21. A major benefit of these research activities is increased opportunity for our students, including use of \$2.6 M in new equipment for FY22-23.

Montana Tech has long seen undergraduate research as an essential avenue to realize our student-centric education mission, as well as evidence of our “determined doer” mantra. The increased recognition by external entities of our research and scholarly contributions demonstrate that Montana Tech’s faculty have high value to external stakeholders in nationally relevant and emerging areas of need.

As an example, in the upcoming year the [Center for Advanced Materials Processing \(CAMP\)](#) is beginning work on two major research awards. One involves advanced manufacturing work and will deliver high-temperature sensors and instrumentation, strategies that increase the range and safety of unmanned aerial vehicles (UAVs), and novel techniques for air and water purification. In collaboration with the Montana Bureau of Mines and Geology (MBMG), the second leverages Montana Tech’s legacy as a school of mines with expertise in mineral identification and extraction. This project seeks to lay the groundwork for economically and environmentally utilizing sound domestic Rare Earth

Element (REE) sources to escape dependence on foreign REE sources and ensure America's strategic dominance.

In addition to CAMP and MBMG, many faculty have contributed to record research expenditures over the past year. Projects range from supporting underrepresented (both economically and demographically) students, ecological restoration, partnerships with tribal colleges, and more.

Looking to the future, through the support of alumni, Montana Tech has initiated the Chancellor's Distinguished Fellowship program to recruit outstanding graduate students that might not otherwise venture to Montana. The initial cohort of students will join us in the Fall. This cohort represents exceptional students from across the country, all with significant prior research experience. Additional efforts support the undergraduate research program, with an anticipated doubling (via alumni donation) of funded undergraduate research projects this summer.

To follow research activities, visit <https://www.mtech.edu/research/>.



REVITALIZING CERA

Montana Tech is renewing its commitment to conduct environmental remediation, restoration, and reuse research with the **reimagination of its Center for Environmental Remediation and Assessment (CERA)**. The Center focuses on research and education that develops sustainable and reliable waste management technologies that are innovative, scalable and effective, in support of communities, industry, and government.

Dr. Robin Bullock has been appointed the interim director of CERA on campus. Under Bullock's leadership, CERA will broaden its charge creating greater value around waste management, and beneficial reuse of waste materials and reclaimed lands.

The collaborative research program focuses on physical and societal aspects of environmental impact and restoration/reuse. The linked research projects will evaluate opportunities for resilient, effective, and value-added remediation and restoration of

impacted lands—thereby reducing the nation’s protracted site clean-up and underutilization of remediated properties.

[Read more](#)



METALLURGICAL AND MATERIALS ENGINEERING HONORED

The American Mining Hall of Fame will celebrate the **centennial anniversary of the Department of Metallurgical and Materials Engineering** by issuing a special citation at the 40th Annual Awards Ceremony presented by the Mining Foundation of the Southwest. The ceremony will take place on December 3, 2022 in Tucson, Arizona.

In its 100 years, the Department of Metallurgy and Materials Engineering has solidified its reputation as a top choice for students studying metallurgy, mining, and materials science. The Department features a Bachelor of Science degree program in Metallurgical and Materials Engineering and a Master of Science degree program in Metallurgical and Mineral Processing Engineering. It is also heavily involved in the Master of Science program in Materials Science and Engineering and the Materials Science Ph.D. program.

[Read more](#)





BUILDING TOMORROW'S WORKFORCE

Montana Tech's Highlands College was awarded a **\$1M in funding from Butte-Silver Bow** to support workforce development. After a presentation by Karen VanDaveer, interim dean, and her team, the workforce development initiative was approved with overwhelming support. Highlands College will develop and offer the following critically important workforce training programs to assist the City-County in rebuilding the local economy and the employment shortcomings that have been exacerbated by the COVID-19 pandemic. The job skill retooling programs are in high demand by local employers and include Construction, Welding, and Machining Technology, Automotive, Networking and Cybersecurity, Healthcare, Heavy Equipment, School to Work Scholarships, Lifeguard Training, and Commercial Drivers' & Regional Testing Center.



DELIBERATELY DISTINCT

This year, the university launched a **new strategic plan, Deliberately Distinct**. The plan provides a platform for fulfilling Montana Tech's special focus to meet the needs of our students, the state of Montana, and humanity as a whole. With a long history of success, the plan not only positions us for the future, but accelerates our commitment to students, distinctive programs, and a robust and healthy campus.

Thank you to the all who served on team or provided comments, feedback, and initiative ideas. We encourage you to visit the [strategic planning website](#) to learn more about the plan. If you have questions or comments about the plan, please email them to strategicplan@mtech.edu.



Congratulations

Lorri Birkenbuel was named the 2021 Distinguished Industrial Hygienist by the Pacific Northwest Section of the American Industrial Hygiene Association (PNS-AIHA) at the Northwest Occupational Health Conference this fall. Birkenbuel, who serves as the Montana Local Educational Officer with the PNS-AIHA, was recognized by her peers for her outstanding contributions to the profession of Industrial Hygiene. Lorri began teaching courses in the undergraduate Occupational Safety and Health program and graduate Industrial Hygiene programs in 2016. In addition to her teaching responsibilities, she has served as the faculty advisor for the Big Sky American Society of Safety Professionals student chapter. She has directed leading-edge research on respiratory protection practices associated with the COVID-19 pandemic. Before returning to Montana Tech, the SHIH alumna managed environmental health and safety professionals' teams for a multinational energy company.



Professor Emeritus Hsin-Hsiung received the prestigious honor of the 2022 Frank F. Aplan award. Dr. Huang taught and performed research in the Metallurgical & Materials Engineering Department at Montana Tech for 40 years before his retirement in 2021. Dr. Huang specialized in process analysis and modeling and created StabCal, a thermodynamic calculation and process simulation software package that is used by industry throughout the world. Dr. Huang and his wife, ShuMing, make their home in Butte and have two sons, Nicolas and Oliver.



Dr. Marisa Pedulla was named a Fellow of the American Association for the Advancement of Science (AAAS). Election as an AAAS Fellow is an honor bestowed upon AAAS members by their peers. Faculty emeriti, Beverly Hartline Ph.D., was named to the 2021 cohort of Sigma Xi fellows. Sigma Xi is the scientific research honor society.

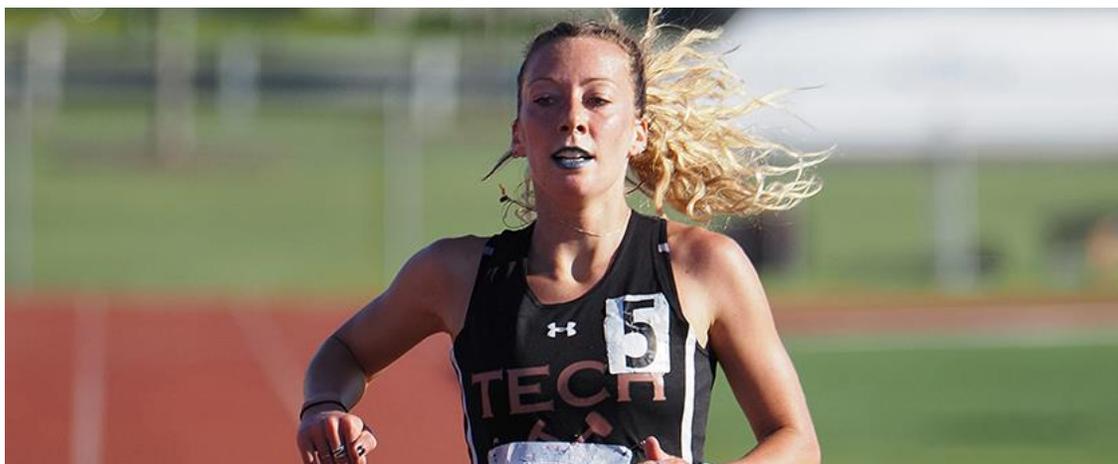


Amy Verlanic received the Walter O. Mason Award at the Council for Opportunity in Education (COE) - 40 Years of Good Trouble: Equity, Access, and Success annual conference in Atlanta, GA. The Walter O. Mason Award is the highest honor awarded by the COE. It recognizes individuals for outstanding contributions to college opportunity programs and the advancement of educational opportunities for low-income, first-generation students and students with disabilities.



Many of our faculty and staff received awards this year. You all make us so proud. Thank you for all you do. The awards above are just a few from the past year. As we enter the next fiscal year, we are hoping to compile a list of all the awards faculty and staff receive. We will post the awards on the website [here](#). Please send your award details to abadovinac@mtech.edu.





FOUR-TIME NATIONAL CHAMPION

We are honored to celebrate Becca Richtman, a four time national champion. Becca was recently named the Women's Track Athlete of the Year by the U.S. Track & Field and Cross Country Coaches Association (USTFCCCA) for the 2022 NAIA Outdoor Track & Field season.

Richtman, from Elburn, Illinois, scored 26 points at the NAIA Outdoor Track & Field Championships, winning the 10,000 meters (35:13.93) and finishing second in both the steeplechase (10:22.79) and 5,000 (17:07.18). The Orediggers finished eighth at the national meet.

She scored 40 points at the Frontier Conference Outdoor Championships and was named Track Athlete of the Meet thanks to individual victories in the steeple, 5,000 and 10,000, a runner-up finish in the 800, and was a member of the Orediggers' runner-up 4x400 relay. Richtman led the Orediggers to their first Frontier Conference Championship in the first year as a full program.

Member coaches of the USTFCCCA voted on the athlete of the year honors following the NAIA Outdoor Track & Field Championships this past weekend in Gulf Shores, Alabama, but considered performances during both the regular season and NAIA postseason.

Richtman, a senior, concludes her career with the Orediggers with four national championships and 10 All-American honors in cross country, indoor and outdoor track & field. Earlier this year, she was the Regional Track Athlete of the Year in indoor track, helping lead the Orediggers to a sixth-place finish at the NAIA Indoor Track & Field Championships.





FRONTIER CONFERENCE CHAMPIONS

The Men's Basketball team had their most successful year in recent history, earning their first Frontier Conference regular-season title since 1993 and won their first Frontier Conference Tournament crown since 1999. The Orediggers traveled to Texas and won the first-ever NAIA National Tournament game and their season ended with a loss in the second round. The Orediggers finished with a 27-7 overall record, the most wins in school history. Three Orediggers received all-conference honors as well as Derrius Collins named Defensive Player of the Year, Keeley Bake named the Sixth-Man of the Year, and Caleb Bellach named Newcomer of the Year. Sindou Diallo and Bellach were selected NAIA Honorable Mention All-Americans.



CROSS COUNTRY FINISHES SECOND SEASON STRONG

The Cross Country teams finished their second year as a program, with both teams finishing second at the Frontier Conference Meet under head coach Zach Kughn. The Oredigger men had one all-conference selection, and the women had two, with senior Becca Richtman finishing in second place. The women's team received an at-large bid to the NAIA National Championships and finished in 11th, with Richtman taking fourth place,

earning a spot on the NAIA All-America Team. The Oredigger women were ranked No. 11 in the NAIA Post Season Coaches' Poll.



COACH SAMSON FINISHES FIRST SEASON

The Football team finished its first season under head coach Kyle Samson who had to wait an extra year due to COVID to take the field. The Orediggers finished with a 5-5 overall record. Coach Samson got his first win as a head coach against a ranked opponent and league-leading Rocky Mountain on September 18th. Six Orediggers were named all-conference, and the team led the Frontier Conference in Academic All-Conference for the third straight year, with 44 student-athletes making a 3.25 GPA.



SUCCESS ON THE COURSE

The Men's Golf team finished in second, and the Women's team took third at the Frontier Conference Tournament in April under head coach Sean Ryan. Senior Sean Ramsbacher finished second for the individual title by just two strokes. Two Oredigger women finished

in the top 10 at the conference tournament. Ramsbacher won the Montana Tech Invite last fall and was one of three men named all-conference. Four women were named all-conference, with three of them being freshmen.



INDOOR TRACK AND FIELD

The Women's Indoor Track & Field team competed for the first year as a full team under coach Kughn. Three athletes from the women's team qualified for the NAIA Indoor Track & Field National Championships. Senior Becca Richtman nearly pulled off the "triple crown" at the national meet winning titles in the mile and the 3,000 meter races and finishing second in the 5,000 meter. Richtman scored 28 points for the Orediggers, and Tech finished in sixth place overall. Richtman was named the Track Athlete of the Meet and was also named the USTFCCCA Regional Track Athlete of the Year. The Oredigger women finished ranked No. 6 in the NAIA Coaches' Poll.



A TEAM EFFORT

The Track & Field teams finished their first year of competition as a full team. The Oredigger women won the Frontier Conference Championship, and the men took fourth place. The women defeated last year's reigning champion Carroll College with 226 points to 206. The Oredigger women had 13 athletes earning 34 all-conference awards and seven men earning 12. The Tech women qualified five athletes in eight events for the NAIA National Championships. Senior Becca Richtman scored all of the Oredigger points, finishing with her fourth national championship in the 10,000 meter and took second in the

3,000 meter steeple chase and the 5,000 meter. Richtman was named the Track Athlete of the Meet and finished her career with ten All-American honors. The Oredigger women finished the year ranked No. 8 in the NAIA Coaches' Poll.



VOLLEYBALL SUCCESS

Volleyball reached the NAIA National Tournament Final Site under head coach Brian Solomon for the fourth time. The Orediggers just missed the final eight in the national tournament in a tie-breaker finishing the season with a 23-10 overall record. Five Orediggers earned all-conference honors, and Maureen Jessop was named a NAIA Honorable Mention All-American. The Orediggers finished the year ranked No. 14 in the NAIA Coaches' Poll.



LEADING THE LEAGUE IN ACADEMICS

Women's Basketball led the league in Academic All-Conference honorees this year. The team finished the season with an overall record of 13-19 under head coach Carly Sanon. The Orediggers reached the semifinals of the Frontier Conference Tournament, falling to Rocky Mountain College. Tavia Rooney was selected first-team all-conference and Dani Urick was selected second team.



CAMPUS TRANSFORMATIONS



The [Marcus Daly Dining Hall](#) received a major upgrade giving faculty, staff, and students an open and bright space to have a meal and gather together. The new brighter and open location is a great place for faculty, staff, and students to enjoy a meal at the the Chef's Table, the salad bar, the pizza or deli station, the grill, or dessert station. Make sure to visit the dining hall to see all that Sodexo has to offer.

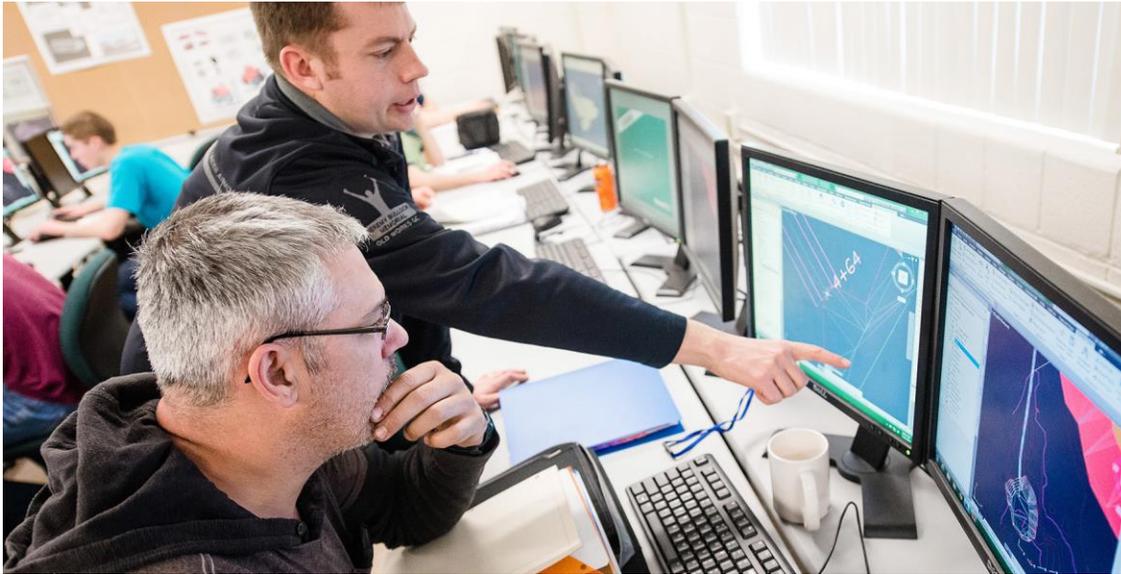


CARES funding provided resources for much-needed upgrades in **research and teaching laboratories** in the Chemistry and Biology Building shared by Biological Sciences, and Chemistry and Geochemistry. Funds were used to upgrade and optimize existing space to accommodate growing undergraduate and graduate enrollment in these disciplines. Upgrades include both laboratory benchwork and equipment used by both departments as well as others across campus. Outdated equipment used heavily in student labs was replaced with instrumentation reflective of current technology, and capacity was expanded by purchasing sufficient equipment to accommodate the needs of students and faculty. Upgrades to graduate student workspace in the Museum Building is in progress.



The **Lesar Family Nursing Simulation Center** opened this spring on the first floor of the Science & Engineering Building. The Simulation Center was made possible by a gift from Sherry and Dave Lesar. The high-tech simulation center will significantly enhance the offerings in the nursing program. Within its 5,000 square feet center will offer four simulation suites with the ability to flex space to hospital, home, or office settings, debriefing rooms, and telehealth rooms. In addition, the center will include a nurse's station and medication room.





This past year has seen real effort towards improved **online courses and classroom technology**. CARES money supported our online and face-to-face courses with new memberships to professional development providers such as EDUCAUSE, Academic Impressions, and Quality Matters, an international leader in quality online course design. In addition, video recording and streaming have been made much easier by joining the Montana University System's contract with video platform Panopto, that provides new and more efficient ways to stream and store videos in face-to-face and online courses. And lastly, and probably most exciting, Tech hosted OCHE's Extended Learning Institute (XLI) in April, bringing a diverse group from across Montana to Butte to share how they are using innovative approaches to teaching and learning. Overall, it has been an exciting year, and we look forward to launching some of the new ideas we have laid the groundwork for over the past months.



During this last year, **Information Technology** utilized CARES funding to facilitate several improvements in Montana Tech's information technology infrastructure. All building network switches have been replaced increasing the reliability and redundancy of the network at both North and Highlands campuses. 50 Wireless Access Points are currently being configured and deployed. Some of these access points will be used to update older versions that are likely to fail and some will be used to improve campus wireless coverage in the following buildings: NRRC, ELC, URC, Library, HPER, MAIN, HSB and the SUB. Along with these changes, Highlands campus was upgraded with a fiber connection to North Campus, eliminating the need to rely on obsolete microwave technology for network connectivity.

With the help of Montana Tech's Facilities crew 46 classrooms are receiving technology upgrades. These upgrades include either new projectors/screens/Smart Podiums or Smart Boards, HuddleCam Tracking cameras and upgraded microphones. The majority of these upgrades are intended to be completed by Fall 2022.

Papercut Mobility Print was implemented this last year. To find out how to print from your mobile device on campus visit our knowledgebase article [here](#) or navigate to our knowledgebase at kb.mtech.edu and search for 'mobile print.'

FY22 also saw the release of the MyMtech mobile app, which contains the same information available as the desktop version (my.mtech.edu). This app allows the users easy access to Moodle, Banner/OrediggerWeb, and campus communications as well as any other application a user may need to access. The DegreeWorks Application was installed and launched during FY22 as well. This degree planning and audit system integrates with Banner/OrediggerWeb and assists academic advisors and students with degree planning and 'what if' scenarios regarding a change of major for that student. Etrieve/Softdocs Workflow & Forms was also purchased this last year enabling the pilot phase of electronic timecard to be launched in early May. More departments and timecard types are planned to come on board through FY23.





Over the last two years, the university has renovated the Reed House directly behind the Chancellor's residence. The Reed House is a Craftsman-style home built in approximately 1915 by Alexander and Agnes (Leys) Christie, both immigrants from Scotland. Alexander and his brother-in-law James Leys ran a successful jewelry store in Uptown Butte for decades. Family members occupied the home until 2015, and then due to the central campus location, Montana Tech was able to purchase it.

The home and yard were in poor condition when purchased, and recent efforts have updated the exterior finishes and landscaping around the outside. The Reed House features original woodwork, beautiful built-ins, and light fixtures, making it an appealing possibility for the campus from both an architecture and location standpoint. The university hopes to secure funding from a donor or foundation to complete interior renovations and establish a program or initiative that aligns with the university's strategic plan.



IT'S A GREAT DAY TO BE AN OREDIGGER

Montana Technological University was named a [best college for veteran's](#) by Military Times.

Montana Technological University's Software Engineering program has landed on a list of the [top bachelor's degree programs](#) in the nation.

EDsmart ranked the Sherry Lesar School of Nursing among the [best BSN programs](#) in the nation for 2022. The Sherry Lesar School of Nursing is the only university in Montana to appear on the list, and comes in at #19.

Best Accredited Colleges named Montana Tech's electrical engineering program to their ranking list of the [Best Electrical Engineering Degree Programs](#) in the United States.

Best Accredited Colleges named Montana Tech's mechanical engineering program to their ranking list of the [Best Mechanical Engineering Bachelor's Degree Programs](#) in the United States.

University Headquarters named Montana Tech as the [top bachelor's and master's degree-offering school](#) in the state of Montana. On the bachelor's degree list, Montana Tech was followed by Montana State University and Carroll College. The master's degree list saw Montana Tech, Carroll College, and Montana State University-Northern as the top three universities.

The Princeton Review has listed Montana Technological University as one of 209 outstanding institutions in the nation as a [Best Value College 2022](#) and as a Top 50 Best Value Public College.

Montana Tech's nursing program has once again been named the top Bachelor of Science in Nursing (BSN) program in the state of Montana. Nursing Process named the university to its national list of "[Best BSN program in Every State for 2021](#)."

The National Strength and Conditioning Association (NSCA) has approved and recognized [Montana Tech's Exercise and Health Sciences Program](#) through the NSCA Education Recognition Program (ERP) for three years.

View more facts, rankings, accolades and awards [here](#).

