President’s Update September 6, 2022
Agenda

• AY2021-22 Highlights
• State of Mines Fall 2022
• Progress toward MINES@150
  • Campus Infrastructure
  • E&I Ecosystem
  • Professional Development
  • Campaign for MINES@150
• President’s DI&A Awards
• Q&A
Colorado School of Mines recognized with R1 research university classification

Only 146 universities out of nearly 4,000 nationwide receive the “Very High Research Activity” Carnegie designation.

Awards Expenses

MINES@150 goal

Graduate student, Matt Tillery, prepares a silicon sample for photolithography in the clean room on campus. Quantum sciences and engineering is among the growing research areas at Colorado School of Mines. (Photo by: Rachel Leinter/Colorado School of Mines)
Well-Positioned for New Federal Funding Opportunities

• Large increases for Basic and Applied R&D
• FY23 S&T budget $111B proposed (+29%)

• National Priorities:
  Health • Climate • Energy • Critical Materials • Innovation for Equity • National Security and Economic Resilience • STEM Education • Emerging Technologies

• Bipartisan Infrastructure Law (BIL)
  • Hydrogen Hub – Mines in CO/WY/UT/NM team

• CHIPS and Science Act
  • New NSF Technology Innovation & Partnerships Directorate
  • Semiconductor research, workforce development
AY2021-22 Highlights

**Spotlight on Mines: University featured on 'The College Tour'**

*Colorado School of Mines shines in season four of the TV series available on Amazon Prime Video in April*

**Mines advances to NCAA DII football semifinals for first time in program history**

*Orediggers (12-1) will take on Valdosta State (11-1) on Saturday, Dec. 11 in national semifinal game airing live on ESPN+

6th Consecutive All-Sports RMAC Competition Cup
6th Nationally in Learfield Director’s Cup Rankings

www.minesnewsroom.com
AY2021-22 Highlights

Mines team places first at American Society of Civil Engineers’ national competition

Colorado School of Mines team wins top honors at 44th Intercollegiate Mining Competition

Space Resources students take second, third place in NASA Break the Ice Challenge

5 Mines Students named NSF Graduate Research Fellows

Mines Freshman wins Colorado Governor’s Award for community building efforts

www.minesnewsroom.com
AY2021-22 Highlights

Jamal Rostami selected as UCA Outstanding Educator Award
Honor is presented to exceptional professors and teachers by the Underground Construction Association

Kamini Singha wins SEG Reginald Fessenden Award
Honor recognizes Singha's "extensive and significant contributions of applied geophysics to hydrogeophysics"

Mines department head wins Society of Petroleum Engineers international award
Jennifer Miskimins awarded 2022 Distinguished Achievement Award for Petroleum Engineering Faculty
AY2021-22 Highlights

Faculty Awards honor 9 Mines professors for teaching, research, mentorship

Computer Science Department — aka CS@Mines — won four awards, including two for Associate Professor Tom Williams
AY2021-22 Highlights

Mines students who saved dog from avalanche appear on The Ellen DeGeneres Show

Bobby White and Josh Trujillo were backcountry skiing in Berthoud Pass when they leaped into action to save a dog trapped by an avalanche.

Meet The Donkeys Who Duked It Out To Become The New, Long Face Of The Colorado School Of Mines

By Paolo Zialcita · Sep. 3, 2021, 4:00 am

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www.minesnewsroom.com
State of Mines - Fall 2022 - Key Points

• Largest incoming group of undergraduate students; fewer graduate students

• Strong financial position; challenged by inflation, job market, stock market, low graduate enrollment, and competition for students

• Well-positioned for new funding opportunities in areas of national need and global importance (energy, minerals, STEM education, workforce development)
State of Mines - Fall 2022 - Key Points

- Expansion of infrastructure and services continues - to support MINES@150 and growth in undergrad students, faculty, and research
- Key MINES@150 initiatives taking shape & solidifying (E&I Ecosystem, professional development, new academic programs, DI&A, Mines Online)
- External support is fueling MINES@150 success (philanthropy & alumni engagement); fundraising is challenging in current economy
- Increasing efforts to raise Mines’ profile ("Top-of-Mind/First-Choice")
AY2022-23 Incoming Undergraduate Students

- **Most ever** incoming students (1530 first-year + 148 transfer students)
- 51% CO Residents
- 48 other states (47%) and 18 other countries (2%) represented
- Most ever women (522; 32%)
- Most ever URG (445, 27%)
- Most ever Hispanic/Latino (212, 13%)
- Most ever First-Gen students (289; 17%)

3.84 AVG High School GPA
45% increase in students with >4.0 HS GPA
31 AVG ACT
1382 AVG SAT
AY2022-23 Incoming Graduate* Students (Fall 2022)

Fewer Incoming Graduate Students

- 499 total post-bac students (13% decline from previous 3-year Fall average)
- 77% US citizens; 23% international
- 114 international students (similar to the max number in Fall the last 5 years)
- 113 new PhD students (10% lower than previous 5-year Fall average)
- 277 non-thesis MS + certificate students (11% drop from 3-year Fall average)
- Less diverse than undergraduate student demographics

* - all post-bac options included (PhD, MS, certificates)
Progress Toward MINES@150 Macro Design Targets

<table>
<thead>
<tr>
<th>Headcount</th>
<th>Mines @150 Design</th>
<th>Fall 2022 Values</th>
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</thead>
<tbody>
<tr>
<td>Total Students</td>
<td>7500</td>
<td>7300</td>
</tr>
<tr>
<td>• Undergraduate</td>
<td>5000</td>
<td>5718</td>
</tr>
<tr>
<td>• Masters/Certificate</td>
<td>1600</td>
<td>935</td>
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<td>• Doctoral</td>
<td>900</td>
<td>644</td>
</tr>
<tr>
<td>T/TT Faculty</td>
<td>250</td>
<td>216</td>
</tr>
<tr>
<td>Teaching Faculty &amp; Professors of Practice</td>
<td>90</td>
<td>116</td>
</tr>
<tr>
<td>External Research Funding</td>
<td>$85M</td>
<td>$95M</td>
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AY2022-23 Budget* ($M)

**Revenue***
- Tuition and Fees: $198M (59%)
- Housing, Dining & Other: $39M (12%)
- State Funding: $37M (11%)
- Foundation Support: $34M (10%)
- Other: $11M (3%)

**Expenses***
- Our People: $170M (50%)
- Operating Expenses: $74M (21%)
- Financial Aid: $57M (16%)
- Debt: $23M (7%)
- Maintenance & Renovations: $20M (6%)

**Challenges**
- Inflation
- Job Market
- Stock Market
- Grad Enrollment
- Fewer Students Going to College

* - excludes direct expenses budgeted for research grants/contracts
Fewer Students Going To College

College Enrollment among Recent High School Grads Declined Again in 2021

June 7, 2022 by Jessica Nelson

College enrollment among recent high school graduates fell to 61.5% in 2021, a drop of 0.9 percentage point after a larger decline of 3.5 percentage points in 2020. For the prior 15 years, the overall share of recent high school graduates that are attending college by October of the year they graduated hovered between 66% and 70%. The 2021 college enrollment rate is the lowest since 2001.

While it might make logical sense to think that enrollment rates of recent high school graduates would depend to some degree on the business cycle, in the last couple of decades the decision to attend college immediately after high school doesn’t appear to change much in economic expansions versus recessions. Even the pandemic, which moved so much training online, only caused a dip of a few percentage points in the overall share of recent graduates attending college. However, the labor market experiences of recent high school graduates vary considerably with the strength or weakness of the economy, with young people graduating from high school during recessions facing much higher unemployment rates and more difficulty finding work, regardless of college enrollment.

To thrive as a **mid-sized** and **uniquely STEM-focused** university, MINES needs to be a **top-of-mind and first-choice** university for students, public and private partners, and faculty and staff.

**A Top-of-Mind First-Choice University**

- A leader in educating STEM students and professionals
- A preferred partner for talent, solutions and life-long learning

**An inspiring and caring community in which to learn, explore, live and work**

**Accessible and attractive to qualified students from all backgrounds**

**A producer of differentiated and highly desired STEM-educated leaders**

**A go-to place for use-inspired research and innovation needed to solve challenges facing industry, society, and the environment**

**The exemplar for alumni affinity, visibility and involvement**
MINES@150 – The Imperatives

To achieve our MINES@150 aspirations, we must:

• grow to 7500 students (5000 undergraduate + 2500 graduate/post-bac students)
• expand pathways for, and be attractive and accessible to students we want at Mines
• offer a unique signature student experience with deliberate professional development, and achieve best-in-class student success outcomes and ROI
• produce distinctive graduates: highly-valued, future-prepared and adaptable
• re-align our portfolio with the future; expand offerings and diversify delivery
• grow the reach and impact of our R&D and E&I efforts
• build/acquire the infrastructure needed for MINES@150
• grow/attract the leaders, faculty, and staff needed for MINES@150
• strengthen affinity for MINES among our students, alumni, and external partners
• attract investment to support our strategic initiatives
re-align portfolio, expand offerings, diversify delivery

- Initial MINES Online building phase
  - 26 Online programs created
  - 240 courses ready by December 2022
  - 3 other priority programs will be ready for AY23

- Focus now on enrollment growth plus a few new strategically targeted programs

- Modest numbers, but encouraging growth
  - +51% growth in FTE’s (Fall 20 to F21)
  - +31% growth in Credit Hours (31%) (Fall 20 to 21)
  - +66% growth in Head Count (Fall 20 to 21)
  - Interest in Mines Online Programs grew by 63% (Fall 21 to 22) & applications increased by 15%*

* - excluding space resources
grow/attract leaders, faculty & staff needed for MINES@150

NEW FACULTY FUN BIOS
2022-2023
Getting to know you!
grow/attract leaders, faculty & staff needed for MINES@150

Relative to 2015:

Moved from <20% Women in T/TT faculty ranks to 29%.

Moved from 25% Women in across all faculty ranks to 33%.
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grow/attract leaders, faculty & staff needed for MINES@150

Dr. Braelin Pantel
Vice President for Student Life

Andrew Moore
Chief Information Officer

Jason Slowinski
Associate Vice President, Infrastructure & Operations
build/acquire the infrastructure needed for MINES@150

- Labriola Innovation Complex and Beck Venture Center should open Summer 2023
- Solar panels are being installed on Steinhauer, Green Center, Rec Center, GRLA, K Lot, etc. (expected to provide 6% of campus daily energy use)
- Early Childhood Education Center groundbreaking anticipated by the end of this year; opening Spring 2024. Located at Tangent Way and 19th Street (Mines Park)
- A new ~850 space Parking Garage with a Classroom Wrap anticipated to start construction Winter 2023. Located west of the Beck Venture Center
- Planning to address our MINES@150 Student Housing capacity goal is underway
- Addressing research growth needs by renovations and working with partners, e.g.:
  - Energy and Minerals Research Facility (USGS + Mines) is anticipated to start construction Winter 2023. Located east of the USGS Earthquake Center
  - CoorsTek Redevelopment at 8th and Washington in downtown Golden
grow the reach and impact of our R&D and E&I efforts

Learn
Create
Launch

Mines | Entrepreneurship & Innovation Meetup
(1st and 3rd Wednesday of the month at 5 PM at the Buffalo Rose)

MINES
McNeil Center for Entrepreneurship and Innovation

Innovation.mines.edu
### Global Energy Future Innovation Forum & Innov8x Challenge

**SEPTMBER 7 – GLOBAL ENERGY FUTURE INNOVATION FORUM**

- **September 7 (9am – noon)** – Innovation Forum Event – Session 1  
  Location: **Bunker Hall, Green Center**

- **September 7 (noon – 1:15pm)** – Innovation Forum Lunch (pre-registration required)

- **September 7 (1pm – 4:30pm)** – Innovation Forum Event – Session 2  
  Location: **Bunker Hall, Green Center**

- **September 7 (4:30pm – 6pm)** – Innovation Forum Networking Reception (pre-registration required)

**SEPTMBER 8 – GLOBAL ENERGY FUTURE INNOV8X CHALLENGE**

- **August 18 (4:30pm – 6:30pm)** – Challenge Problem Sponsor workshop (virtual)

- **August 24 (4pm – 6pm)** – Challenge Pitch Day (Problem Sponsors pitch challenges to students & student teams formed)

- **September 8 (11am – 1pm)** – **Challenge Event** (student teams present solutions) – with networking lunch for everyone  
  Location: **Grand Ballroom, Mines Ben Parker Student Center**

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achieve best-in-class student success outcomes and ROI

<table>
<thead>
<tr>
<th>BS Graduation Rates</th>
<th>4-Year</th>
<th>5-Year</th>
<th>6-Year</th>
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<tbody>
<tr>
<td></td>
<td>66%</td>
<td>82%</td>
<td>83%</td>
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</table>

https://www.mines.edu/careers/

98% Positive Outcome Rate for BS Graduates

Up from 95% at time of graduation

18-MONTH UPDATE FOR BS CLASS OF 2019-2020

Not every student graduates with a secured next step. The Career Center tracks job search progress for students for 18-months after graduation. Post-graduation positive outcomes include:

- Graduates who have accepted positions in areas of industry, government, or military
- Those who have chosen continued education as their next step
- International students who have returned to their home countries

OREDDIGGERS WERE ACCEPTED AT THESE GRAD SCHOOLS:

Boston University
Carnegie Mellon University
Colorado School of Mines
Duke University
Georgia Institute of Technology
IMT Atlantique
Massachusetts Institute of Technology
Northwestern University
Purdue University
Rensselaer Polytechnic Institute
Texas A&M University
University of California, Berkeley

University of California, Los Angeles
University of California, Santa Barbara
University of Colorado
University of Georgia
University of Illinois Urbana-Champaign
University of Texas at Austin
University of Utah
University of Washington
University of Wyoming

87% BS Graduates that Pursued Graduate School did so at Mines
unique signature student experience with deliberate professional development

Engaging Scholarship Communities
The PASCAL Center stewards several scholarship communities and provides students with intentional programming and opportunities for professional and academic development. *Learn More.*

Stewardship of the VIP Program
The Vallejo-Irvine Program for Professional Development aims to supplement Mines students’ technical skills with professional development opportunities that will teach them to successfully navigate their careers. *Learn More.*
Attract investment to support our strategic initiatives

- Investments in Students
- The Mines Signature Student Experience
- Entrepreneurship, Innovation, and Business Programs
- Pursuit of Excellence and Distinction

$36M transferred to Mines from the Foundation last year – the most ever!
## 2022 Mines DI&A AWARDS

### UNIT & DEPT PROGRESS REPORT AWARDS

<table>
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<th>Award Category</th>
<th>Department/Unit</th>
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<tr>
<td>Best in Fostering Dialogue</td>
<td>Library &amp; Museum</td>
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<tr>
<td>Best in Recruitment &amp; Retention</td>
<td>Computer Science</td>
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### PRESIDENT'S CHOICE AWARDS

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<tr>
<td>Academic Department</td>
<td>Petroleum Engineering</td>
</tr>
<tr>
<td>Nonacademic Department</td>
<td>Information &amp; Technology Solutions (ITS)</td>
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</table>

### Best in Shared Responsibility

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<th>Department/Unit</th>
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<tbody>
<tr>
<td>Humanities, Arts &amp; Social Sciences</td>
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<tr>
<td>Geology &amp; Geological Engineering</td>
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### Best in Data & Metrics

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<td>Geology &amp; Geological Engineering</td>
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### DI&A AWARD WINNERS

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Dr. Jennifer K. Ryan</td>
<td>Supporting Student Success, Associate Professor, Applied Mathematics and Statistics</td>
</tr>
<tr>
<td>Megan Rose</td>
<td>Raising Awareness, Senior Budget Analyst, Academic Affairs, Office of Budget and Financial Planning</td>
</tr>
<tr>
<td>Dr. Zhao Han</td>
<td>Creating a Culture of Inclusion – Faculty, Post-Doctoral Fellow and Adjunct Faculty, Computer Science</td>
</tr>
<tr>
<td>Lanie Breckenridge</td>
<td>Creating a Culture of Inclusion – Student, Undergraduate Student, oSTEM President, Metallurgical and Materials Engineering</td>
</tr>
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Campus Town Hall
Fall 2022

Questions?

President’s Update September 6, 2022