Campus Town Hall Fall 2022

COLORADOSCHOOLOFMINES
EARTH • ENERGY • ENVIRONMENT

President's Update September 6, 2022

MINES.EDU

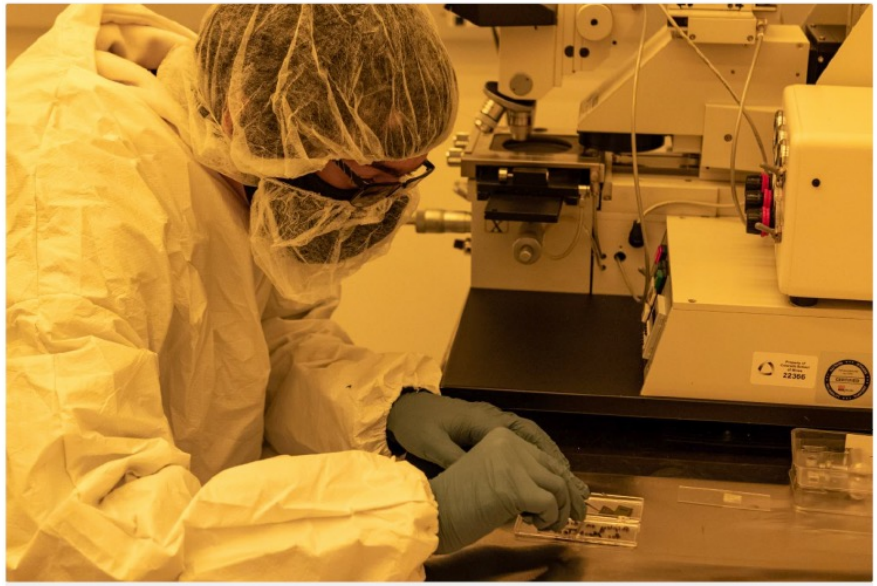
Agenda

- 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

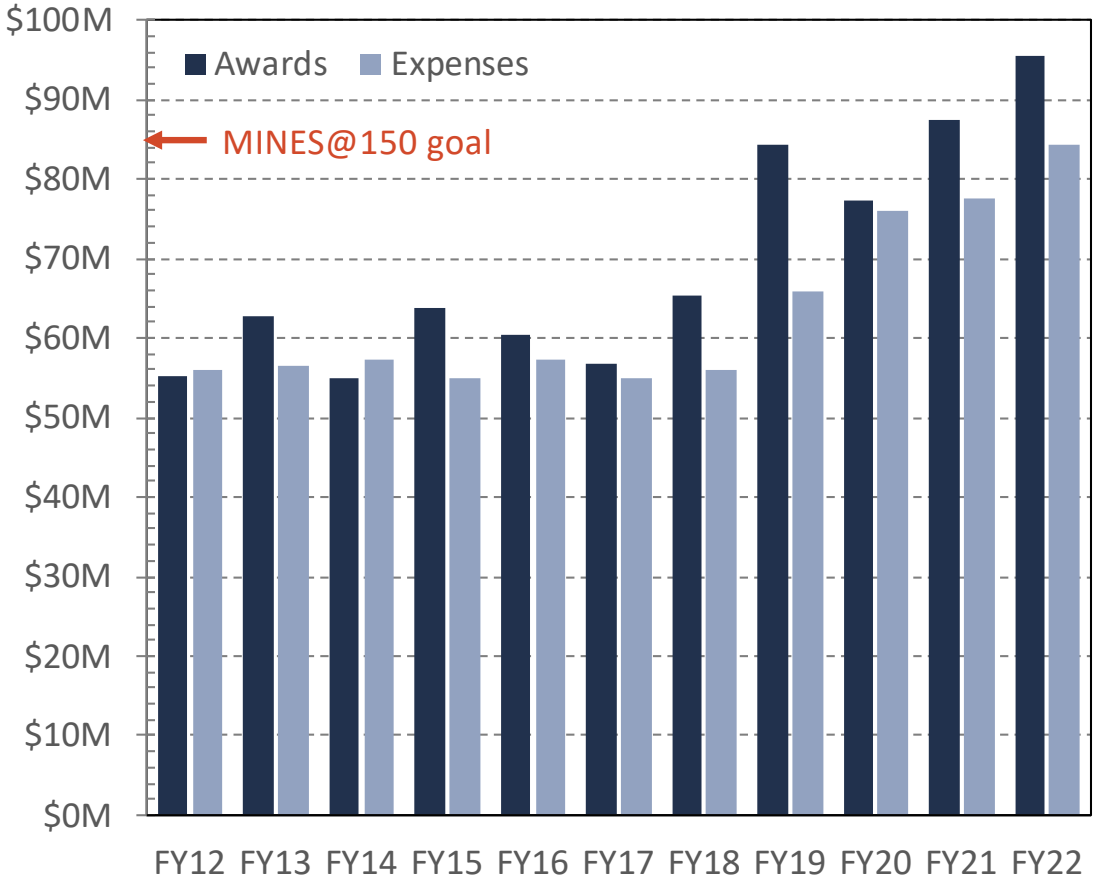
AY2021-22 Highlights

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



Graduate student Matt Tennery prepares a silicon sample for photolithography in the clean room on campus. Quantum science and engineering is among the growing research areas at Colorado School of Mines. *(Photo by Rachael Lamman/Colorado School of Mines)*

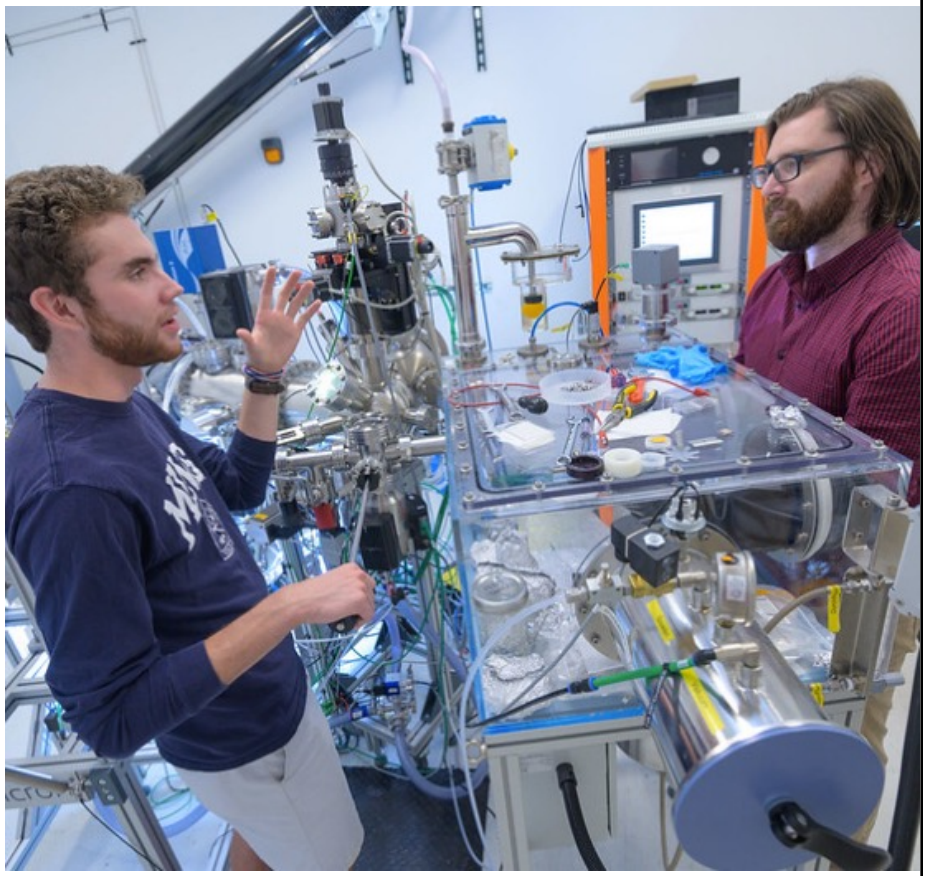


Well-Positioned for New Federal Funding Opportunities

- 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

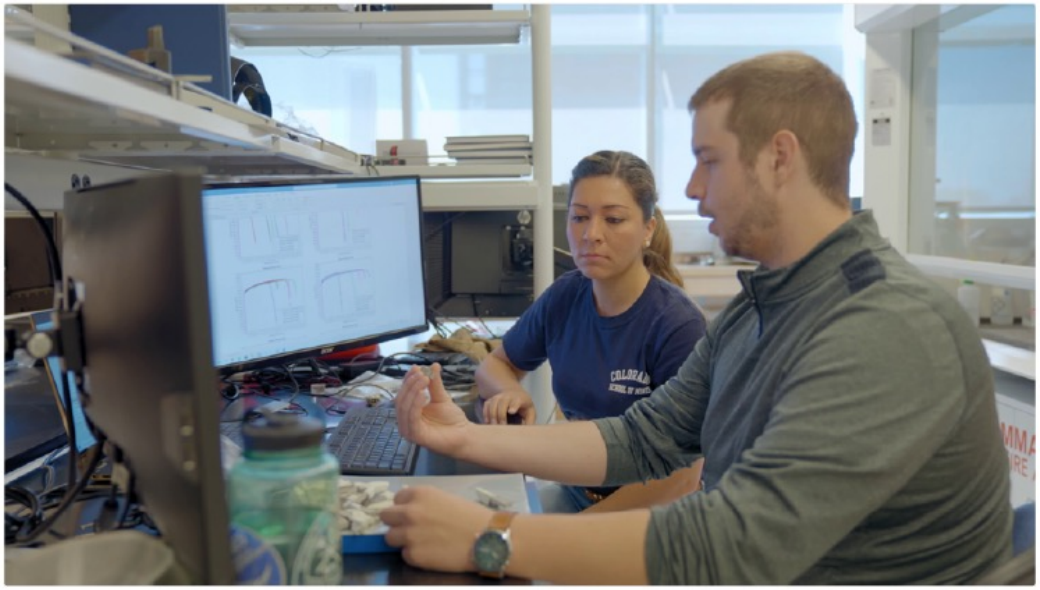
- Bipartisan Infrastructure Law (BIL)
  - Hydrogen Hub – Mines in CO/WY/UT/NM team
- CHIPS and Science Act
  - New NSF Technology Innovation & Partnerships Directorate
  - Semiconductor research, workforce development



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+

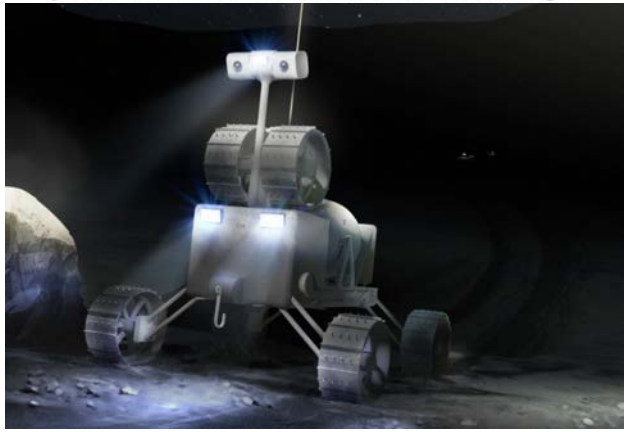
6th Consecutive All-Sports RMAC Competition Cup
6th Nationally in Learfield Director's Cup Rankings

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

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

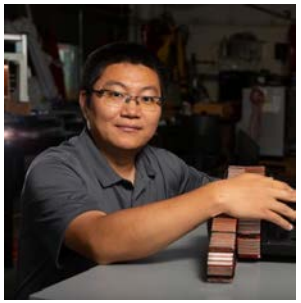
Computer Science Department — aka CS@Mines — won four awards, including two for Associate Professor Tom Williams











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

CPR News

AY2022-23

Oredigger Camp 6.2

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%)

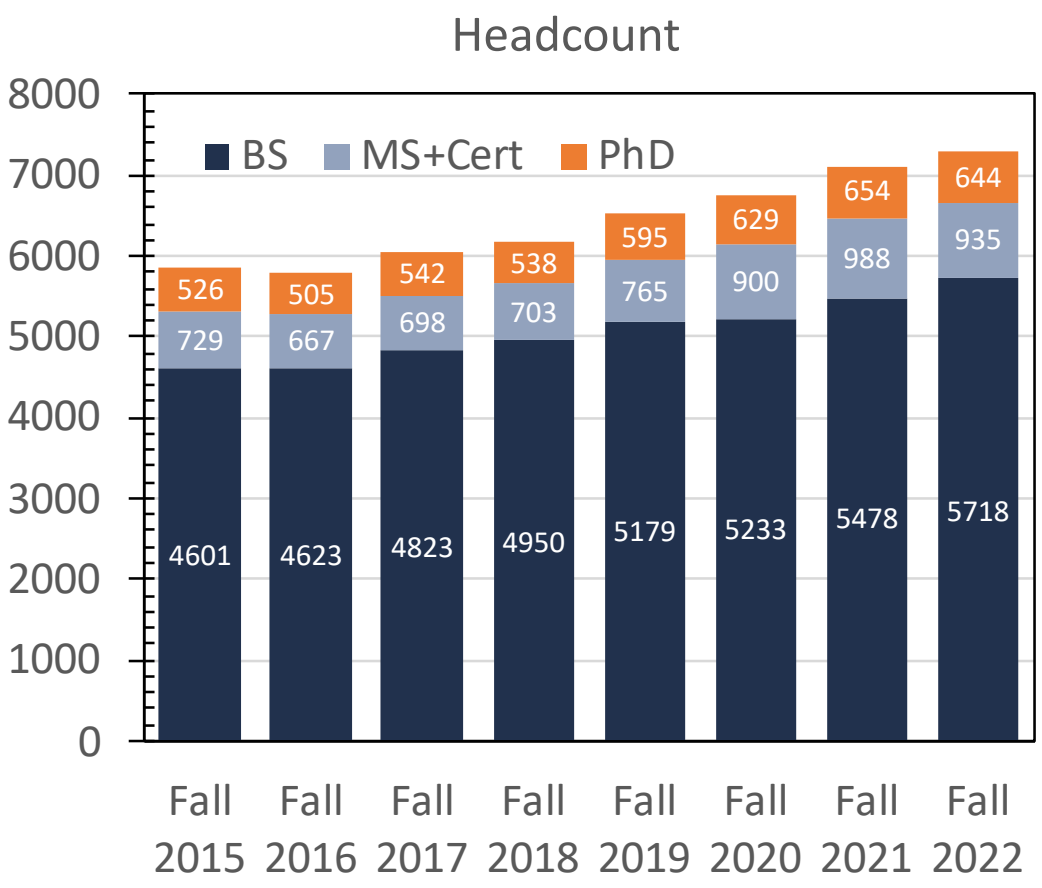
AY2022-23 Incoming Graduate* Students (Fall 2022)

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

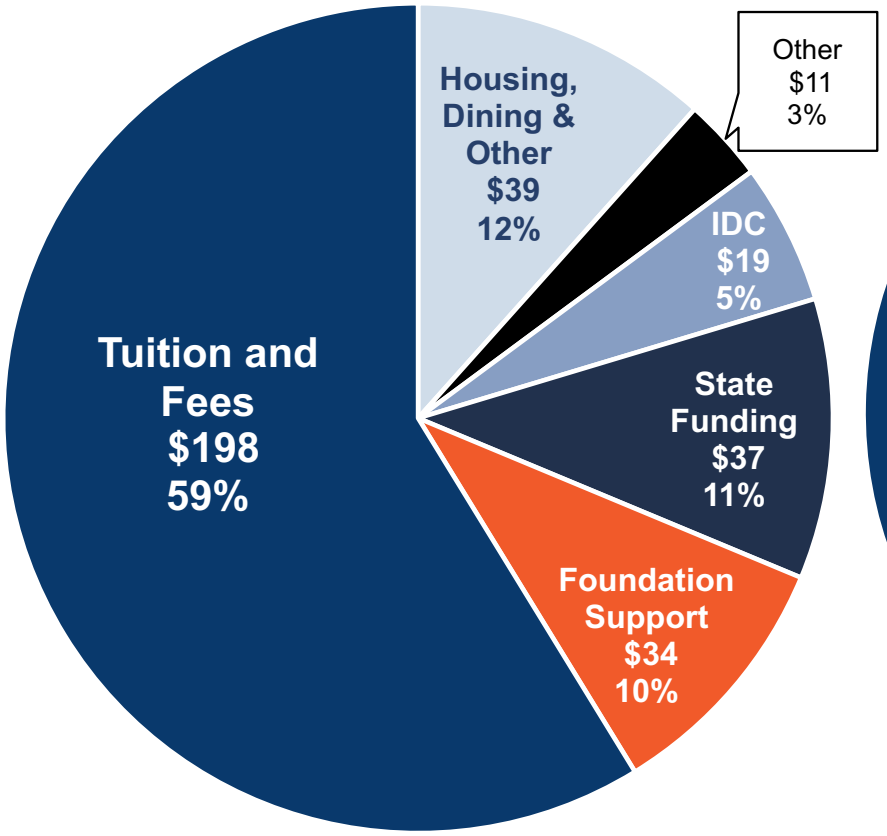
** - all post-bac options included (PhD, MS, certificates)*

Progress Toward MINES@150 Macro Design Targets

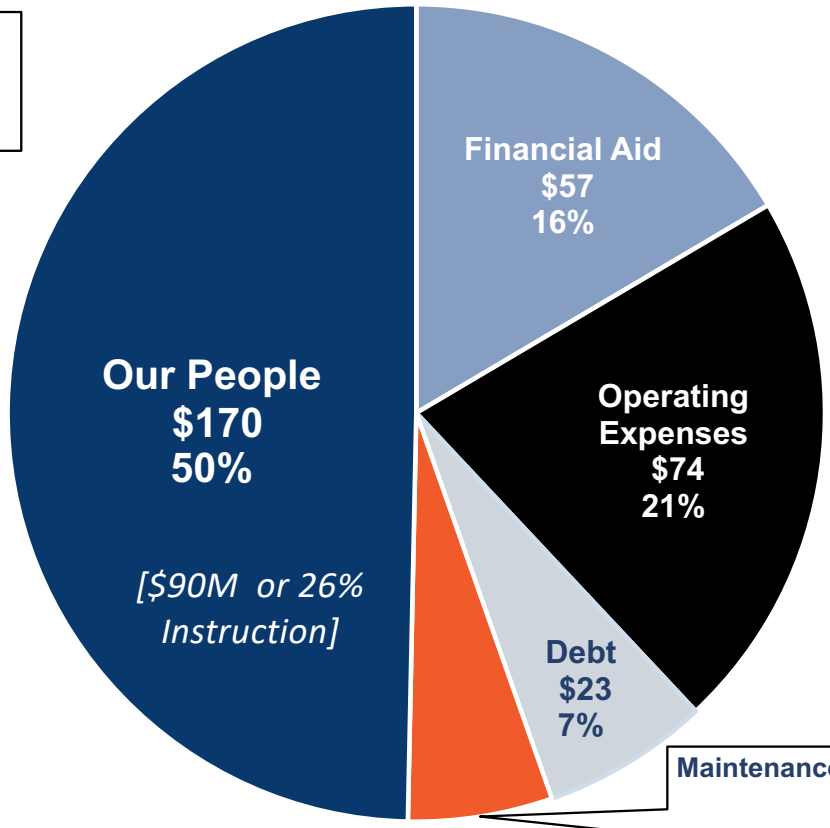


	Mines @150 Design	Fall 2022 Values
Total Students	**7500**	**7300**
• **Undergraduate**	**5000**	**5718**
• **Masters/Certificate**	**1600**	**935**
• **Doctoral**	**900**	**644**
T/TT Faculty	250	216
Teaching Faculty & Professors of Practice	90	116
External Research Funding	$85M	$95M

AY2022-23 Budget* ($M)



Revenue*



Expenses*

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

State of Oregon
Employment Department
Quality Information, Informed Choices

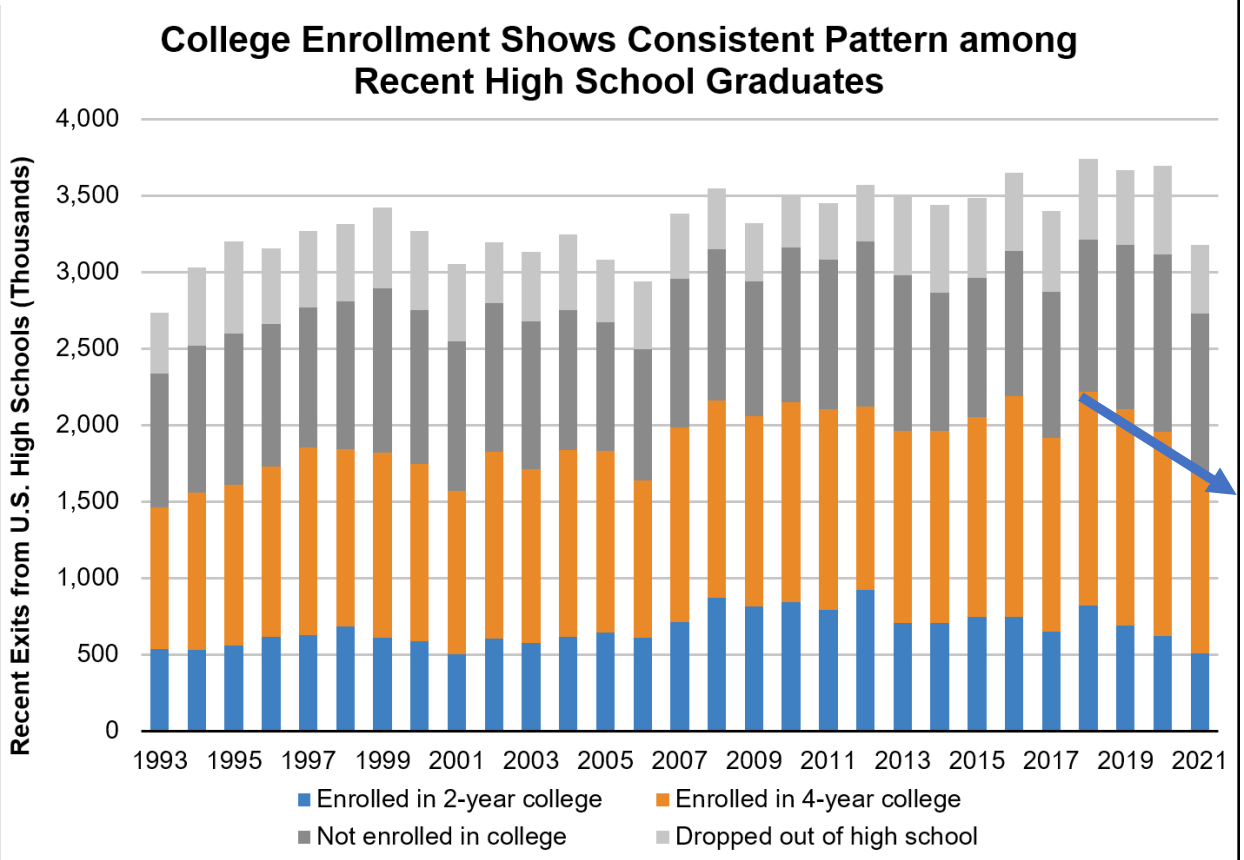
COVID-19 | Jobs & Careers | Economic Data | Business & Industry | Training & Education

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 61.8% 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 grads 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.



Source: Oregon Employment Department and Bureau of Labor Statistics, Current Population Survey

MINES@150 – Our Aspirations

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

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

Accessible and attractive to qualified students from all backgrounds

A leader in educating STEM students and professionals

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

A preferred partner for talent, solutions and life-long learning

The exemplar for alumni affinity, visibility and involvement

COLORADO SCHOOL OF MINES

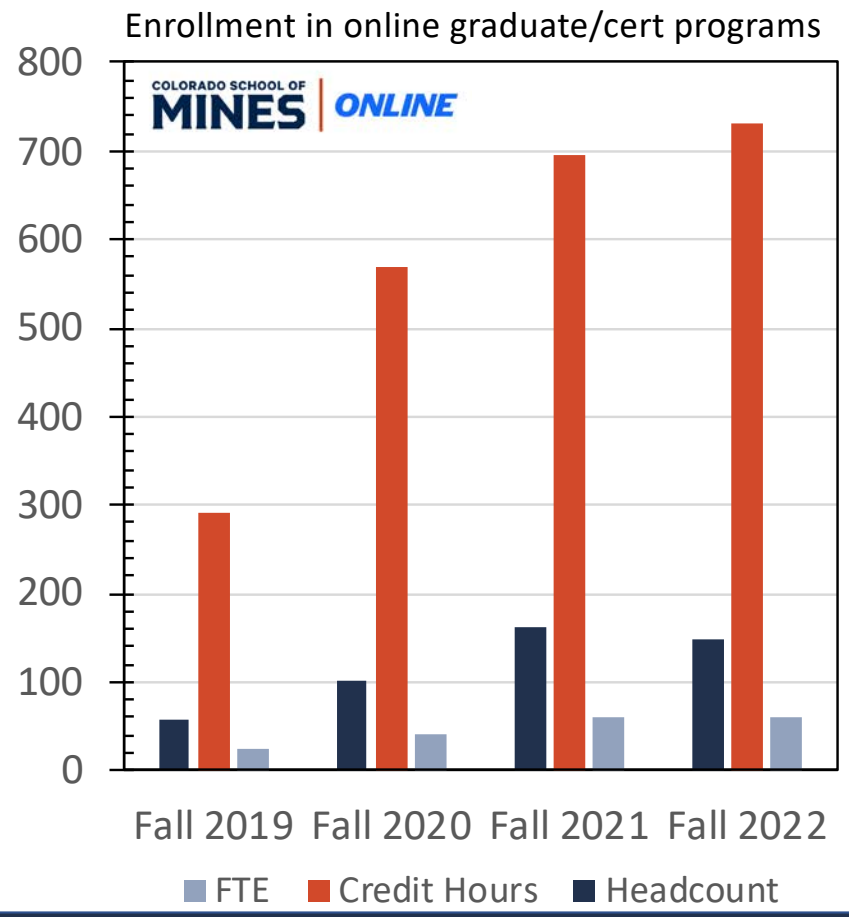
MINES@150 – The Imperatives

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

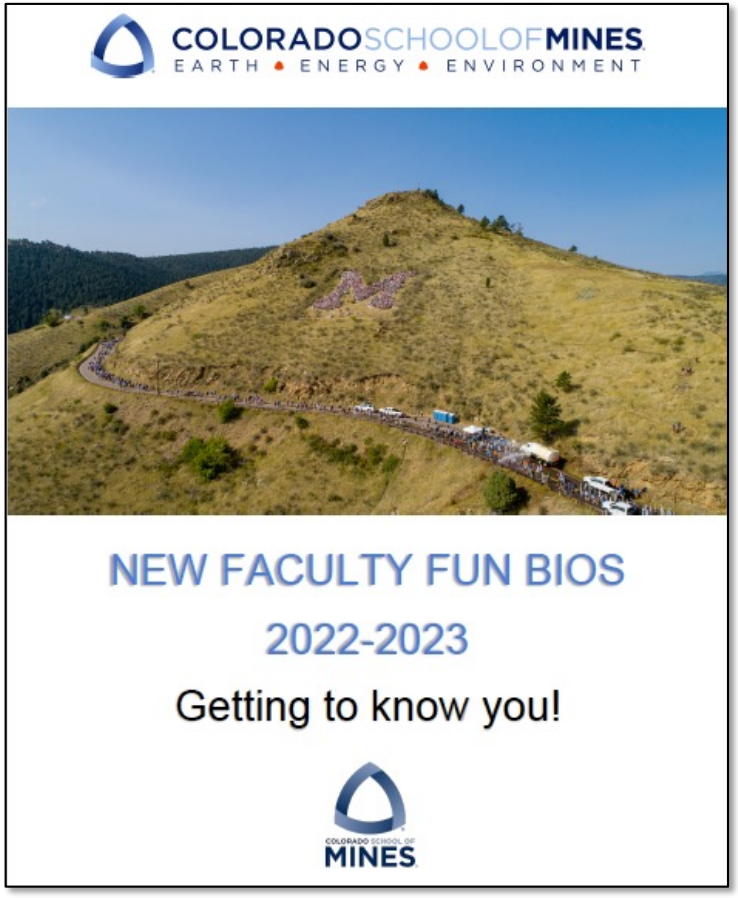
re-align portfolio, expand offerings, diversify delivery

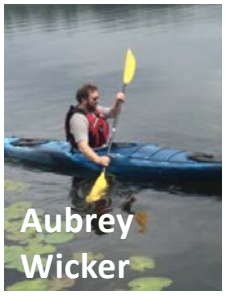
- **Initial MINES Online building phase**
  - ✓ 26 Online programs created
  - ✓ 240 courses ready by December 2022
  - ✓ 3 other priority programs will be ready for AY23
- **Focus now on enrollment growth plus a few new strategically targeted programs**
- **Modest numbers, but encouraging growth**
  - +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%*

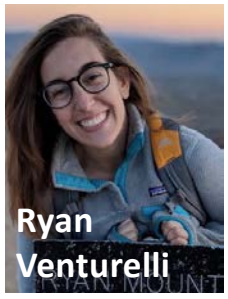


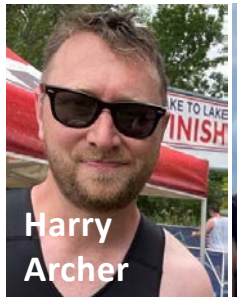
* - excluding space resources

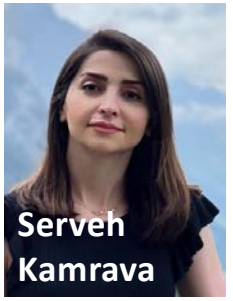
grow/attract leaders, faculty & staff needed for MINES@150

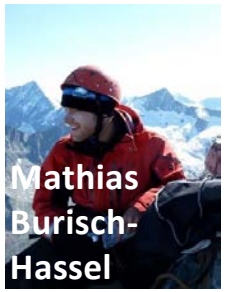


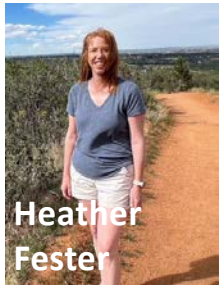










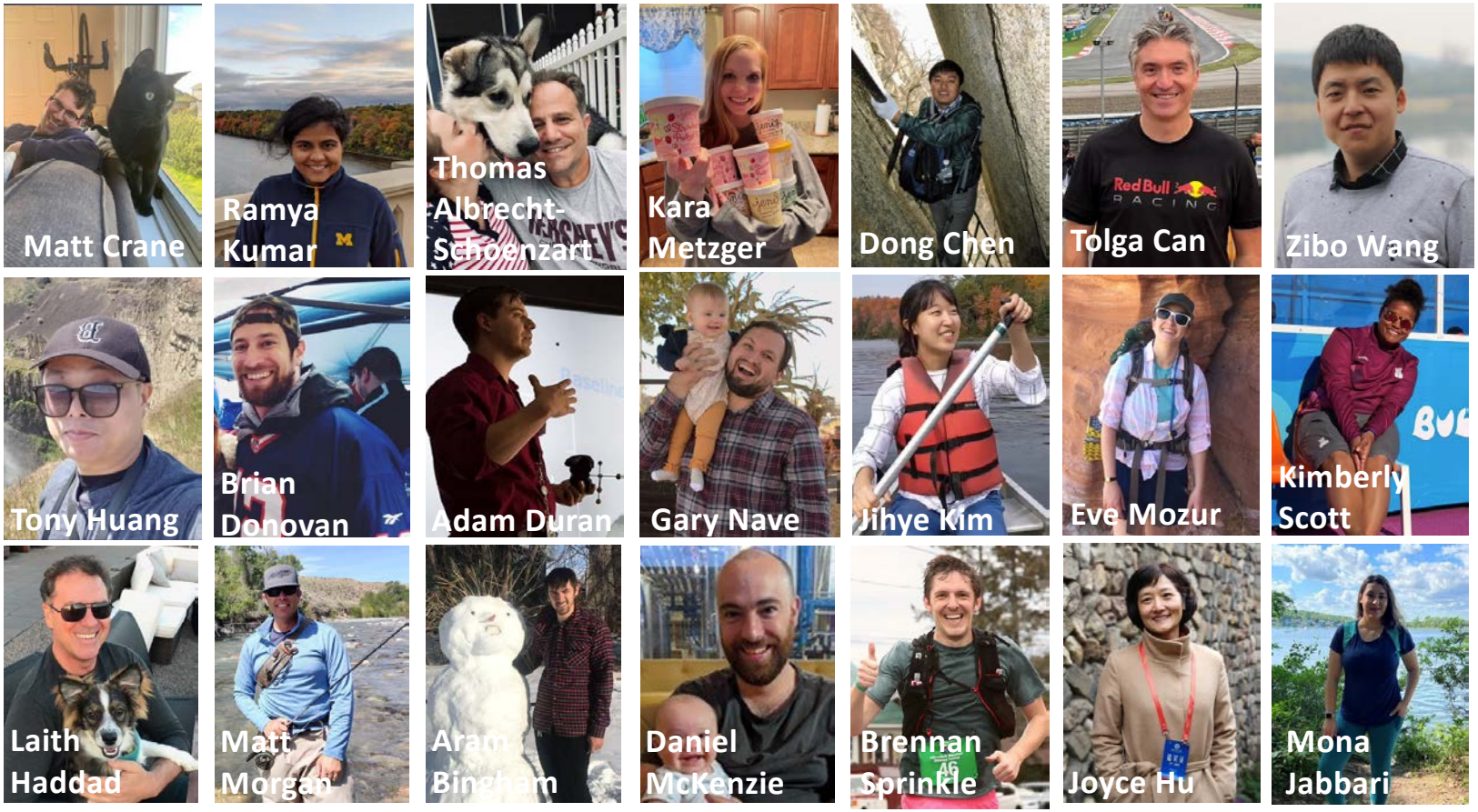


grow/attract leaders, faculty & staff needed for MINES@150

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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Teaching Faculty & Professors of Practice	**90**	**116**
External Research Funding	$85M	$95M

grow/attract leaders, faculty & staff needed for MINES@150

Dr. Braelin Pantel
Vice President for Student Life

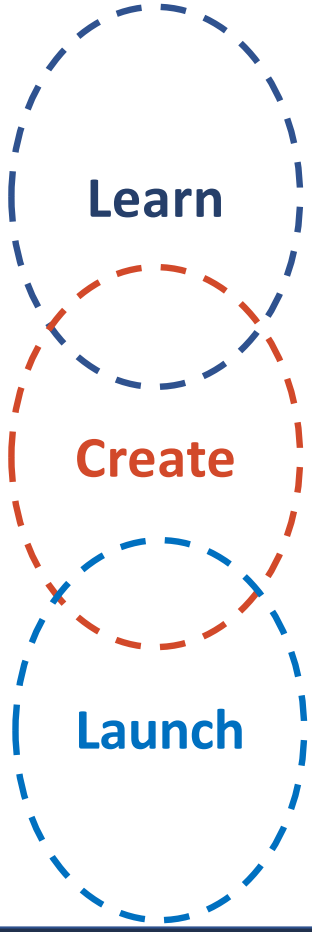
Andrew Moore
Chief Information Officer

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



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

Innov8x™

Global Energy Future Innovation Forum & Innov8X™ Challenge

MINES Global Energy Future Initiative

SEPTEMBER 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)

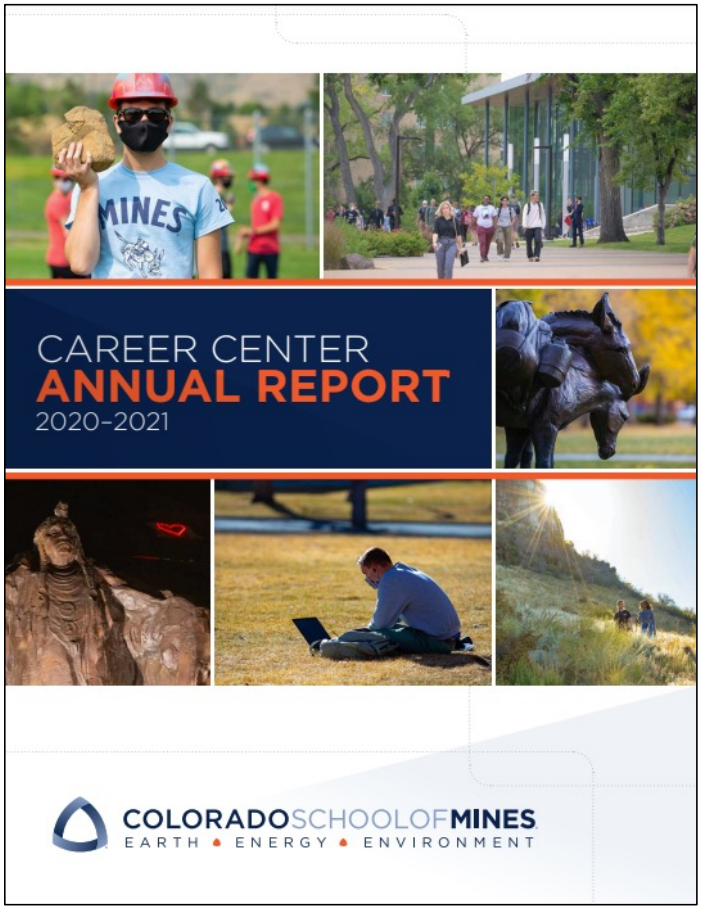
SEPTEMBER 8 – GLOBAL ENERGY FUTURE INNOV8X CHALLENGE

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)

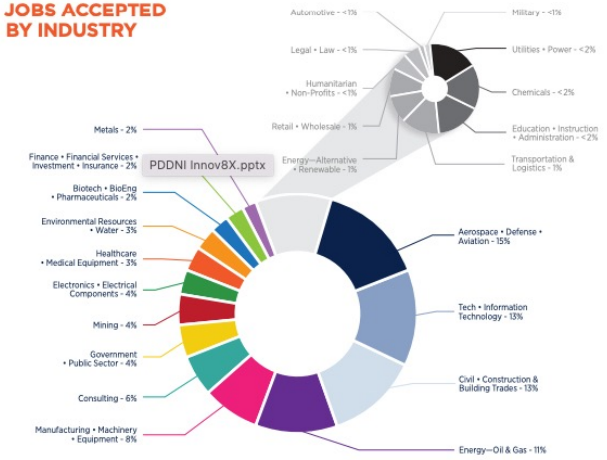
September 8 (11am – 1pm) – ***Challenge Event*** (student teams present solutions) – with networking lunch for everyone
Location: Grand Ballroom, Mines Ben Parker Student Center

achieve best-in-class student success outcomes and ROI



BS Graduation Rates	4-Year	5-Year	6-Year
	66%	82%	83%

JOBS ACCEPTED BY INDUSTRY



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**

98% Positive Outcome Rate for BS Graduates

Up from **95%** at time of graduation

Graduation Year	Positive Outcomes 6 months after graduation	Positive Outcomes 18 months after graduation
2019-2020	95%	**98%**
2018-2019	94%	**98%**
2017-2018	88%	**94%**

OREDIGGERS WERE ACCEPTED AT THESE GRAD SCHOOLS:

87% BS Graduates that Pursued Graduate School did so at Mines

- 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
- Rennsaelar 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

unique signature student experience with **deliberate professional development**

Vertical Connections

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.***

Professional Development

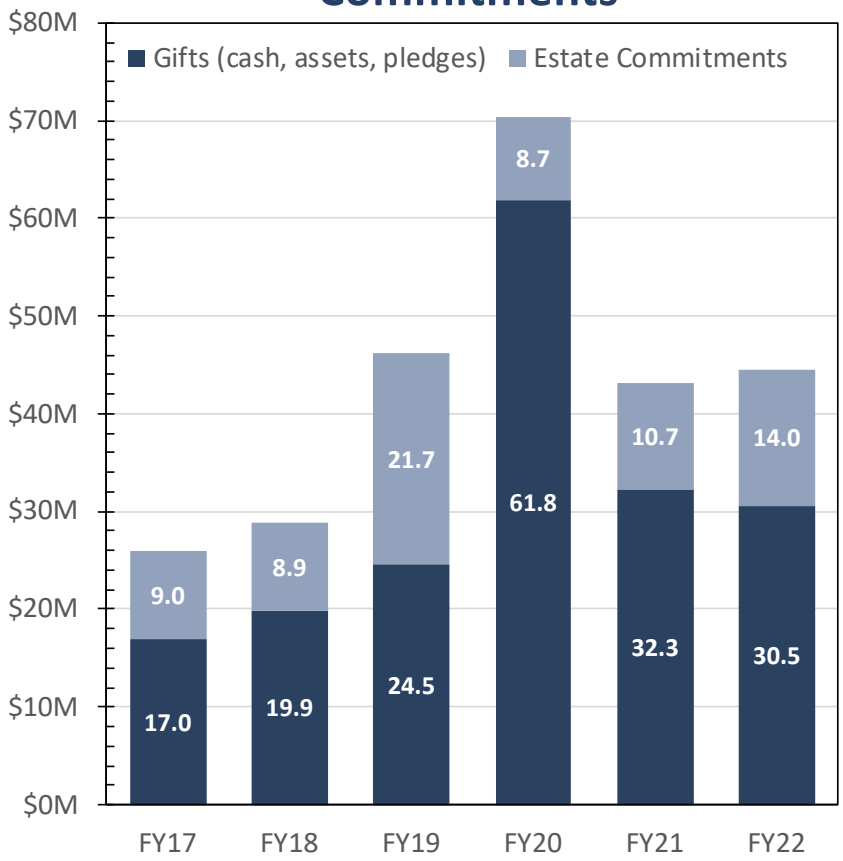
attract investment to support our strategic initiatives

THE CAMPAIGN FOR MINES @ 150

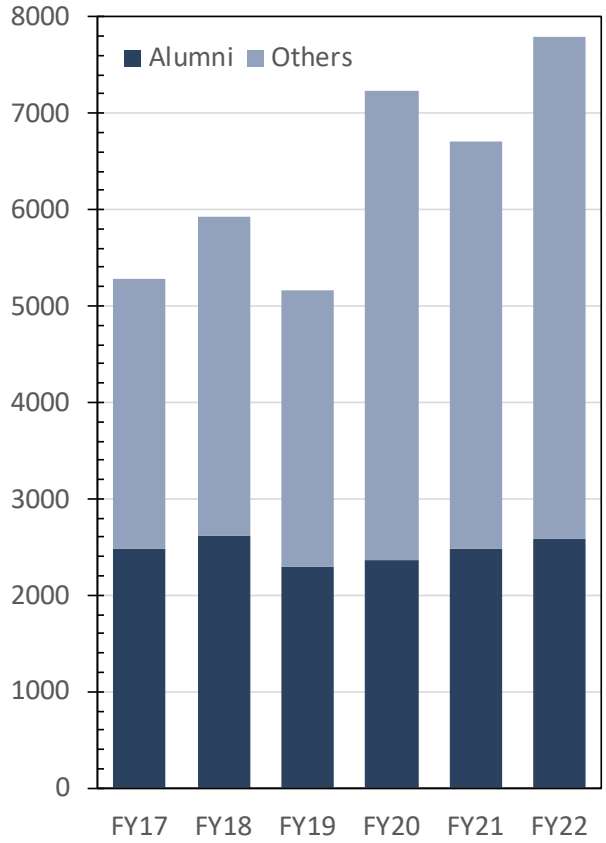
- Investments in Students
- The Mines Signature Student Experience
- Entrepreneurship, Innovation, and Business Programs
- Pursuit of Excellence and Distinction

$36M transferred to Mines from the Foundation last year – the most ever!

Commitments



Donors



2022 Mines DI&A AWARDS

UNIT & DEPT PROGRESS REPORT AWARDS

Best in Fostering Dialogue
Library & Museum

Best in Recruitment & Retention
Computer Science

PRESIDENT'S CHOICE AWARDS

Academic Department
Petroleum Engineering

Nonacademic Department
Information & Technology Solutions (ITS)

Best in Shared Responsibility
Humanities, Arts & Social Sciences

Best in Data & Metrics
Geology & Geological Engineering

DI&A AWARD WINNERS

Dr. Jennifer K. Ryan
Supporting Student Success
Associate Professor
Applied Mathematics and Statistics

Megan Rose
Raising Awareness
Senior Budget Analyst, Academic Affairs,
Office of Budget and Financial Planning

Dr. Zhao Han
Creating a Culture of Inclusion – Faculty
Post-Doctoral Fellow and Adjunct Faculty
Computer Science

Lanie Breckenridge
Creating a Culture of Inclusion-Student
Undergraduate Student, oSTEM President,
Metallurgical and Materials Engineering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Questions?
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