New Faculty Orientation

FACULTY CLASS OF 2023-24

August 15-18, 2023
## New Faculty Schedule of Events

<table>
<thead>
<tr>
<th>Time</th>
<th>TUESDAY 8/15 (Marquez 108)</th>
<th>WEDNESDAY 8/16 (Marquez 108)</th>
<th>THURSDAY 8/17 (Marquez 108)</th>
<th>FRIDAY 8/18 * Wear your new Mines shirts 😊</th>
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</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>Orientation to Effective Teaching for New Faculty</td>
<td>New Faculty Orientation</td>
<td>New Faculty Orientation</td>
<td>M Climb (encouraged if able, meet at the Faculty/Staff tent outside the ORC at 7:30 am)</td>
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<tr>
<td>9:00 – 10:00</td>
<td>Overview of Effective Teaching at Mines Trefny Center Staff (10-minute break 9:50 – 10:00)</td>
<td>Welcome, Cohort of 2023! Kamini Singha &amp; Roel Snieder (15-minute break 9:45-10)</td>
<td>Institutional Equity Sareen Lambright Dale, Carole Goddard &amp; Kristin Moulton (15-minute break 9:45-10)</td>
<td>Campus Conference</td>
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<td>10:00 – 11:00</td>
<td>Active and Inclusive Classrooms Trefny Center Staff (10-minute break 10:50 – 11:00)</td>
<td>Overview and Vision of the Mines Community Terri Hogue (15-minute break 10:45-11)</td>
<td>Diversity, Inclusion and Access Kate Youmans (15-minute break 10:45-11)</td>
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<tr>
<td>11:00 – 12:00</td>
<td>Feedback and Assessment Trefny Center Staff</td>
<td>Services &amp; Support Andrew Moore &amp; Rose Foster: ITS, Johanna Eagan: ORA, Christine Homer: HR, Brianna Buljung &amp; Seth Vuletich: Library, Tim Sweitzer: EHS, Walt Copan: VPRTT, Allyce Horan: Writing Center</td>
<td>Workshops (two options): 1) Mines Online: Sam Spiegel 2) Promotion and tenure: Andy Herring &amp; Kamini Singha</td>
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<tr>
<td>12:00 – 1:00</td>
<td>Lunch and mingle</td>
<td>Lunch and mingle (Marquez Atrium)</td>
<td>Lunch and mingle (Marquez Atrium)</td>
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<tr>
<td>1:00 – 2:00</td>
<td>Faculty/staff headshots Kafadar Commons near the 3-prong statue (1:00 – 3:30)</td>
<td>Student Panel: Mines Undergraduate &amp; Graduate Students Share Colin Terry + Tim Barbari – Moderators (runs until 2:15; 15-minute break 2:15-2:30)</td>
<td>1) Building a meaningful service portfolio: Alexis Sitchler 2) Applying for external funding to launch your research career: Walt Copan, Lisa Kinzel, Johanna Eagan &amp; Corinne Packard (15-minute break 1:45-2)</td>
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<tr>
<td>2:00 – 3:00</td>
<td>• Drop-in basis (5-10 min / person depending on how busy it is) • Bring a piece of paper with your full name written on it in large letters</td>
<td>Wellness in the Mines Community Roel Snieder, Colin Terry + ...(2:30-4:00)</td>
<td>1) Entrepreneurship and Innovation: Sid Saleh, Zack Bennett &amp; Victoria Bill 2) Being and finding mentors: Gabe Walton (15-minute break 2:45-3)</td>
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<tr>
<td>3:00 – 4:00</td>
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<td>Wrap Up: What will you bring to Mines? Roel Snieder &amp; Kamini Singha</td>
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<td>4:00 – 5:00</td>
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<td>5:00 – 6:00</td>
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** Partner invited as well; RSVP to Kim Luzeckyj (kluzeckyj@mines.edu)**
NEW FACULTY WELCOME RECEPTION

YOU’RE INVITED!

Mix and mingle with the incoming Faculty Class of 2023.

Refreshments will be served.

RSVP: Monday, August 7th

Wednesday, August 16
5:00 – 6:00 pm
Marv Kay Stadium - Blaster Room
2023 MINES-a-palooza
Join us in Friedhoff Hall for a conference expo-style event featuring posters describing Mines@150 progress, meet those leading these initiatives, and learn more about campus programs at information tables throughout. Come reconnect with colleagues to hear about summer adventures, meet those who you may have only connected with through email or Teams, and welcome new members to the Mines Community.

Schedule of Events
7:30 am
M Climb, first wave
Meet at the faculty and staff tent outside the ORC along Elm Street.

11:30 am – 1:00 pm
Campus BBQ for all faculty and staff
Kafadar Commons

12:30 pm – 1:30 pm
Faculty Welcome and New Faculty Introductions
Bunker Auditorium

1:15 pm – 4:30 pm – Friedhoff Hall
Campus Conference & Expo – “MINES-a-palooza”
Poster session and booths – see full list of presenters below
  Approximately 2 pm
  President Johnson Welcome
  Approximately 3 pm
  Research Initiatives Overview with Walt Copan
Cake, desserts, light appetizers, beer and wine available throughout the event.

MINES-a-palooza - President's Office
Please visit New Faculty Information on the Mines Academic Affairs website:

**New Faculty Orientation**

You will find resources to help you get started and situated at Mines!

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**PARKING**

The parking code **G2205V** can be used to park in any of the yellow or blue lots on campus that have a pay station meter (shown on the attached parking map by the orange circle). This code will be good for the entire week of August 14-18, 2023.

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**FREE FACULTY HEADSHOTS – 8/15/23 @ 1:00pm**

The Mines Office of Communications and Marketing is happy to offer free professional headshots.

Headshots will take ~5-10 min/person.

- **Headshots** will be taken outdoors in the Kafadar Commons near the 3-prong statue beginning from 1:00pm – 3:30pm on Tuesday, August 15th after your Orientation to Effective Teaching at Mines

- Please bring a piece of paper with your full name written on it in large letters

If you are unable to attend the session below during orientation, please send me (kluzeckyj@mines.edu) a photo/headshot to accompany your formal biography for the Board of Trustees.

Attire is up to you or your department.

Questions? Contact Agata Bogucka - abogucka@mines.edu
Administrative Departments

- **Academic Affairs**: 303-273-3320
- **Admissions**: 303-384-2027
- **Admissions, Undergraduate**: 303-273-3220
- **Admissions, Graduate**: 303-273-3247 | 800-446-9488
- **Alumni Association**: 303-273-3275
- **Athletics**: 303-273-3360
- **Board of Trustees**: 303-273-3280
- **Budget and Planning**: 303-273-3064
- **Business Services for Infrastructure and Operations**: 303-273-3330
- **Campus Events**: 303-869-5400
- **Capital Planning and Design**: 303-273-3077
- **Career Center**: 303-273-3233
- **Center for Academic Services and Advising (CASA)**: 303-273-3081
- **Communications and Marketing** (public relations, newsroom)
- **Compliance and Policy**: 303-384-2546
- **Continuing and Professional Education**: 303-384-2690
- **Controller’s Office**: 303-273-3166
- **Copy Center**: 303-273-3202
- **Counseling Center**: 303-273-3377
- **Disability Support Services**: 303-273-3297
- **Distribution & Mail Services**: 303-273-3267
- **Diversity, Inclusion & Access**: 303-273-3146
- **Energy and Materials Programs Portfolio**: 303-384-2620
- **Environmental Health and Safety**: 303-273-3316
- **Facilities Management**: 303-273-3330
- **Finance, Administration and Operations**: 303-273-3240
- **Financial Aid**: 303-273-3301
- **Food Services**: 303-273-3358
- **Foundation**: 303-273-3275
- **Global Education**: 303-273-3210
- **Global Initiatives and Business Development**
- **Graduate Studies, Office of**: 303-384-2551
- **Green Center Reservations**: 303-273-3460
- **Human Resources**: 303-273-3250
- **Infrastructure and Operations**: 303-273-3330
- **Information & Technology Solutions** (formerly Computing, Communications & Information Technologies): 303-384-2345
- **Institutional Research**: 303-273-3383
- **Internal Audit**: 303-384-2504
- **McNeil Center for Entrepreneurship & Innovation**

Contact Us: [https://www.mines.edu/contact/](https://www.mines.edu/contact/)
Administrative Departments (cont.)

- Mines Administrative Processing Services (MAPS): 303-273-3166
- Newsroom (Communications and Marketing)
- Office of General Counsel: 303-273-3325
- Parking: 303-273-3100
- President’s Office: 303-273-3280
- Project Management Office
- Public Safety: 303-273-3333
- Purchasing: 303-273-3258
- Recreational Sports: 303-273-3513
- Registrar: 303-273-3200
- Research Administration: 303-273-3411
- Research and Technology Transfer: 303-273-3327
- Residence Life and Housing: 303-869-5433
- Student Activities, Involvement and Leadership (SAIL): 303-273-3234
- Student Health Center: 303-273-3381
- Student Life: 303-273-3231
- Student Recreation Center: 303-273-3513
- Student Wellness Center: 303-273-3377
- Sustainability Office: 303-384-2413
- Title IX: 303-273-3260
- Trefny Innovative Instruction Center
- Women in Science, Engineering and Mathematics: 303-273-3498

Student Support Services

- Advising, Center for Academic Services and Advising (CASA)
- Bursar’s Office: 303-273-3158
- Career Center: 303-273-3233
- Center for Academic Services and Advising (CASA)
- Counseling Center: 303-273-3377
- Disability Support Services: 303-273-3297
- Financial Aid: 303-273-3301
- Office of Graduate Studies: 303-384-2551
- International Student and Scholar Services
- Library: 303-273-3690
- McNeil Center for Entrepreneurship & Innovation
- Recreational Sports: 303-273-3513
- Registrar’s Office: 303-273-3200
- Residence Life and Housing: 303-869-5433
- Special Programs and Continuing Education: 303-384-2690
Student Support Services (cont.)

- **Student Activities**: 303-273-3234
- **Student Health Center**: 303-273-3381
- **Student Life**: 303-273-3231
- **Student Wellness Center**: 303-273-3377
- **Writing Center**: 303-273-3085

Academic Departments

- **Applied Mathematics & Statistics**
- **Arthur Lakes Library**
- **Chemical and Biological Engineering**
- **Chemistry**
- **Civil & Environmental Engineering**
- **Colorado Geological Survey**
- **Computer Science**
- **Economics & Business**
- **Electrical Engineering**
- **Engineering, Design, & Society**
- **Geology & Geological Engineering**
- **Geophysics**
- **Humanities, Arts, and Social Sciences**

Interdisciplinary Programs

- **Advanced Energy Systems**
- **Advanced Manufacturing**
- **Data Science**
- **Energy (minor)**
- **FEA Professional**
- **Geochemistry**
- **GIS and Geoinformatics**
- **Humanitarian Engineering and Science**
- **Hydrologic Science and Engineering**
- **Materials Science**
- **Military Science/ROTC**
- **Nuclear Science & Engineering**
- **Operations Research with Engineering**
- **Quantitative Biosciences and Engineering**
- **Quantum Engineering**
- **Robotics**
- **Space Resources**
- **Underground Construction and Tunnel Engineering**
The intent of these after-hours contact procedures is to get maximum service to customers on campus after 4:30pm M-F and on weekends.

**Guiding Principles**

There are many instances where an emergency can be handled by staff already on campus. The first responder (normally someone from custodial or the heat plant) will determine if the situation warrants being remedied immediately and if it can be remedied immediately. If the first responder determines that immediate remediation is needed but cannot handle the situation on their own, then the first responder will call other staff who can correct the issue. In the event of an emergency call 911.

**First Responder Contact Information**

Facilities Management Main Phone Number: 303-273-3330
*Call this number first. FM now has a cell phone that is attached to the main FM phone line. The cell phone will be answered by a custodian or another FM employee during the after-hours and weekends.*

Heating Plant:
Controllers Room 303-384-2211

Public Safety:
Normal Hours 303-273-3333
After Hours 303-980-7300 Jeffcom Dispatch (Non-Emergency)
Pat Bahl 303-513-9126 Sergent
Dave Cillessen 303-524-2844 Commander

**Additional contact information:**

- [EMERGENCIES AND URGENT HELP](#)
- [WORK ORDER](#)
- [PARKING SERVICES](#)
- [ACCESS SERVICES (LOCK SHOP)](#)
- [NEW EQUIPMENT REVIEW & APPROVAL](#)
- [OUTAGES / CONSTRUCTION ANNOUNCEMENTS](#)
- [DISTRIBUTION SERVICES](#)
- [SUSTAINABILITY](#)
- [BUSINESS SERVICES](#)
- [ENVIRONMENTAL HEALTH & SAFETY](#)
- [FACILITIES MANAGEMENT](#)
- [OFFICE OF DESIGN AND CONSTRUCTION](#)
Office of Research Administration

Proposal Submission
- Team to help you build and submit your proposals
- Industry, Federal, State, Non-Profits
- Assist in transferring research projects to Mines

Contract Review & Negotiation
- Team to review and negotiate all your research related agreements (awards, subawards, NDAs, MOUs, consortia, etc.)
- Assist you with managing federal rules & requirements as your project changes

Award Administration
- Team to help you with the on-going financial management of your projects (expenses, financial reports, invoicing)
- Assist you with managing federal rules & requirements as your project changes

https://ora.mines.edu
ora@mines.edu
Proposals
Notify your ORA Proposal Analyst of an upcoming proposal as soon as possible but a minimum of 2 week before deadline for standard, single investigator projects, 4 weeks for all others.

Award Administration
To start spending on a research project, there are 2 options:

1. Award documents have been accepted by Mines and a fund/index number is generated for you to use to start spending
2. An approved At-Risk Spending Request. If Mines has received notification your award is on its way, we can go through the At-Risk process to allow pre-award spending on something new or continued spending for incremental funding.

Who do I work with?
PIs have a triad of ORA staff members to help them with their research proposals and projects. Your specific triad is listed on our website at https://ora.mines.edu/home/ora-department/
Research and Technology Transfer

Walt Copan
Vice President of Research and Technology Transfer
wcopan@mines.edu

Lisa Kinzel
Director, Research Development
lkinzel@mines.edu

Alyssa Von Lehman Lopez
Research & Proposal Development Manager
avonlehmanlopez@mines.edu

Jenny Crawford
Research Grant Developer
(303) 384-2722
jenny.crawford@mines.edu

Mike Kaufman
Director of Materials and Energy Initiatives
mkaufman@mines.edu

Jennifer Nekuda-Malik
Associate Director of Research Communications
jnekuda@mines.edu

Makenna Rademaker
Executive Assistant
mrademaker@mines.edu

Will Vaughan
Director, Technology Transfer
wvaughan@mines.edu

Andrew Lattanner
Director, Federal Relations
alattanner@mines.edu

Scot Allen
Research Compliance Officer
allen@mines.edu

Ralph Brown
Research Security Analyst
rbrown@mines.edu

David Diercks
Director, Shared Instrumentation Facility
ddiercks@mines.edu

Jennifer Nekuda
Associate Director of Research Communications
jnekuda@mines.edu

Makenna Rademaker
Executive Assistant
mrademaker@mines.edu

Will Vaughan
Director, Technology Transfer
wvaughan@mines.edu

Research@Mines.edu
Why use a shared facility?

SIF provides central access to nine core facilities, 40+ instruments and 10 technical experts, all designed to advance your research. **Discover more, discover faster, create a better future!**

Access advanced equipment | Receive expert support
Design your experiments | Develop new ideas
Save time & money | Achieve your research goals

Learn more at mines.edu/shared-facilities
## Electron Microscopy
- FEI Helios Nanolab 600i FIB/SEM
- FEI Quanta 600i Environmental SEM
- FEI Talos F200x TEM/STEM
- FEI Tecnai T12
- JEOL JSM-7000F Field Emission SEM
- PHENOM SEM
- TESCAN S8252G Raman SEM/FIB*

## Scanning Probe & Optical Microscopy
- ASYLUM MFP-3D Scanning Probe Microscope
- DIGITAL INSTRUMENTS Atomic Force Microscope
- KEYENCE VHX-5000
- D-600 Profilometer
- WITEC Laser Confocal Raman Microscope

## Optical & Electrical Characterization
- CARY 5G UV-VIS Spectrometer
- Four Point Probe/ Electrical Probe Station
- FTIR Spectrometer/Ellipsometer
- Janis SHI-4-2 Cryostat
- HL5500 Hall Effect Measurement System
- Solar Simulator w/EQE
- WOOLLAM M-2000 Ellipsometer

## Mechanical Testing
- MARK-1- ESM 1500
- MTS Alliance RT/100
- INSTU-MET Renew 1125
- SATEC SONNTAG Fatigue Testing System SF-1-U
- DIC Fatigue Dynamics RBF-200 Rotating Bending Fatigue
- DSI Gleeble 3500-GTC
- MTS Exceed E22 Impact Tester
- MTS Landmark 370.10
- MTS Landmark 370.25
- MTS 312.21 Top Actuator
- MTS 312.21 Hydraulic Grips
- MTS 312.21 Bending Under Tension
- MTS 312.41
- MTS 810 Material Test System 318.50 Extensometers
- Digital Image Correction
- Heater and Cooling Furnaces

## Nanofabrication
- Class 1,000 Clean rooms
- ABM UV Mask Aligner
- AUTO GLOW 200 Reactive Ion Etcher
- KARL SUSS MJB3 UV400 Mask Aligners
- ULVAC-RIKO MILO-5000 Rapid Thermal Annealer
- Diffusion Furnace
- High Temperature Furnace
- Rapid Thermal Annealer
- Vacuum Furnace
- Wet & Dry Oxidation Furnaces
- TPT hb05 Wire Bonder

## Thin Film Deposition
- AJA Sputtering System
- ANGSTROM Thermal Evaporator
- Tabletop Gold Sputter Coater
- High Temperature Thermal Evaporator
- AJA UHV Multi-Technique Deposition System
- Semicore Sputtering System

## Mass Spectrometry
- CAMECA APT LEAP 4000X SI
- IONTOF TOF-SIMS,V*
- SCIEX 5500 Triple Quad
- SCIEX X500R QToF

## X-Ray Diffraction & Computed Tomography
- PANALYTICAL Empyrean Modular X-Ray Diffractometer*
- PANALYTICAL X’Pert Pro X-Ray Diffractometer
- ZEISS Versa 520 XCT*

## X-Ray Photoelectron Spectroscopy*

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* Instrument has in situ capabilities

For more detailed information on instrumentation capabilities, to request access or assistance, and view user rates, please visit: Mines.edu/Shared-Facilities
Meet the Team

Dave Diercks
SIF Director
ddiercks@mines.edu

Anne Steputis
SIF Administrator
steputis@mines.edu

For more detailed information on instrumentation capabilities, to request access or assistance, and view user rates, please visit:

Mines.edu/Shared-Facilities

Alex Dixon
Nanofabrication, Surface Characterization & Thin Film Deposition Lab Manager
agdixon@mines.edu

Garrison Hommer
Mechanical Testing Lab Manager & Technical Expert
ghommer@mines.edu

Praveen Kumar
TEM and AFM Technical Expert
kumar@mines.edu

Erin Sedlacko
Liquid Chromatography Mass Spectrometry Lab Manager
esedlack@mines.edu

Xerxes Steirer
X-Ray Facilities Manager & Technical Expert
ksteirer@mines.edu

Michael Walker
TOF-SIMS Specialist
mawalker@mines.edu

Gary Zito
SEM Technical Expert
gzito@mines.edu
TOP 10 THINGS FOR FACULTY TO KNOW ABOUT ARTHUR LAKES LIBRARY

1. Ask a Librarian
   Consult with a research librarian

2. Library Catalog
   Search for books, journals, maps, articles and more

3. Prospector & Interlibrary Loan
   Search regional libraries via Prospector and request articles and more via Interlibrary Loan

4. Database Collections
   Find all our databases in your discipline

5. Off Campus Access
   Get access to library resources off campus
   libguides.mines.edu/offcampusaccess

6. Partner with an Instruction Librarian
   Incorporate research and source evaluation skills into your courses and assignments, contact Brianna to get started

7. Research Guides
   Locate databases in your discipline and direct your students on the best places to start their research
   libguides.mines.edu

8. Course Reserves
   Place textbooks on hold for student use or create a customized reading lists in Canvas’s Course Readings. Contact Chris to get started

9. Consult on Research
   Consult on author rights, research data management, and more, contact Seth to get started

10. Open Educational Resources
    Adopt or create open and free educational resources in your courses to better support your learning objectives and save students money

Explore these things and more at library.mines.edu or stop by and chat with us!

Seth Vuletich
Scholarly Communications Librarian
sethvuletich@mines.edu

Brianna Buljung
Teaching & Learning Librarian
bblujung@mines.edu

Chris Thiry
Academic Outreach Librarian
cthiry@mines.edu
MISSION
The Trefny Innovative Instruction Center’s mission is to inspire an institutional culture that values, studies, and implements transformative teaching and learning at Mines. The Center provides leadership, consultation, resources, and programs to achieve the four areas of our mission:

- **TEACHING & LEARNING**: Promote teaching that is intentionally designed, supportive of students, focused on learning, and reflective.
- **EDUCATION RESEARCH**: Further data-driven instruction and education research.
- **UNIVERSITY LEADERSHIP**: Advance teaching and learning through university strategic planning, initiatives, and policy.
- **COMMUNITY**: Foster a collaborative, learning-centered teaching community.

SERVICES WE OFFER

**WORKSHOPS AND EVENTS**: We offer a variety of events and gatherings throughout the year. Scan the QR code to see our upcoming events and active learning communities.

**LEARNING PROGRAMS**: We offer in-depth learning programs to support faculty and graduate students in improving teaching and learning. Scan the QR code to explore our offerings!

**EARLY COURSE FEEDBACK (ECF)**: Interested in collecting student feedback midway through the semester? An ECF is a great way to hear from students about their learning experience in your course, and can give you valuable feedback in time to make adjustments during the semester. Scan the QR Code to request an ECF!

**INDIVIDUAL CONSULTATIONS**:  
- Do you have questions about teaching and learning? Contact a Faculty Developer (facdev@mines.edu) to explore your questions and brainstorm ideas.  
- Do you have questions about assessment or conducting classroom-based research? Contact Megan Sanders, Senior Assessment Associate, at sanders@mines.edu.

**EDUCATIONAL MULTIMEDIA**: The HIVE Helps develop Instructional resources, Video and Educational media for the Mines community through our dedicated student-employee team. Scan the QR code to learn more about how we can help you enhance your in-person and online courses.

Scan the QR code to learn more about our full range of services, including grant support, institution-level committee work, department consultations, and more!
NEW FACULTY LEARNING COMMUNITY

Overview
Are you a new faculty member at Mines? Are you interested in support and community as you teach your course(s)?

Join the New Faculty Learning Community (NFLC), an opportunity to discuss teaching and learning with colleagues from across the university throughout the academic year. During the NFLC, which meets approximately monthly, you will engage in informal discussions around teaching and learning and get support and resources to help you teach at Mines. The goals of the NFLC are to: 1) build community, 2) support new faculty, and 3) promote evidence-based teaching practices.

Who should join the NFLC?
We encourage new faculty (and those who started at Mines over the past several years) to join us! Whether you are new to teaching or have a lot of prior experience teaching, we welcome you to join the NFLC.

Why should you join the NFLC?
Our goal for this learning community is to provide support and to help set you up for success when you teach at Mines. During the NFLC, you will connect with other new faculty, reflect on your teaching experiences, share resources, build community, and engage in conversations that can help you in your own classes.

For more information and to join:
Go to https://tinyurl.com/TrefnyNFLC or scan the QR code.

trefnycenter.mines.edu
Welcome to the HIVE!

The HIVE is a part of the Trefny Innovative Instruction Center at the Colorado School of Mines~
~
At the HIVE, we can help you create instructional media to broaden the scope of who you can reach as well as deepen the impact that you can have~
~
We have a range of resources available and look forward to working with you~

Please visit our website https://trefnycenter.mines.edu/hive/ for more information, FAQs, tutorials, and to schedule an appointment to get started with creating the perfect media for your instructional needs~

References
What We Do

Enhance the use of multimedia to provide effective and efficient ways for learning by:

- Editing instructional footage
- Providing recording equipment for checkout (cameras, microphones, tripods, etc.)
- Self-service use of our two Voiceover/Screen Capture recording studios (with Camtasia software)
- Self-service use of our Green Screen Studio
- Self-service use of our Lightboard Studio
- Live filming of special events
- Providing Resources and Tutorials through our website

The Process

- Schedule an appointment for one of the HIVE Services
- Pre-Production Meeting: discuss and plan out your project needs and timeline
- Record Your Multimedia: use one of our self-service studios, check out equipment, or record via Zoom, etc.
- Upload your MP4 Footage through our Website: once received, our HIVE team will edit the audio and video, incorporating any requests you may have; please allow 1-2 weeks for editing
- Once Complete: a draft will be sent to you to review, with revisions made as needed
- Final Videos: are stored in our system for continuing access

Importance of Instructional Media

- “Multimedia-based instructional materials have been identified as an important tool for managers and students in their efforts to connect and apply classroom theory-based learning with the analysis of real world problems.” [1]
- “Incorporating simulation or multimedia content into instructional materials enhances student understanding and retention.” [1, 2]

Benefits of Instructional Media

- Ability to replay instructional videos to review: 51.2% of students replayed lectures 2-4 times in a case study [3]
- Ability to access instruction when it is needed, such as for review, taking notes at an individual pace, catching up, and asynchronous instruction to best fit personal schedules. [3]
The Writing Center can help you reach your pedagogical and professional goals.

We can assist you with:

- teaching in-class writing workshops tailored for your class and pedagogical style.
- planning and designing scaffolded writing assignments, write-to-learn activities and essay prompts.
- reviewing scholarly publications, proposals and reports.

Please contact the Writing Center Director, Allyce Horan, at ahoran@mines.edu with any questions!
You can also learn more about the Writing Center at writing.mines.edu.
The Online Technical Communication Center (OTCC) connects students and faculty with resources to develop their oral and written communication skills in STEM.

Our resources are designed to be shared and modified by faculty to meet individual class needs.

Each resource includes an explanatory video, accompanying handout, and engaging exercise sheet.

otcc.mines.edu
Ways Orediggers can engage with MINES DI&A

**FOUNDATIONAL**
Foundation level content often provides an introductory or basic understanding of diversity, equity and inclusion.

- Try an Inclusion Icebreaker at your next meeting
- Review Equity Resources
- Attend a Mines Community Alliance (MCA)
- Attend campus DI&A events

**INTERMEDIATE**
Appropriate for those looking to build on and increase their knowledge of diversity, equity and inclusion.

- Join a student organization supported by WISEM or MEP
- Participate in Mines Climate Surveys
- Attend workshops at the annual Celebration of DI&A

- Join the Mines DI&A Council
- Submit a DI&A Award nomination
- Apply for a Community Grant
- Introduce yourself with your pronouns, include in email signature

- Incorporate DI&A best practices in candidate reviews & selection
- Promote Hiring Excellence
- Join a department/unit diversity committee

**ADVANCED**
For those who are looking to increase their expertise in diversity, equity and inclusion.

- Become an Ambassador, Advocate, Fellow or MCA Chair
- Incorporate DI&A best practices in grants and proposals
- Include DI&A in performance management
- Lead a K-12 outreach activity
- Use the Inclusive Classroom Checklist
- Advise a student organization
- Facilitate a workshop at the annual Celebration of DI&A

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**Welcome to Mines!**

In spring of 2019, campus published its first Strategic Plan for diversity, inclusion and access. Over 100 Orediggers contributed to its production through focus groups, council representation and town halls. As a new member to the community, you are strongly encouraged to read it and find your unique way to contribute to the 24 recommendations found within.

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**Meet the Team**

- **Dr. Kate Youmans**
  - Presidential Fellow for Access, Attainment & Diversity

- **Kelly Olson**
  - Associate Director

- **Heather Houlton**
  - Program Manager - Research Analyst

- **Serena Lewis**
  - Administrative Coordinator

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The Mines DI&A staff are located in the WISEM house, 1710 Illinois St., or reachable by emailing diversity@mines.edu.
WISEM is dedicated to promoting and supporting women in STEM. Through WISEM, Mines is committed to increasing the number of women who aspire to be future engineers, scientists and business leaders, including those who come to Mines with a goal of making the world a better place.

**MISSION**
To enhance opportunities, provide advocacy and implement programming for women on campus while ensuring an inclusive and equitable environment for all students, faculty and staff.

**VISION**
To serve as the comprehensive program for enhancing women’s experiences at Mines by:

- preparing students for successful, sustainable, rewarding careers.
- equipping Mines employees with professional success and advancement opportunities.
- providing all members of the Mines community with educational opportunities and resources that contribute to an inclusive and welcoming campus environment.

**SIGNATURE EVENTS**
- The Continuum, an event celebrating graduating women each fall and spring
- The Chevron Lecture Series and Luncheon featuring an outstanding woman leader in science, engineering or business
- Women’s History Month Luncheon and events commemorating women’s accomplishments throughout history

**EMPLOYEES**

**PROFESSIONAL DEVELOPMENT SERIES**
A series of workshops and lectures for women employees on campus.

**WOMEN EMPLOYEE GROUPS**
Opportunities for women to build community across campus, including EMPOWER, Administrative Professionals, Teaching Faculty, Tenure/Tenure Track Faculty, AMI and the Women Mines Community Alliance.
STUDENTS

RECRUITMENT

In partnership with Mines Admissions, Making the Connection, sponsored by Halliburton, is a program for high school women who are accepted to Mines. The program highlights the outstanding achievements of Mines women and the diversity of STEM disciplines.

OUTREACH

Full STEM Ahead at Mines is a week-long, hands-on summer camp for middle school girls in collaboration with Baker Hughes and Mines faculty and staff.

SCHOLARSHIPS

- Florence Caldwell Achievement Program - Three full tuition scholarships are awarded each year, for a cohort of 12 Caldwell Scholars.
- Sister-to-Sister Scholarship awarded to one upper-class student each year.
- Vanguard Community of Scholars Program develops leaders to solve societal problems through professional development with women faculty, industry leaders and a community service project. Program size: 120 scholars.

WOMEN PROFESSIONAL SOCIETIES

WISEM provides support and amplifies other women’s student-led professional societies on campus such as:

- Association of Computing Machinery-Women
- Society of Women in Chemistry
- Society of Women in Geoscience
- Society of Women in Mathematics
- Society of Women in Physics
- Women in Chemical & Biological Engineering
- Women in Mining
- Women in MME, ML and Nuclear
- Women of Aeronautics and Astronautics

WOMEN GRADUATE STUDENT GROUP

This community extends networking and professional development opportunities to all women graduate students through breakfast meetings, workshops and social events.

SOCIETY OF WOMEN ENGINEERS (SWE)

SWE is a student-run organization with faculty advisor support. Mines has the largest collegiate section in the nation with over 700 members. SWE provides:

- Career opportunities through Evening with Industry and Networking Reception.
- Professional development through weekly speakers, national and regional SWE conference attendance, and executive board leadership opportunities.
- Outreach through Girls Lead the Way leadership conference for high school girls, Girl Scout Engineering Day, Girls on the Rise event for middle school girls, local math and science nights and the Schlumberger Serve to Succeed outreach program.
- Scholarships - SWE Scholarship in Honor of Florence Caldwell, the first woman to graduate from Mines, is awarded to 4 active SWE members.
- Mentorship - SWE Peer Mentorship Program for incoming women students.
- Social and networking events allow members to build friendships within the Mines community.

For more information, visit orgs.mines.edu/swe

ALUMNI

WOMEN OF MINES ALUMNI INTEREST GROUP

WISEM Director co-chairs this group to connect alumnae to campus and support Mines initiatives.

CONTACT US

ANNETTE PILKINGTON
WISEM Director
303-273-3498
apiilking@mines.edu

KELLY KNECHTEL
WISEM Associate Director
SWE Faculty Advisor
303-273-3146
knechtel@mines.edu

WISEM House
1710 Illinois Street
Golden, CO 80401

WISEM.MINES.EDU
RESOURCES FOR SURVIVORS

If you, or someone you know, has experienced sexual harassment, sexual assault, or interpersonal violence (domestic/dating violence, and stalking) at any point, there are multiple options to talk to someone and access resources both on and off campus.

Want to talk to someone at Mines?

Yes

Wellness Center
1770 Elm Street
1. SHAPE Office
303-273-3781
Speak to a Confidential Resource Advocate. Receive support and referrals, learn about options.

2. Health Center
303-273-3381
Speak to a nurse practitioner or physician.

3. Counseling Center
303-273-3377
Speak to a licensed counselor

Mines Faculty
or Staff
Look for those who have the "I Believe You" badge. They have been through additional training.

Please note: Mines faculty and staff are considered mandatory reporters and must share any reports they receive with the Office for Institutional Equity. However, the decision on how to move forward is yours.

*With the exception of the Mines Counselors, Health Center professionals, and the designated Confidential Resources.

The Office for Institutional Equity
oe@mines.edu
303-273-3260
Share instances of sexual and interpersonal violence with the Office for Institutional Equity team. There are multiple options:

1. Make an informal report. You have the option to just receive supportive measures.

2. Move forward with a formal complaint. Receive process advising as well as supportive measures.

Mines Police
McNell Hall 118
303-273-3333 or 911
Report to a police officer.

1. Share what happened and address any safety concerns.

2. You may make a report and request they not investigate.

3. If desired a criminal case would be opened and a detective assigned to investigate (criminal charges may result).

*Your report and forensic evidence will be processed and retained as required by law and best practice.

Medical Attention at St. Anthony Hospital Emergency Room
720-321-4103
If you choose to get a Sexual Assault Nurse Exam, there are multiple reporting options, with medical care at each step:

1. Anonymous. Kit is not tested and police receive no identifying information.

2. Medical. Kit is tested and police can receive identifying information.

3. Police. Kit is tested and police are notified.

No

Resource Options in the Local Community

Blue Bench
303-329-9922

Victim Outreach, Incorporated (VOI)
303-202-2196
Both are available 24/7.

Porchlight Family Justice Center
303-271-6100

IT'S ON
ENGINEERING A CULTURE OF RESPECT

COLORADO SCHOOL OF MINES

If there is an emergency, call 911.
You always have the option to report online.
AMNESTY POLICY for Health & Safety

Signs of alcohol or prohibited substance emergency: confusion or disorientation; vomiting; irregular pulse, depressed breathing; inability to stay conscious; cold, clammy, or blue tinged skin/lips; lack of physical coordination; slurred speech; dilated pupils or bloodshot eyes; and shakes or tremors. (Note that this is not an exhaustive list. Please use your best judgment.)

Is your or someone else’s health or safety at risk or in danger?

No

The Amnesty Policy is not applicable.

Yes

Are you the person in danger?

No

Follow these steps:
• Contact emergency officials at 303-273-3333 or 911.
• Remain with the individual requiring help.
• Meet and cooperate with appropriate emergency officials and Mines staff.

Yes

Did you or someone in your organization perform these steps?

No

If you and/or a member of your organization were intoxicated or under the influence, then you are NOT protected by the Amnesty Policy.

Yes

If you and/or a member of your organization were intoxicated or under the influence, then you ARE protected by the Amnesty Policy.
EHS STAFF

Barb O’Kane
EHS Executive Director
303-384-2561

EHS TEAM

Elisabeth Citta
Chemical Store Coordinator
303-273-3555

Haitao Dong
Radiation Safety Officer
303-273-3573

Kyle Flikins
Safety & Health Professional
303-273-3998

Lauren Poole
Sustainability Coordinator
303-384-2413

Cory Smith
Chemical Safety Officer / Safety Professional
303-273-3511

Tim Sweitzer
Associate Director EHS
303-273-3869

Faith Weaver
EHS Technician II
303-273-3287

Adam Zeigler
Health & Safety Specialist
303-273-3391

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MAIN OFFICE
1400 Maple Street
Munhall Hall, Suite 134
Golden, CO 80401
303-273-3316
Hours: M-F 8 a.m. to 4:30 p.m.

CHEMICAL STORAGE AND DISTRIBUTION FACILITY (CSDF)
Coolbaugh Hall Room 030
303-273-3555
Hours: M-F 9 a.m. to 12 p.m. and 1 p.m. to 4 p.m.

MINES.EDU/EHS
**EHS SERVICES**

- Hazard Evaluation & Risk Minimization
- Chemical Procurement
- Hazardous Waste Management
- Radiation Protection & Laser Safety
- Chemical Spill Response & Cleanup
- Incident Investigation and Prevention
- Environmental Compliance
- Campus-Wide Chemical Inventory
- Exposure Control Surveys

**CHEMICAL PROCUREMENT**

All hazardous chemicals are ordered through the EHS department and billed back to the requestor.

Commonly used research reagents are kept on hand and available for immediate pick up at the CSDF. The EHS department maintains a campus-wide chemical inventory which facilitates safe storage and material management.

**EHS TRAINING**

- General Lab Safety
- Hazardous Waste Generator
- Bloodborne Pathogen & Biosafety
- Radiation Safety and Laser Safety
- Confined Space Entry
- Ladder Safety
- Respirator Use and Fitting
- Machine Shop Safety
- Lockout Tagout
- Hoisting & Rigging
- And others upon request

**SUSTAINABILITY SERVICES**

- Green Buildings Taskforce
- Energy Efficiency and Renewable Energy
- Surplus Property Disposal/Resale/Reuse
- Campus Recycling and E-Waste
- Sustainability Reporting (AASHE)
- Green Labs
- Hazardous Waste Reduction
- Sustainability Outreach and Consulting
- Zero Waste Events
- Environmental Assessment
- Ergonomics

**EMERGENCY MANAGEMENT**

- Prevention
- Planning
- Training
- Incident Response
- Code Blue Emergency Phones
- Mines Alert mass notification system (text, phone, email)
- AEDs
- Building evacuation drills
Inclusive Teaching Practices Tips and Checklist

Inclusive teaching and learning respects diversity of the students and their experiences and actively engages, includes, and challenges all students. Our students come from all over the world with different backgrounds and experiences. The practice of inclusive teaching acknowledges and challenges biases and stereotypes that can undermine students’ success and sense of belonging. Inclusive teaching creates a better classroom for all learners.

This checklist includes many strategies for inclusive teaching and universal design of instruction. What practices are you trying?

Contact Disability Support Services if you need support for students with disabilities.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Examples</th>
<th>Have tried</th>
<th>Want to try</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Create a welcoming environment</strong></td>
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<tr>
<td>Examine assumptions.</td>
<td>1. Reflect on your assumptions about students. What stereotypical notions do you hold about some student groups or backgrounds?</td>
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<tr>
<td>Establish an inclusive environment for all students.</td>
<td>2. Include a syllabus statement that fosters an inclusive learning environment (use the latest Mines syllabus template from Trefny, see the bottom of this document for example text that you might add on fostering an inclusive classroom).</td>
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<td></td>
<td>3. Be explicit about promoting equity and access for all students.</td>
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<td></td>
<td>4. Respect, adhere to, and follow up (privately) on the disability accommodation letter for students. Maintain confidentiality. Remember that accommodations are not advantages, but a means of providing each student with full access to their education and an opportunity to effectively demonstrate what they have learned.</td>
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<td>5. Accommodate students. Life happens and students are people too. Be compassionate and understanding of illness, religious holidays, and other stresses. At the beginning of the semester, ask your students to let you know in advance of any issues that will affect their participation in class or complete assignments on time.</td>
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<td>6. Ensure that resources and assistance provided both in and outside of class is equally available and accessible to everyone. E.g. offer and record office hours with Zoom, post relevant information for the whole class.</td>
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<td></td>
<td>7. Ensure that your TAs or graders are applying these tips, too.</td>
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<tr>
<td>Reduce anonymity.</td>
<td>8. Know and use preferred names and pronouns.</td>
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<td></td>
<td>9. Build rapport and get to know students and their individual perspectives and experiences (e.g., greet students as they enter class, interact with students before and/or after class).</td>
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<tr>
<td>Model inclusive language, behavior, and attitudes.</td>
<td>10. Avoid using masculine pronouns for students, e.g. “Hey guys”</td>
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<td></td>
<td>11. Provide context when using idioms, metaphors, pop culture references, etc.</td>
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<td></td>
<td>12. Use language that acknowledges and values different experiences/perspectives.</td>
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<tr>
<td>Incorporate multiple and diverse examples, resources, and perspectives.</td>
<td>13. Identify whether certain perspectives are missing or underrepresented in course materials.</td>
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<td></td>
<td>14. Use examples/illustrations across multiple domains and/or representing a variety of perspectives and populations to 1) help students understand the applicability of concepts in diverse contexts and 2) help students relate to the material.</td>
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<tr>
<td></td>
<td>15. Include materials, readings, and images that reflect contributions and perspectives from groups historically underrepresented in the field.</td>
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<td></td>
<td>16. When inviting guest lecturers/visitors, include diverse contributions/perspectives.</td>
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<tr>
<td>Strategy</td>
<td>Examples</td>
<td>Have tried</td>
<td>Want to try</td>
</tr>
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<tr>
<td><strong>Add Structure</strong></td>
<td>17. Establish, use, and enforce established classroom norms that foster a positive and inclusive environment and establish ground rules for respectful interaction in the class (e.g., no interrupting, rule of 3 where you have to wait until 3 people talk before you contribute again, consider other perspectives and suspend judgment).</td>
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<td>18. Communicate expectations for participation and engagement early and often.</td>
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<td>19. Encourage and monitor student participation during class and activities. Be aware when a few students (or students from one group [e.g., male students]) dominate a conversation in small groups or entire class discussions.</td>
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<td>20. Respond to classroom conflict/disruption promptly, consistently and respectfully.</td>
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<td>21. Facilitate active listening (e.g., incorporate paraphrasing and questioning strategies into discussions).</td>
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<td></td>
<td>22. Show respect for all questions and comments.</td>
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<tr>
<td><strong>Establish, communicate, and reinforce norms and expectations for group work</strong></td>
<td>23. Ensure that leadership and roles for teams and group work are shared/rotated and clearly defined.</td>
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<td></td>
<td>24. Where appropriate for learning outcomes, use a variety of methods to assigning groups and change groups throughout the semester. While diverse teams are important, don’t isolate and separate the women and underrepresented students.</td>
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<tr>
<td><strong>Use varied active learning strategies.</strong></td>
<td>25. Use a variety of teaching strategies, such as active learning strategies.</td>
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<td></td>
<td>26. Provide alternative means for contributing to the discussion (e.g. clickers, poll everywhere, comments submitted on notecards).</td>
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<tr>
<td><strong>Encourage a growth mindset/ Acknowledge that failure and struggle are a part of learning</strong></td>
<td>27. Convey the idea that intelligence is not a reflection of fixed, natural abilities, but can change and grow over time (Dweck 2006). E.g. avoid describing student performance as a sign of natural ability (or lack of ability), avoid statements like “some people have trouble with math/writing/critical thinking.”</td>
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<td>28. Cultivate an environment where it is okay to make mistakes, and leverage those mistakes to improve learning. Encourage cognitive risk-taking and dignify errors.</td>
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<td>29. Help students develop a growth mindset (e.g. in office hours or during feedback, identify specific areas that are challenging and help students identify strategies to improve).</td>
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<td></td>
<td>30. Resist a single right answer. Ask students to generate and articulate multiple solutions and/or approaches to problems.</td>
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<td>31. Incorporate assignments and assessments that are low-stakes in addition to high stakes exams, papers, and projects.</td>
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<td><strong>Provide feedback that helps students to improve.</strong></td>
<td>32. Promote fairness and transparency by sharing the criteria (rubrics) by which you use to evaluate students’ work.</td>
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</tbody>
</table>
|                                                                         | 33. Provide constructive and encouraging feedback on how to improve comprehension or performance. Examples include:  
   a. “Wise feedback”: 1) assurance that you are providing critical feedback because you have high standards 2) specific comments on where student work does/does not meet those standards, and 3) confidence that students can meet those standards (Cohen 1999, Yeager 2014).  
   b. “Strategy feedback”: identify specific areas for improvement and practice (Dweck 2012).                                                                                                                                         |            |             |
### Strategy

**Encourage students to utilize resources (available through course and campus).**

<table>
<thead>
<tr>
<th>Examples</th>
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</tr>
</thead>
<tbody>
<tr>
<td>34. Help students learn about and encourage all to take advantage of academic assistance resources; e.g. tutoring via CASA. Not all students are aware of or comfortable seeking out campus resources.</td>
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<tr>
<td>35. Reduce the stigma of office hours and encourage students to take advantage of out of class support: routinely remind students of the times, encourage them to schedule a meeting if they aren’t available during office hours, consider requiring students to come to office hours, be welcoming when students come.</td>
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</tbody>
</table>

### Work to refine and improve your teaching practices

<table>
<thead>
<tr>
<th>Set up processes to get feedback on the course climate.</th>
<th>36. Ask a colleague or Trefny staff to observe your teaching and provide feedback.</th>
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<tbody>
<tr>
<td></td>
<td>37. Participate in workshops (e.g. Trefny Center) or conferences (e.g. ASEE) to learn new teaching strategies and improve your teaching.</td>
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<td>38. Provide opportunities for students to reflect on the course and give feedback (e.g. an anonymous mid-semester survey) and reflect on integrating those changes into your class.</td>
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</tbody>
</table>

These tips were compiled from the [Center for the Integration of Research, Teaching and Learning](https://diversity.mines.edu/trefnycenter.mines.edu) (they also have an [inclusive classroom practices checklist](https://diversity.mines.edu/trefnycenter.mines.edu)), [Imperial College London](https://diversity.mines.edu/trefnycenter.mines.edu), [Washington University in St. Louis](https://diversity.mines.edu/trefnycenter.mines.edu), [University of Arizona](https://diversity.mines.edu/trefnycenter.mines.edu), and [University of Michigan](https://diversity.mines.edu/trefnycenter.mines.edu).

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**Sample statement for your syllabus:**

**Diversity & Inclusion at Mines and in this Class**

At Colorado School of Mines, we understand that a diverse and inclusive learning environment inspires creativity and innovation, which are essential to the engineering process. We also know that in order to address current and emerging national and global challenges, it is important to learn with and from people who have different backgrounds, thoughts, and experiences.

Our students represent every state in the nation and more than 90 countries around the world, and we continue to make progress in the areas of diversity and inclusion by providing [Diversity and Inclusion programs and services](https://diversity.mines.edu/trefnycenter.mines.edu) to support these efforts.

In an ideal world, science would be objective. However, much of science is subjective and is historically built on a small subset of privileged voices. In this class, we will make an effort to read papers from a diverse group of scientists, but limits still exist on this diversity. I acknowledge that it is possible that there may be both overt and covert biases in the material due to the lens with which it was written, even though the material is primarily of a scientific nature. Integrating a diverse set of experiences is important for a more comprehensive understanding of science. I would like to discuss issues of diversity in our field as part of the course from time to time.

If you feel like your performance in the class is being impacted by your experiences outside of class, please don’t hesitate to come and talk with me. I want to be a resource for you. If you prefer to speak with someone outside of the course, visit the [Mines counseling center](https://diversity.mines.edu/trefnycenter.mines.edu). I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.
Student Life Contact Information

Student Outreach and Support (SOS)
For Students that are struggling with academic, personal, mental, and physical health concerns.
Website: mines.edu/SOS Email: SOS@mines.edu

Academic Misconduct / Student Code of Conduct Violations:
- Sam Ralston, Office of Community Standards
  Contact: seralston@mines.edu Phone: 303-384-2766

Athletics:
- Athletics Staff Directory: https://minesathletics.com/staff-directory

Center for Academic Services & Advising (CASA):
- Undergraduate Student Withdrawals, Academic Support, and Academic Advising
  Contact: casa.mines.edu Phone: 303-384-2600

Counseling Center (for student referrals or consultation on student concerns):
- Contact: counseling.mines.edu Phone: 303-273-2250

Disability Support Services:
- Contact: disability.mines.edu Email: disabilitysupport@mines.edu Phone: 303-273-2250

Excused Absences:
- https://www.mines.edu/student-life/student-absences/
- Contact: Caroline Fuller cfuller@mines.edu Phone: 303-273-3350

General Student Life Support:
- Student Center Room E240. Email: deanofstudents@mines.edu Phone: 303-273-3350

Graduate Student Withdrawals, Academic Support, and Academic Advising:
- Contact: Jenny Briggs, Assistant Dean of Graduate Studies, jsbriggs@mines.edu Phone: 303-273-3461

Mines Testing Center (including proctoring exams for students with accommodations):
- Contact: https://www.mines.edu/disability-support-services/ and Mines Testing Center (MTC) - Disability Support Services. Email: disabilitysupport@mines.edu Phone: 303-384-2532

Public Safety (Mines Police Department):
- In an emergency, call 911.
- Non-Emergency assistance Contact: publicsafety.mines.edu Phone: 303-273-3333

Raise Your Hand:
- If a student or staff member is struggling, “Raise Your Hand” for assistance. https://www.mines.edu/student-life/raise-your-hand/

Retroactive Withdrawals, Excused Absence Abuse, General Academic Concerns:
- Contact: Colin Terry, AVP Student Life, cterry@mines.edu Phone: 303-273-308
Recommendations for Research Advisor/Advisee Interactions and Expectations
From the Graduate Council, Colorado School of Mines

This document is intended for graduate student researchers pursuing a thesis-based MS or Ph.D. (referred to as “advisees” in this document) and their research advisors (referred to as “advisors”).

Academic research conducted under the direction of a faculty advisor is an opportunity for accelerated academic and professional growth. This is best accomplished by beginning with clear expectations for both the advisor and the advisee. This document, though not exhaustive, is intended to provide a framework for the advisor and advisee to discuss their expectations for a safe, supportive, and productive research advisor/advisee relationship.

Advisors and advisees should feel free to edit this document as desired, so long as all involved parties agree to its content. It is recommended that both the advisor and advisee acknowledge that they received and reviewed this document by signing it.

The Roles of Advisor and Advisee
The advisor and advisee each have unique roles in the research process.

The advisor is primarily responsible for:
1. Securing research funding through proposal writing.
2. Managing research funds and overseeing all research efforts in the group.
3. Mentoring advisees working under their direction. This includes providing academic advising, guidance, and resources to perform research as well as professional development opportunities.
4. Reviewing, editing, and approving all communication relating to the research effort, including sponsor reports, manuscripts, conference proceedings, and oral presentations.

The advisee is primarily responsible for:
1. Conducting research.
2. Sharing knowledge gained through study and experience with the advisor.
3. Managing their thesis project(s) and degree progress.
4. Effectively communicating research accomplishments through presentations, reports, and publications.
5. (Potentially) Serving as a teaching assistant (TA)

Both parties are responsible for ensuring that the advisee has a reasonable research project(s) to pursue and the resources needed to execute the work. The advisor may provide the initial framework for projects based on the group’s central research areas, and the advisee is expected to develop independence in their work and generate and execute their own ideas. This is expected to be a continuous process that occurs throughout the length of the advisee’s degree and is facilitated by the advisor.

Both parties are also encouraged to discuss early in the process expectations and interests regarding interactions with collaborators (inside and outside of Mines) and mentoring of undergraduate research assistants.
Adaptations to these general roles may be necessary in some circumstances. In addition, as the advisee grows in knowledge and experience, they may take on some tasks of the advisor, like proposal writing or assisting in mentoring junior researchers.


**Professional Behavior & Inclusion**
Both the advisor and advisee are responsible for creating and maintaining a safe, positive, and supportive culture in the research group, the department, and on campus. This is to be accomplished with open communication, mutual respect, and non-discrimination that enables all parties to realize their full intellectual potential.

Though advisor/advisee relationships vary from formal to informal, a high level of professionalism is essential. Advisors should always be careful to keep advisee information confidential.

**Academic Mentoring**
The research advisor also serves as the student researcher’s academic advisor. Student researchers should regularly consult with their advisor about selecting coursework to gain necessary skills for success in their research. In these discussions, the educational interests of the student should be the primary consideration. Advisors should support student efforts in balancing coursework and research responsibilities, establishing a thesis committee, thesis preparation, and other program requirements. However, it is the student’s responsibility to meet academic requirements and timelines. Students should carefully study the major requirements outlined in the graduate catalog and handbook for their department and/or program. Students can also consult with their thesis committee, the Graduate Program Manager, or the Office of Graduate Studies.

**Documentation**
All researchers are required to maintain detailed documentation of their work. This documentation could be written or digital, as directed by the advisor. While advisees may keep personal copies, all documentation should be delivered to the advisor upon completion of the research appointment or at their advisor’s request. Researchers should have access to the funded grant proposal they are supporting.

**Communication**
Advisors and advisees should establish and adhere to preferred means of communication (e.g., in-person discussion, email, phone, text, or other electronic formats). All parties should do their best to respect personal time by limiting text and phone calls on evenings and weekends. Exceptions may be necessary.
Meetings
Advisors should schedule regular meetings with their advisees, such as group, subgroup, and one-on-one meetings. The advisor should provide expectations for the frequency of these meetings and the preferred format for research discussions (e.g., printed slides, presentations, or progress reports). Advisees should come to these meetings prepared to discuss their research progress. Advisors should also schedule regular one-on-one meetings with each advisee for academic and professional mentorship or to address topics best discussed in private.

Professional Development
It is the responsibility of the advisor to provide the time and opportunities for advisees to attend regional and/or national conferences. It is the responsibility of the advisee to produce research results worthy of conference presentation. In consultation with their advisor, advisees should select a conference best suited to showcase their research results. Advisees should seek out external funding to supplement travel costs whenever possible.

TAing
Advisees may serve as teaching assistants (TAs) for none, some, or all of their graduate work. TA roles and expectations vary depending on the advisee’s funding, advisor’s funding, and department. Prior to joining a group, the advisee should discuss TAing expectations with their potential advisors. Some key questions to address in this conversation are:

- How often do group members typically TA?
- Under what circumstances might someone be asked to TA more or fewer semesters?
- What is the typical workload for TAs?
- What are expectations for research progress while on TA?

Work Schedule
Successful research requires a sustained effort over an extended time period. Defining an expected workload—and even more so, a fixed schedule—is notoriously difficult in graduate work for many reasons. For example, different advisors have varied expectations; factors such as lab work operations, field site access, and equipment availability will vary among and within research groups; and advisees will have different goals and circumstances that may impact their schedules, such as caregiving responsibilities, disabilities, commuting, etc.

Advisors and advisees should have a clear and honest discussion about workload expectations before an advisee joins a particular group. Advisees should familiarize themselves with the group culture. Key areas to discuss are:

- **Academic/professional topics** such as career goals, expected number of publications during degree, expected time to degree, expectations for balancing coursework with RA/TA assignments and research progress both early and later in the degree program
- **Logistical factors** such as typical work week schedule, expectations/availability for working nights and weekends, requirements and/or constraints for different types of tasks in the primary work locations (e.g., lab, field, other facilities), and level of hands-off/on style of advising

It is recommended that the advisee discuss these areas with both the advisor and the current group members.
Recommendations for Research Advisor/Advisee Interactions and Expectations
From the Graduate Council, Colorado School of Mines

Vacation/Time Off
All Mines students and employees receive time off during official university holidays. Additional time off should also be taken throughout the year, and the advisee should make their requests for time off to their advisor. Prior to joining a lab, the advisee should discuss with their potential advisor the expectations for vacation time per year and the process by which to request time off.

A new potential advisee may hesitate to initiate this conversation with a potential advisor in fear of appearing unmotivated. However, vacation time beyond university holidays should be expected and granted. The potential advisor is encouraged to initiate this conversation prior to taking on a new advisee. The advisee is encouraged to ask the advisor and current members of the group about vacation policies prior to joining the group.

Lab Safety
Advisors and advisees have a shared responsibility to maintain a safe working environment. Faculty should ensure students are properly trained before using equipment, conducting experiments, or visiting field sites. Students must ensure that they follow all safety protocols, understand the safety hazards of their research, and conduct their research with safety in mind. Students should reach out to their advisor and EH&S about safety precautions before beginning a new experiment. Additionally, students should not feel pressured to work in an environment that they consider to be unsafe. For more information, or to schedule safety training, consult the Mines Environmental Health and Safety website (https://www.mines.edu/ehs).

Feedback
Constructive feedback is critical to professional development. Advisors should provide timely and regular performance feedback to their advisees. Feedback should be constructive by describing specific items/tasks that were executed well or should be improved. If an advisee feels they are not receiving adequate feedback, it is recommended that the advisee schedule a one-on-one meeting with their advisor and prepare a list of specific questions on which the advisor can offer insight. Advisors are also encouraged to ask for feedback from their advisees to create a more supportive, positive, and productive environment.

Group Manuals
In addition to the discussion items and expectations listed in this document, each group is encouraged to have other standard operating procedures (SOPs) to help the group run smoothly. To ensure all important information is communicated and accessible to everyone in the group, it may be helpful to create a Group Manual that details expectations in the group, SOPs (such as ordering supplies, waste management, equipment access, field site permits or protocols), and resources (such as online tools, resources, fellowships, etc.). There are several examples of free, cloud-based, password-protected collaboration software (also called multi-user wikis) in which users can log in and easily access information and contribute new information. Examples include Nuclino and Notion.

Conflict Resolution
Advisors and advisees are required to abide by Mines Policy on Academic Integrity/Misconduct (https://catalog.mines.edu/policiesandprocedures/). This includes maintaining professionalism at all times.
Recommendations for Research Advisor/Advisee Interactions and Expectations
From the Graduate Council, Colorado School of Mines

Mines policies include a Student Complaint Process: If a student needs to make a complaint, specific or general, about their experience at Mines, he or she should contact the Office of the Dean of Students at 303-273-3288 or studentcomplaint@mines.edu. If there is an issue related to discrimination, sexual harassment, or sexual violence, there are specific procedures that will be followed. Students may find more information on the Title IX website (https://www.mines.edu/title-ix/) or by contacting the Title IX & Equity Director at 303-273-2558.

The Graduate Program Manager, Department Head, and Office of Graduate Studies are also available to consult on any conflicts that cannot be suitably settled within the research group.

Additional Resources
Conducting research and working towards a degree can be challenging. Mines offers several resources to help. All the below resources are free for students.

- The Graduate Studies Office (https://www.mines.edu/graduate-studies/) provides policies, forms, FAQ, office hours consulting sessions, and more. Visit https://www.mines.edu/graduate-studies/graduate-assistantship/ for policies and guidelines related to this document.
- Student Outreach and Support (https://www.mines.edu/student-life/student-outreach-and-support/) provides mental health resources and options. If you are concerned for someone’s wellbeing, you can also submit an online referral to the Care team.
- CASA (https://www.mines.edu/casa) provides academic advising, tutoring, academic support, and academic workshops.
- The Counseling Center (https://www.mines.edu/counseling-center/) provides mental health resources and support. Students may call 303-273-3377 for an appointment. Located in the Wellness Center 2nd floor at 1770 Elm St.
- The Health Center (https://www.mines.edu/student-health/) provides health services. Students may call 303-273-3381 for appointment. Located in Wellness Center 1st floor at 1770 ElmSt.
- The Center for Professional Education (https://www.mines.edu/cpe/resources-for-gradstudents/) – provides professional development courses, workshops, and seminars as well as one-on-one support.
- Colorado Crisis Services (http://coloradocrisisservices.org) provides crisis support 24/7 via phone, text, and in person. Colorado Crisis Services is a great confidential resource, available to anyone by calling 1-844-493-8255, or texting “TALK” to 38255. Walk-in location addresses are posted on the website.

The Counseling Center, Health Center, and Colorado Crisis Services are confidential resources. The Counseling Center will also make referrals to off-campus counselors, if preferred.

In an emergency, you should call 911, and they will dispatch a Mines or Golden PD officer to assist.

By signing below, the advisor and advisee agree to the content of this document.

________________________________________
Adviser signature and date

________________________________________
Advisor signature and date
Mentoring at Mines

Most new faculty are looking for some sort of mentoring. Unfortunately, many university mentoring programs randomly match junior and senior faculty without much follow through or studies on efficacy. As noted by Rockquemore (2019) the word “mentoring” is vague enough that people have a variety of thoughts when they hear this term, and also that that word often is associated with matchmaking faculty rather than helping new faculty discover their needs. Here, we’re going to rephrase a “need for mentoring” by allowing you to think about two key questions:

1) What do I need?  
   and  
2) How can I get my needs met?

Here, we describe a number of possible needs, and how you might find them on campus. It's impossible and potentially unhealthy to try to have all these needs met by one person. When you shift from a person-based to a needs-based framework, it frees you from the search for "a mentor" and focuses you instead on identifying your needs and getting them met. This shift acknowledges that it’s normal to have an evolving set of needs throughout your career and that those needs are most effectively, efficiently, and comprehensively met in the context of a broad network of information, community, support, accountability, and ongoing feedback.

**Professional Development**

Many new faculty are looking for help learning how to manage time, resolve conflicts, administer projects, organize your office space, teach efficiently, supervise graduate students, and make strategic decisions about service commitments. At Mines, you might want to look for information on this topic for both you and your students here:

- Check out the Center for Professional Development Education: [https://www.mines.edu/cpe/](https://www.mines.edu/cpe/)
- Check out the library’s Modern Researcher program: [https://libguides.mines.edu/researcher501](https://libguides.mines.edu/researcher501)
- Get on the VPRTT’s research listserv and participate in Mines'-wide research events (contact Lisa Kinzel for information)
- Plug into the Trefny Center’s teaching workshops: [https://trefnycenter.mines.edu/](https://trefnycenter.mines.edu/)
- Explore Percipo, a web-based monthly series focused on learning new skills and professional development: [https://www.mines.edu/human-resources/professional-development/](https://www.mines.edu/human-resources/professional-development/)
Mentoring at Mines

Personal/Emotional Support
As a new faculty member, you are in the midst of a significant identity and role transition—from graduate student (or post-doc) to professor. As a result, you may need support in dealing with the common stress and pressures of transitioning to life on the tenure track. Suggestions:

- Reach out to colleagues/friends in your department and beyond with whom you connect
- Participate in Mindful Mondays, a meditation group that meets at the library
- Take advantage of the yoga and spin classes in the Rec Center, or go to lift weights or use the pool
- Join Roel Snieder’s (rsnieder@mines.edu) running club
- Be the positive change you want to see: this week, say thanks to five people or ask five people how they are doing, and make a genuine effort to be interested in their response
- C-SEAP (State of Colorado’s confidential Employee Assistance Provider) is available to address personal problems and workplace issues. CSEAP counseling, training, and organizational development services are free-of-charge and located on campus. To make an appointment with C-SEAP on the Mines Campus, call (303) 866-4314
- Faculty enrolled in Mines’ Anthem plans are covered for most counseling services. The cost depends on your plan and whether you use an in-network or out-of-network provider. Employees can check their benefits at: www.mybensite.com
  User: cheiba  Password: csmines
- Through Anthem and Live Health Online, employees also have access to virtual psychology and/or psychiatry services, covered through our Anthem insurance plans. Download the Live Health Online app or visit the website: https://livehealthonline.com/
- Lastly, all employees have access to Colorado Crisis Services. They provide phone, text and walk-in assistance. Call 1-844-493-8255 or text “TALK” to 38255. To locate a walk-in site, see their website at https://coloradocrisisservices.org/
A Sense of Community
Given that most new tenure-track faculty have uprooted their lives to move to a new area, you may find yourself seeking both an intellectual and/or social community where you feel a true sense of belonging. Ways of building community include:

- Build your own community by challenging yourself to ask one colleague to lunch/coffee a month, perhaps someone that you rarely talk with
- Get a second coffee when you go to get one, and drop it at a colleague’s office
- Go to a departmental seminar that is not your own
- Take time to help a student figure out their life path
- Make a conscious effort to say hi to colleagues and students in the hall
- Nominate a colleague for an award
- Become part of the Faculty Senate
- Attend campus events and ask a colleague to go with you

Accountability
The structure of your job likely provides the least accountability for the activity that is most valued -- research, writing, and publication. To avoid getting caught up in the daily chaos, the vast majority of new faculty members need some form of accountability system for writing. Some options include:

- Start a writing group—consider reaching out to other new faculty around campus
- [www.stickK.com](http://www.stickK.com): a website created by behavioral economists at Yale, where you set a writing goal for yourself. If you fail to reach your writing goal, you can pay a sum to a charity, or as an even stronger motivator, an “anti-charity” – an organization you really don’t want to have your money

Institutional Sponsorship
You also need to cultivate relationships with people who are invested in your success at your institution. In part, these are senior faculty who are willing to use their power to advocate for your best interests behind closed doors. To build these relationships, consider:

- Reaching out to colleagues in your department and beyond with whom you connect
- Participating joyfully in departmental events, as much as you can
- Thank the staff for the things they do for you, as they can help you make your life easier
**Mentoring at Mines**

**Access to Networks**
Because knowledge isn't produced in isolation, it's critical for you to connect with others to discuss potential research collaborations, navigate external funding, and access opportunity structures that might not be immediately apparent to you as a new faculty member. People and places to think about include:

- New colleagues from New Faculty Orientation
- Campus-wide events throughout the school year
- Regular meetings for Teaching Faculty
- Regular meetings for Women Teaching Faculty

**Project-Specific Feedback**
You will also need to regularly communicate with people who can provide substantive comments on your proposals, manuscript drafts, and new ideas. Good options here may include:

- Colleagues in your department who seem interested in your work and wellbeing
- Colleagues beyond the walls of Mines who may serve as a mentor in this capacity

**Role Models**
As a new faculty member, looking to other faculty members who are navigating the academy in a way that you aspire to will be critical for your development as both a faculty member and academic. Who makes a good role model? Well, that's up to you. But a few thoughts are:

- Senior colleagues in your department or beyond with whom you connect.
- Mentors from other institutions
- Think about serving as a good role model to students, too!
- If you are having trouble finding someone, reach out to Roel (rsnieder@mines.edu) or Kamini (ksingha@mines.edu) so we can help try to find someone with you
Mentoring at Mines

Safe Space
This applies at any career stage, but especially as a tenure-track faculty member. It’s extremely important to have the space to discuss and process unique and individual experiences without being invalidated, questioned, devalued and/or disrespected. Some options include:

• Reach out to colleagues in your department and beyond with whom you connect
• If you’re looking for an off-campus (non-Mines-affiliated) life coach, one local option is Katharine Lavenhagen, who focuses on life transitions: http://coachingwithkatharine.com/

The Weekly Challenge
This week, we challenge you to:

• Pause every time you feel the urge to use the word "mentor" or "mentoring" and ask yourself: What do I need right now? What’s holding me back? And what (specifically) would help me to be more productive and effective?
• Go through the previous list of (some!) typical faculty needs and specify what would be helpful to you in moving forward. Don’t be afraid to name your need. If you don’t know how to write a successful grant, get un-stuck in your writing, or are floundering in the classroom, it’s okay. Name it so you can get the help you need to move forward.
• Ask yourself: How can I get__________(insert current need not being met)? If you don’t know, state the need to someone else, and ask them to help you brainstorm how to get your needs met.
• Once you know what you need and have identified possibilities for getting it met, ask for help widely without shame, insecurity, or the belief that such a request means you are incompetent.
• Release yourself from the limiting belief that all you need is to find a single guru-like figure who will care for you, protect you, and lovingly guide you through your academic career. Repeat after me -- There is no guru. Instead, see what opens up this week for you when you replace that limiting belief with the idea that you can get your needs met from a wide variety of people and then take action in that direction.
• Be sure that you are taking advantage of whatever "mentoring" programs your department, college, and/or university offers, as well as any that may be offered by your professional organizations. They may not meet all of your needs, but they will increase the size of the network of people you can call on to assist you when you need it.

Adapted from Kerry Ann Rockquemore, PhD
President, National Center for Faculty Development & Diversity From the Tomorrow’s Professor Listserve
WELCOME!

COLORADO SCHOOL OF MINES