189\textsuperscript{th} Commencement
Saturday, May 4, 2024
The Monument Ice Arena
ORDER OF CEREMONY

Master of Ceremonies
Dr. Lance Roberts

Processional (Stand)
Graduation Band

Pomp and Circumstance by Edward Elgar, arranged by Larry Clarke

Presentation of Colors
Army ROTC Color Guard

President’s Message
Dr. Jim Rankin

Recognition of the 50 Year Graduates
Dr. Lance Roberts

Senior Class Representative’s Message
Mr. Patrick Rust

Message from the Board of Regents
Mr. Douglas Morrison

Presentation of Honorary Degrees
Dr. Jim Rankin

Commencement Address
Mr. Qusi Al-Haj

Conferral of Degrees
Dr. Jim Rankin

Presentation of Degree Candidates
Dr. Joseph Dlugos

Alumni Welcome
Mr. Rich Wells

Retirement of Colors
Army ROTC Color Guard

Recessional (Stand)
Graduation Band

Flourishes! by William Owens

SOUTH DAKOTA MINES GRADUATION BAND

Dr. Haley Armstrong, Director
Makya Milkowich, Trumpet
Angelina Benda, Clarinet
Christian Olson, Trombone
Chase Bradley, Horn
John Papiernik, Euphonium
Krista Burkman, Clarinet
Ethan Parsons, Euphonium
Alex Chan, Trumpet
Andrew Peterson, Percussion
Skyler Doty, Alto Sax
Dakota Remington, Tuba
Macy Fliehe, Flute
David Robbins, Percussion
Sam Gering, Clarinet
Rose Sarchet, Trombone
Kyle Houchin, Clarinet
Aidan Stietz, Tuba
Jacob Jorgenson, Trumpet
Brandilyn Ukena, Flute
Duram Kelly, Clarinet
Danielle Vander Poel, Flute
Mason Klein, Trumpet
Jayden Vollmuth, Horn
Luke Lichtenberg, Trombone
Charles Winkers, Trumpet
Karen Ly, Oboe

This program is not an official document. Due to strict requirements, it must be printed before the final list of degree candidates can be determined.
50-YEAR GRADUATES
CLASS OF 1974

Class of 1974 - 386 graduates (311 BS degrees, 70 MS degrees, 5 PhD)
Only those attending today's Commencement are listed below.

Mark T. Anderson
Chemistry, Rapid City, SD

Tom Anderson
Metallurgical Engineering, Novato, CA

Ron Bach
Mechanical Engineering, Troy, ID

Paul Bachman
Electrical Engineering, Harrisburg, SD

Buddy Belzer
Civil Engineering, Rapid City, SD

Mark Bossly
Mechanical Engineering, Ipswich, MN

Gary Christman
Chemical Engineering, Spearfish, SD

Dan Colgan
Civil Engineering, Hermosa, SD

Monte Dirks
Metallurgical Engineering, Sioux Falls, SD

Fred Fletcher
Electrical Engineering, Palm Desert, CA

David Gnirk
Mechanical Engineering, Herrick, SD

Jim Green
Mechanical Engineering, Rapid City, SD

Dave Habicht
Electrical Engineering, Rapid City, SD

Michael Hafner
Mechanical Engineering, Sturgis, SD

Kevin Hegerle
Metallurgical Engineering, Parker, CO

Jerry Jarding
Mechanical Engineering, Reston, VA

Steve Kirk
Mining Engineering, McKinney, TX

Darwin Koepp
Chemical Engineering, Spearfish, SD

Sue Koepp
Chemical Engineering, Spearfish, SD

Lowell Kolb
Electrical Engineering, Rapid City, SD

Candy Krebs
Geological Engineering, Round Top, TX

Marvin Larsen
Mechanical Engineering, Albuquerque, NM

James McNulty
Math, Rapid City, SD

Ivan Mehlhaff
Chemical Engineering, Custer, SD

Kathy Miller
Chemistry, Rapid City, SD

Ken Moke
Chemical Engineering, Rossmoor, CA

Bob Morcom
Civil Engineering, Spearfish, SD

Gerry Morgen
Electrical Engineering, Kennewick, WA

Terry Mudder
Chemistry, Sheridan, WY

Jeff Muffat
Mechanical Engineering, Cottage Grove, MN

Bill Mulder
Mechanical Engineering, Mitchell, SD

Gary Nelson
Civil Engineering, Romeoville, IL

Marlene Nelson
Mechanical Engineering, Bellevue, WA

Al Ness
Metallurgical Engineering, St Augustine, FL

Michael Pawlak
Civil Engineering, Arlington, WA

Leno Pederson
Electrical Engineering, Bardstown, KY

Mary Pederson
Chemical Engineering, Bardstown, KY

Steve Piatz
Electrical Engineering, Eagan, MN

Randall Pooley
Chemical Engineering, Rathdrum, ID

Randy Porterfield
Mechanical Engineering, Norman, OK

Duane Quiett
Mechanical Engineering, Gettysburg, SD

Art Rausch
Civil Engineering, Heathsville, VA

Steve Richard
Civil Engineering, Grand Junction, CO

Bob Ringgenberg
Metallurgical Engineering, Nixa, MO

Jim Schunneman
Mechanical Engineering, Houston, TX

Jim Scull
Civil Engineering, Rapid City, SD

Lindell Sunde
Mechanical Engineering, Charlotte, NC

Don Swanson
Civil Engineering, Des Moines, IA

Steve Vanderboom
Civil Engineering, Medina, MN

CLASS OF 1949
Jim Ward
Electrical Engineering, Milwaukee, WI
Mr. Patrick Rust

Patrick Rust came to South Dakota Mines after graduating from Chadron High School in Chadron, NE. His parents are Katie and Jason Rust, and he has one sister, Megan Rust.

Rust has been involved in various clubs and activities while at South Dakota Mines. He has served as a student senator, student mentor, residential advisor, and a member of Circle K International. He has been a member of Lambda Chi Alpha, serving as scholastics chair in and vice president. He has been a member of the Vex Robotics team, serving as vice president and treasurer. He received the Caring, Helping, Aspiring, and Development (C.H.A.D.) award last year and was inducted into the Leadership Hall of Fame this spring. He completed an internship with Dakota Panel and two internships with Lockheed Martin Space.

After graduating with his Bachelor of Science degree in industrial engineering and engineering management, Rust will be working at Raytheon in Tucson, AZ.
Mr. Qusi Al-Haj

Mr. Qusi Al-Haj came to the United States from Zarqa, Jordan, at age 17. He graduated from South Dakota Mines in 1991 with a master's degree in electrical engineering; he received a bachelor's degree in electrical engineering from the University of Missouri at Rolla in 1983. He became a U.S. citizen in 1991. He is the founder and former president of Micro Solutions, Inc.; former special assistant to the Deputy Under Secretary of the Air Force for International Affairs; and is currently the deputy state director and Air Force advisor to U.S. Senator John Thune. He is a charter board member of the Rapid City Community Development Corporation, and served on the Ellsworth Task Force & Honorary Commander Program as well as the Rapid City Chamber Military Affairs Committee. He is a past chairman of the Rapid City Area Chamber of Commerce, past president of the Rapid City Rotary Club, and served as a board member of the Boy Scouts and Girl Scouts of the Black Hills and vice chairman of Black Hills Works. He currently serves on Black Hills State University School of Business Advisory Board, and is a member of the audit committee for Mines' Center of Alumni Relations and Advancement.
GRADUATE DESIGNATIONS
† Army ROTC Cadet being commissioned as Second Lieutenant
‡ 2023 Graduate
‡‡ Summer 2024 Graduate
‡‡‡ Fall 2024 Graduate

BACHELOR OF SCIENCE DEGREE

*Cum Laude  White Tassels  3.50 - 3.69 GPA
**Magna Cum Laude  Red Tassels  3.70 - 3.89 GPA
***Summa Cum Laude  Gold Tassels  3.90 - 4.00 GPA
Atmospheric and Environmental Sciences

Battsengel Dashdorj
Dissertation Title: Flow characterization, trends, and peak flow frequency analysis in the Mongolian Orkhon River watershed

Civil and Environmental Engineering

Cody J. Allen
Dissertation Title: Spatiotemporal dynamics of sulfate reducing bacteria during microbial induced corrosion

Geology, Geological Engineering, and Mining Engineering: Mining Engineering Specialization

Scott David Rosenthal
Dissertation Title: Impacts to Load Carrying Capacity per Unit Length of Swellex® Rockbolts Subjected to Blasting Induced Vibrations
MASTERS OF ENGINEERING DEGREE CANDIDATES

Civil and Environmental Engineering
Taran Lynn Tucker

MASTERS OF SCIENCE DEGREE CANDIDATES

Atmospheric and Environmental Sciences
Per Russell Lundquist

Biomedical Engineering
Caleb Allen Brouwer
Amelia Pearl Huffer
Kara Lynn Huse
Nadia Jo Kaczmarz
Jillian Irene Linder

Chemical Engineering
Grant Walker Bauer
Daniel Carl Cerfus
Zoe Nicole Fickbohm
Christen Violet Gauker
Chisimdi Vivienne Udedide

Civil and Environmental Engineering
Antonio M. Candelaria
Alexander J. Hall
Tracy Lynn Herrboldt
Mason Matthew Karpen
Daniel Kazadi Kime
Quinton J. Mohr
Samantha E. Overend
Md. Hasan-Ur Rahman
Rabbi Sikder
Tatiana Angeline Vasquez
Computer Science and Engineering
  Emeka David Amadi
  Caleb Lewis Ehrisman
  David Michael Mathews ‡‡
  Md Kausar Hamid Miji
  Mangesh Sagar Sakordekar

Construction Engineering and Management
  Bryce Jimmy Hayes
  Danner Kent Purkett

Electrical Engineering
  Jamiu Mohammed Abdulsalam
  Mou Deb
  Edna Ayide Egbunu
  S. M. Ahsan Habib
  Caden Robert Johnson
  Venkata Sasidhar Kunchapu
  Jacob Simpson Oursland

Engineering Management
  Quintan Evan Green
  Philip Andrew Litecky
  Roosevelt Kenneth Momon
  Johnathon Raymond Weber

Geology and Geological Engineering
  Madison Xariah Betts
  Gillian M. Clark
  Lauren Kathleen Stern
  Michael Tetteh
  David Jerry Tilley, Jr.

Green and Sustainable Chemistry
  Izabelle Brooke Smith

Industrial Engineering
  Peter Young Atteh
  Leila Talebi ‡‡
Materials Engineering and Science
Avery Thomas Bend ‡‡
Carter John Crawford

Mechanical Engineering
Anthony Chinonso Ekemezie
Cameron Wade Good
Hafizul Islam ‡‡
Ryan Rodney Kappenman
Zachary William Karg
Morgan Marguerite Wiechmann

Mining Engineering and Management
Ian Michael Cone
Yahor Dzemidziuk
Michael Michael
Anthony Alexander Rojas
Nicole Russell

Nanoscience and Nanoengineering
Tolulope Olayinka Ajuwon ‡

Paleontology
Corrine Roe Cranor
Krystal Bernadette Ortiz
Katrina Wisofsky
BACHELOR OF SCIENCE DEGREE CANDIDATES

**Applied and Computational Mathematics**
Jordan Lea Harter

**Atmospheric and Environmental Sciences**
Markus Ron Sonnenfeld

**Biology**
Nathan Price Andersen
Hayley Rae Carter
Sydnee Jill Durtsche
Natalie Grace Montoya ***
Aaron Michael Olson **
Kevin Alan Osmanski **
Jaka Prevodnik ***
Isabelle R. Schild
Grace Rose Tuntland
Joshua Clinton Zerbel ‡‡

**Biomedical Engineering**
Katherine Marie Ballard **
Alonna G. Clair **
Cody M. Collier
Bryce Leonard Deaver ***
Greyson Mark DeVries
Cruz Micheal Franich
Brandon M. Gabert **
Megan Leigh Major
Grace Brook Neven
Michael E. Perry ***
Tierney Rae Robinson
Claire Lee Smith
Braxton Keith Tyree
Samuel Clark Van Osdel **
Joseph Vincent

**Business Management in Technology**
Dariane Carole Keeler
Spencer Todd Skeesick
Brannagh Jack Walsh *‡‡
Chemical Engineering
Seattle Marley Briscoe **
Dalton Lawrence Eckmann **
   Ian Andrew Elkins
   Rianna Garland
   Jay Cyril Horning *
   Reid Alexander Kaiser
   Kyler Douglas Lillie
   Macy Jane Loos
   Dalton Marshall
   Jake Ryan Martinelli ***
   Katelyn J. Novacek
   Lexi Morgan Ochsner **
   Preston Charles Seamands
   Evelyn Elise Smith
   Josi Jene Stevens
   Zack Riley Sudbeck ***
   Samuel Cory Wood

Chemistry
Karmin E. Brunner **
Kendra Louise Westerbur

Civil Engineering
Sydney Nicole Carlbom ***
Hayden Thomas Casdorph ‡‡
   Garrett Lee Cole
   Amanda Brooke Cooley
   Reid Scott Dutrow
   Samuel David Elliott †
   Keaton T. Erhardt
   Allison Marie Harr
   Matthew Thomas Heilman ***
   Carly Kate Hirsch
   Taylor Dean Hojer *
   David Douglas Julius
   Ava Annalise Knutson
   Benjamin Douglas Lewis
   James Ray Lichtenberg
   Nathan D. Lyon
   Eliza Drew McCallum
   Tyrese Malcom Morris
   Tierney Dee Musick
   Isaac Ray Nedved
   Dustin James Paschke
Ruth Mackenzie Potter ***‡‡‡
Danner Kent Purkett
Raymundo Ramirez
Abigaile G. Saline ***
Annika Jude Schooler
Abigail Paige Strahl
Emma Mira Thompson **

**Computer Engineering**
Bradley Jon Dahlke
Dakota Richard Hugh Edens ***
Alexander J. Gergen *
Bryce William Goettle ***
Michael Robert Green ***
Colton M. Kaup *
Trevor David Keierleber *
Jayden Dale Molstad ‡‡
Ashley Lynn Schnetzer *

**Computer Science**
Johnathan Alejandro Arellano
Christopher Robbin Bare
Benjamin Raphael Catalano
Kaeli Grace Clark
Aidan Coopman
Michael Robert Green ***
Alex James Hanson
Connor K. Heath
Noah A. Johnson **
Adam Leo Kraus
Landon James Lamoreaux
Brandon Michael LeBlond *
Edward Lee Maertens
Patrick Jay McBride *
Isaac Patrick McClanahan **
Joshua Francis Mentele ***
Zoe Rae Millage *
Sage Alan Oltmanns *
Ethan Wildon Parsons ***
Hunter Reece Paxton
Lindsey Kae Powell
Carson Daniel Price **
Austin Leon Scott
Brayden L. Simon
Daniel J. Taylor *
Mican James Vollan
Dakota Walker
Adeline Clare Wilson

**Electrical Engineering**
Hezekiah Celestino Ray Arguello
Joshua Jacob Bjerken
Zachary Ryan Bolyard
Jacob Harisson Borden
Zachary C. Boswell
Hunter Kenneth Butler
Tate Walker Dille ***
Chayce Hunter Grindle
Caden Robert Johnson
Theron Michael Kalasinsky *
Cecilia A. Kouri *
Benjamin William Laufman
Joshua John Leone ***
Kiley ReNae Metzger ***
Isabela Meza
Roberto Manuel Perez Torres ****
Antonio Joseph Romero
Ayden Michael Orr Roush
Braeden Michael Seifert-Bulat **
Matthew Austin Sin **
Owen Stenstadvolden ***
Mason Matthew Teal ***
Skylar Apollo Tyler
Spencer A. Wasmund

**Geological Engineering**
Divo Cerjan
Samuel J. Herrboldt **

**Geology**
Ethan Stewart Bailey
Rebecca Lynne Braun **
Reghan Beth Deboer **
Aidan T. Forbes
Zachariah Alfred Hentschel
Dylan Brock Lau
Morgan Elizabeth Nystuen **
Industrial Engineering and Engineering Management
Trevin C. Anderson *
Nathan Joseph Dahme
Dylan Ray Dunn
Adrian Edwin Eastman
Naomi Sariah Hidalgo
Kaden David Jerke *
Nicholas Nathan Limoges
Dominick Zane Oedekoven ***
Trase Douglas Olsen
Patrick P. Rust
Keagen Sidney Smith *
Brent Michael Snyder *
Ryan Joshua Soper
Juliann K. Spilman
Jaycie Marie Stubbs *

Mathematics
Noah Steven Everett ***
Simon T. Mannisto **
Jonathan Paul Snoozy
Owen Stenstadvolden ***

Mechanical Engineering
Micah Alexander Anderson
Jaden S. Arner
Frank Daniel Baca
Donavan Thomas Bradford
Mitchell James Carolan
Britton Douglas Carver
Monty Lee Christo †
Alexis Grace Crumb
Ryley F. Darnell **
Shawn Patrick Dean
Kyden Fraser DeGross
Tyler John DeVelder *
Nathan Scott Dooley
Tyler C. Drey
Seth Michael Drum
Gage B. Espanet
Deon David Estebo **
Ryan Casey Forbes
Dalton Michael Fox
Isaiah Leon Garcia
Luis Fernando Gonzalez
Michael Henry Theis
Conrad Gary Thorman **
Gage Thieke Tuohy
Riley Scott Van Den Top ***
Cooper Jon Vermeulen *
Grant Neil Vikre **
Logan Jay Vojta
Sean Wacker ***
Kevin Andrew Wake
Andrew James Ward
Avery W. Warren
Calvin J. Wolf

Metallurgical Engineering
Quinn Z. Barnes *
Gage M. Canfield
Jaxson A. Dueland
Aaron Scott Eastlake *
Charles Benjamin Gauker
Brianna Nicole Hoff ***
Elyse Sylvan Jensen
Trent Alexander Klocek
Casey Aaron Mason
Mya Gross Maxwell
Austin B. McCracken
Christopher Alan Mercado
Caleb E. Ploeger ***
Rylan Jace Rasmussen *
Tyler T. Reinarts
Joshua Edward Robinson
Jenna Dea Sayler
Jake Donavon Scheafer **
Abigail Dean Sharp
Matthew Hespen Swanson
Charles Eric Thrift ***
Aaron Daniel White
ASSOCIATE OF ARTS DEGREE CANDIDATES

General Studies
Dorothy H. Snowden
**THE TRADITION OF COMMENCEMENT**

Dating back to the universities of thirteenth-century Europe, the conferring of degrees signified that faculty members had attained the guild status of a master. Originally, this "master's" degree was the only one offered; the baccalaureate was simply a stage towards mastership. During the ceremony, black robes were worn in imitation of the clergy, for church and university were one at the time. When the hood was placed over the candidate's head, the ceremony was consummated, and mastership was achieved.

Over the centuries, graduation evolved to commemorate more than the end of an educational endeavor or the mastership of a craft. Instead, it became the start of a new adventure, a passage to professional status recognized by the community of scholars and the community at large.

Today, we call this ceremony commencement, a term defined as both an act of commencing and the ceremony for conferring degrees. In essence, it means a beginning within an end. A middle English term, commencement traces its roots to Anglo-French, Old French, and finally, the Latin word, cominitiare, a combination of the prefix com and initiare, meaning "together, begin," a fitting origin for a word that evokes a graduate's first steps taken in fellowship and a poignant reminder that in each destination lies a new dawn.

**ACADEMIC ATTIRE**

The use of academic dress stems from costumes used in universities of the fourteenth and fifteenth centuries, particularly at Oxford and Cambridge in England. The dress has been used in the United States since colonial times and was standardized by an Intercollegiate Code in 1895.

The style of gown and hood designate the degree earned. The bachelor's gown is royal blue without a hood and the sleeves are pointed; the master's gown is black and has oblong sleeves; and the doctoral gown is trimmed with velvet, has three distinctive chevrons on each arm, and bell-shaped sleeves.

The two colors on the inside of the hood are traditionally the colors of the college granting the degree. The School of Mines colors are blue and gold; however, the hood for the School of Mines is gold and silver, symbolic of the university's connection to these precious metals. Caps are black mortarboards with the tassel worn over the left front quadrant.

As one may observe from the procession, the faculty wear hoods and gowns of varying styles and colors. The color of the tassel on the hat and the outside velvet trim of the hood indicate the field of study.
THE CEREMONIAL MACE

During today’s ceremony, the chair of the faculty will carry the South Dakota School of Mines & Technology’s ceremonial mace. The university mace is an academic tradition that dates back to medieval times. The mace has acquired the ceremonial function of “guarding” the president in the tradition of a medieval sergeant-at-arms.

The School of Mines mace was designed to represent the university’s many disciplines. The handle was crafted from a fossil and represents paleontology, while the pink quartz sphere, encased in the symbol of an atom, symbolizes both geology and physics. The silver and gold signify the institution’s rich mining tradition. The laurel leaf garland crown, fashioned from Black Hills Gold, represents a mark of honor, distinction, and success.

The mace was designed by Ms. Deborah Mitchell, former director of the Apex Gallery and associate professor in the Department of Humanities. The seal was engraved by Dr. Ryan Koontz, former integrated manufacturing specialist for the Center of Excellence for Advanced Multidisciplinary Projects.

ALUMNI PINS

On behalf of South Dakota Mines Center for Alumni Relations and Advancement, each graduate is gifted with an alumni pin, presented by Honorary Alumni President Gary Christman. The pin serves as a reminder that once a Hardrocker, always a Hardrocker and the hope is graduates will wear it proudly as they go forth in their careers.

PHOTOGRAPHY SERVICES

The Grad Team will be providing photography services to the graduates. Photos will be available online at TheGradTeam.com/events approximately one week after the ceremony.

CUSTOM GRADUATION VIDEO

Celebrate with your free graduation gift. Download your StageClip personalized graduation video, featuring just your special moment on stage. Find your clip after graduation at sdsmt.stageclip.com.
COMMENCEMENT COMMITTEE

Dr. Haley Armstrong, Co-chair
Dr. Saurabh Dhiman
Dr. Joseph Dlugos
Ms. Diana Eastman
Ms. Gina Fiorello
Ms. Alyssa Gizinski
Dr. Jade Herman, Co-chair

Ms. Rachel Howard
Mr. Marlin Kinzer
Ms. Eliza McCallum
LTC Max Rovzar
Mr. Bryan Schumacher
Ms. Rachel Skea
Mr. Calvin Tohm

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Mr. Jeff Partridge, Vice President
Mr. Douglas Morrison, Secretary
Mr. Nathan Lukkes, Executive Director
Mr. Brock Brown

Dr. Judy Dittman
Mr. Randy Frederick
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