



Formal Session of the Board of Trustees
August 1, 2024
9:00 a.m. – 11:00 a.m.
Location: MUB Ballroom B
Public Meeting

- I. Call to Order**
Steve Tomaszewski, Chair
- II. Roll Call**
Sarah Schulte, Secretary
- III. Confirm Agenda**
Steve Tomaszewski, Chair
- IV. Opening Remarks**
 - A. Opening Remarks of the Board Chair**
Steve Tomaszewski, Chair
 - B. Opening Remarks of the University President**
Richard Koubek, President
- V. Public Comment Period**
- VI. Committee Reports**
 - A. Academic Affairs Committee**
John Bacon, Committee Chair
 - B. Audit and Finance Committee**
Jeff Littmann, Committee Chair
 - C. Leadership Committee**
Jon Jipping, Committee Chair
- VII. Consent Agenda**
 - A. Approval of Minutes**
 - B. Degrees In Course**
 - C. Resignations, Retirements, and Off-Payroll**
 - D. Funding Productivity Report**

- E. Michigan Tech Fund Agreement**
- F. Board Policy 4.3 - Employment Policy for Professional Staff - Satisfaction or at Will**

VIII. Action and Discussion Items

- A. Employee Recognition**
Richard Koubek, President
- B. Emeritus Rank**
Andrew Storer, Provost and Senior Vice President for Academic Affairs
 - 1) Dr. Guy Meadows, Professor & Director Emeritus, Department of Geological & Mining Engineering & Sciences & Great Lakes Research Center
 - 2) Chris Miller, Teaching Professor Emeritus, College of Forest Resources & Environmental Science
 - 3) Dr. Robert Shuchman, Professor & Director Emeritus, Department of Geological & Mining Engineering & Sciences & Michigan Tech Research Institute
 - 4) Dr. Nikola Subotic, Professor & Director Emeritus, Department of Electrical & Computer Engineering & Michigan Tech Research Institute
- C. Appointment with Tenure - Andrew Barnard, Mechanical Engineering-Engineering Mechanics**
Andrew Storer, Provost and Senior Vice President for Academic Affairs
- D. Appointment with Tenure - Michelle Scherer, Civil, Environmental, & Geospatial Engineering**
Andrew Storer, Provost and Senior Vice President for Academic Affairs
- E. Appointment with Tenure - Lillian LaReesa Wolfenbarger, Biological Sciences**
Andrew Storer, Provost and Senior Vice President for Academic Affairs
- F. Doctor of Philosophy (PhD) in Manufacturing Engineering**
Andrew Storer, Provost and Senior Vice President for Academic Affairs
- G. Presidential Compensation**
Jon Jipping, Leadership Committee Chair

IX. Reports

- A. Athletics Accomplishments**
Suzanne Sanregret, Vice President for Athletics and Recreation
- B. Student Affairs Report**
Laura Bulleit, Vice President for Student Affairs
- C. Undergraduate Student Government**
Cole Pierucki, USG Vice President
- D. Graduate Student Government**
Lauren Sprague, President
- E. University Senate**
Robert Hutchinson, President

X. Informational Items

- A. Proposed 2025 Meeting Dates**
- B. Analysis of Investments**
- C. Advancement & Alumni Relations**
- D. Media Coverage**
- E. Employee Safety Statistics**
- F. Disposal of Surplus Property**
- G. Contracts 500K**
- H. Board of Trustees Policy 8.3 – Waiver of Certain Fees**

XI. Other Business

XII. Date for Next Formal Meeting: October 11, 2024

XIII. Adjourn

Documents related to agenda items below.

VII. Consent Agenda

- A. Approval of Minutes**
- B. Degrees In Course**



**Michigan
Technological
University**

Registrar's Office

MEMORANDUM

To: Dr Richard J Koubek
Office of the President

From: Theresa Jacques
Registrar's Office

Date: July 12, 2024

Subject: Candidates for Degree – Conferral Term 202401

The attached list of candidates for degrees, beginning with Michael James Bunker and ending with Shuo Sun is submitted for the granting of the appropriate degrees by the Board of Trustees. I certify that these candidates meet all requirements for their respective degrees and that the names have been submitted to and have received the approval of the faculty from their major department.

Theresa Jacques
Registrar

TJ/kg

Michigan Technological University

Degrees Awarded for Conferral Term 202401

Michigan Technological University Registrar's Office July 12, 2024

Associate of Arts in Humanities

- Michael James Bunker
- Elsie R Burton - Cum Laude
- Kristie Robin Ollila - Summa Cum Laude
- Griffin Jay Six - Cum Laude
- Clark Davis Sprague

Associate of Science in Engineering

- Jesse Raymond Larson - Summa Cum Laude
- Chloe Grace Oelfke - Cum Laude
- Jordan Lee Redd - Cum Laude
- William Rutherford
- Keely K Snider - Cum Laude
- Clark Davis Sprague
- Elijah Malcolm VanVynckt
- James Ryan Whittaker

Bachelor of Arts in Communication, Culture, and Media

- Lyndsay Eleanor Lagreid
- Cole Alexander Risko - Magna Cum Laude
- Zoe Erin VerDuin

Bachelor of Arts in English

- Cameron Todd Gorelick - Cum Laude
- Karissa Grace Sanders
- Gabrielle Elizabeth Stampfler - Cum Laude

Bachelor of Arts in History

- Karla Marlene Lovell - Magna Cum Laude

Bachelor of Arts in Physics

- Lauren E Megdanoff

Bachelor of Arts in Scientific and Technical Communication

- Michael James Bunker
- Madeline Delaney Nass

Bachelor of Arts in Sound Design

- Samuel J Dykgraaf - Cum Laude
- Noah Robert Lukkari - Magna Cum Laude

- Satbir S Mangat
- Rachael Haley Parsons - Summa Cum Laude
- Rowdy Michael Vyverberg*

Bachelor of Arts in Theatre and Electronic Media Performance

- Spencer Charles Drow
- Alyssa N Helminen - Cum Laude
- Bradley Dean Maycroft - Magna Cum Laude
- Lucy Raye Straubel

Bachelor of Science in Accounting

- Maria L Eskola - Magna Cum Laude
- Daniel William Jeffries - Magna Cum Laude
- Jordyn Marie Robinson - Cum Laude
- Edward James White - Magna Cum Laude

Bachelor of Science in Anthropology

- Kenneth Martin Bragg - Cum Laude
- Skylar Mary Scheff

Bachelor of Science in Applied Ecology and Environmental Sciences

- Elena Kathleen Chagnovich - Summa Cum Laude
- Connor Matthew Ford - Magna Cum Laude
- Luis Fernando Ramirez
- Mackenzie D Russell - Magna Cum Laude
- Serenity Ann Snyder - Magna Cum Laude
- Alycia M Soule - Cum Laude
- Sophie Thieme - Magna Cum Laude
- Lydia G Vander Kooi - Magna Cum Laude

Bachelor of Science in Applied Physics

- James Edward Turkovich
- Michael K Wendt

Bachelor of Science in Audio Production and Technology

- John Spencer Beasley
- Mark Daniel Hobbs - Cum Laude

Bachelor of Science in Biochemistry and Molecular Biology

- Justin Erik Andersen - Magna Cum Laude
- Giovanna Renee Bobnock - Summa Cum Laude
- Christopher Peter Downey
- Eliya Jolee Huebner - Magna Cum Laude

- Ryleigh Alexis Parsons
- Leanna Jane Rose - Magna Cum Laude

Bachelor of Science in Biological Sciences

- Jennifer Nicole Finall
- Halle Blaise Hill - Magna Cum Laude

Bachelor of Science in Biomedical Engineering

- Rayne Rene' Avalos
- Dominique Ray Baker
- Isaac T Boldt
- Reyce Nicole Bowerman - Cum Laude
- David Andrew Bradbury - Summa Cum Laude
- Joshua Kennedy Bradfield
- John W Braun - Magna Cum Laude
- Nikolas K Butcher - Cum Laude
- Rachel Grace Callaghan - Cum Laude
- Misael O Cruz - Magna Cum Laude
- Madeline Gene Draak - Magna Cum Laude
- Alexander James Engholm
- Delaney Raine Fritz - Cum Laude
- Sara Lavon Goheen
- Emma Marion Hayhurst - Summa Cum Laude
- Emilee Elizabeth Mavis Houk - Summa Cum Laude
- Elsa Linnea Huckels - Cum Laude
- Madison Rae Ide - Summa Cum Laude
- Jenna R Jorns - Cum Laude
- Nora R Kopman - Magna Cum Laude
- Richard Thomas Krause
- Alex Michael LaMere - Magna Cum Laude
- Hannah Josephine Maat
- Lindy Grace Oujiri - Summa Cum Laude
- Justina Pauline Pennala - Magna Cum Laude
- Zachary Charles Peterson
- Magen Marie Radke
- Morgan Jane Elyse Reamer - Cum Laude
- Nathan George Rotter - Cum Laude
- Sarah Rose Rowe - Magna Cum Laude
- Lydia Therese Schaible - Magna Cum Laude

- Steven Dominic Silvio - Cum Laude
- Ian Douglas Sousa
- Alexandra Marie Tebeau
- Emily Rose Vitale - Magna Cum Laude
- Lanceng J Waise - Magna Cum Laude
- Bronwyn T Weiker - Magna Cum Laude
- Caleb Jay Zaborney - Cum Laude

Bachelor of Science in Chemical Engineering

- Joseph Pasqualucci Bachmeier - Summa Cum Laude
- Mia Elizabeth Bidolli - Summa Cum Laude
- James Hunter Bode - Cum Laude
- Andrew William Bott
- Hannah Beth Collins
- Dylan Matthew Conlon
- Joseph R Curro - Summa Cum Laude
- Jack Anthony Czaplewski
- Sydney Elizabeth Dankert - Magna Cum Laude
- Nicholas P Dippre
- Joshua C Duer
- Brandon J Espinoza Solis
- Ava Katherine Farquhar - Magna Cum Laude
- Matthew W Fooy - Summa Cum Laude
- Jacquelyn Samara Foreman - Summa Cum Laude
- Austin Jack Foster
- Kevin Michael Garland - Summa Cum Laude
- Grayson Douglas Hartwell
- Cameron Renee Hoogstraten
- Rhys Glenys Jahn
- Lark A Jankewicz
- Madeline Gladys Johnson - Summa Cum Laude
- Luca Daniel Jordache
- Spencer Dennis Kaastra - Cum Laude
- Cade Joseph Kaighen - Magna Cum Laude
- Josilyn Kathlyn Kalepp
- Kristen E Kautz - Magna Cum Laude
- Caleb J Krueger - Summa Cum Laude
- Connor Donald Krueger - Magna Cum Laude

Formal Session of the Board of Trustees - Agenda

- Ciara Ana LaRouche
- Joseph F Lesko - Magna Cum Laude
- Carly Ann Lindquist - Magna Cum Laude
- Liam Jacob Lindstrom
- Stephanie Ann List
- Cassandra R Luedke
- Joshua Patrick Lynch - Cum Laude
- Fidan Malikova
- Seth Edward Marianos
- Mikayla S Marshalek - Summa Cum Laude
- Jake Earl Mathson - Cum Laude
- Alyssa Faith Mayer
- Arianna Marie Mlinar - Magna Cum Laude
- Thomas A Morrison - Magna Cum Laude
- Emmitt Aldon Nelson - Summa Cum Laude
- Lydia J Nelson - Cum Laude
- John Thomas O'Connor - Magna Cum Laude
- Madeline Jennifer Owens - Cum Laude
- Brennan Edward Pagac
- Clay Thomas Patterson
- Caleb Lee Pitts - Cum Laude
- Jillian M Pixley
- Erica Renae Proehl
- Morgan Redding - Magna Cum Laude
- Sierra Noel Reid - Magna Cum Laude
- Zoe Elizabeth Rhines - Magna Cum Laude
- Valynn Justine Rinkel
- Danya Gabriella Salame
- Sara Jane Schrader
- Jacob C Schuh
- Elizabeth Renee Schumann - Summa Cum Laude
- Joshua Roger Shane - Magna Cum Laude
- Allison Virginia Swanson - Cum Laude
- Luke Tangen
- Daniel Ernest Taylor
- Allisyn Marie Terry
- Amanda Rose Tharp - Magna Cum Laude

Formal Session of the Board of Trustees - Agenda

- Hailey Dee Ullett - Magna Cum Laude
- Holland Blake VanZon
- Sarah N VanZon
- Jackson Thomas Vidlund - Magna Cum Laude
- Gary Michael Vinson
- Joseph Paul Wade
- Trevor Scott Wesolowski
- Ana Sofia White - Cum Laude
- Jonathan R Wildey - Magna Cum Laude
- Justin Alexander Williams - Cum Laude
- Allison Rose Wood - Summa Cum Laude

Bachelor of Science in Chemistry

- Sophia Jeannette Jaeger
- Danica L Lemmons - Magna Cum Laude
- Joseph V Peters - Cum Laude
- Nicholas Ray Sabotchick - Cum Laude
- Maxwell T Socha - Cum Laude
- May Tonia Waters - Summa Cum Laude

Bachelor of Science in Civil Engineering

- Wyatt Clifford Anderson - Magna Cum Laude
- Justin Paul Anthony
- Madeline Mary Auricchio
- Michael Anthony Behm
- Brodey John Bevins - Summa Cum Laude
- Jacob William Bishop - Cum Laude
- Madison Jo Block - Cum Laude
- Samantha Louise Bonn - Summa Cum Laude
- Brayden Joseph Brincks - Summa Cum Laude
- Blake D Cain
- Chloe M Cowen
- Jordan Andrew Dent
- Ian Michael Erickson - Cum Laude
- Jacob Andrew Evon - Magna Cum Laude
- Dylan Thomas Ferron
- Joshua Mason Gould - Cum Laude
- Lexi Elizabeth Gross - Cum Laude
- Onalee Mae Handlovits - Magna Cum Laude

Formal Session of the Board of Trustees - Agenda

- Wenton August Harrison - Cum Laude
- Duffy Jack Karstrom
- Sydney Rose Kivi - Cum Laude
- Jonathon David-Lawrence Lafave - Cum Laude
- Dylan James Lane
- Anthony John Leick - Summa Cum Laude
- Matthew David Lemanski
- Grady E McDonald - Magna Cum Laude
- Sophia Ellan Metz
- Elizabeth Anne Miller
- Matthew Brian Morey - Magna Cum Laude
- Dayton Kaine Moyle
- Benjamin I Nagel - Summa Cum Laude
- Caleb James Novitch - Summa Cum Laude
- Nate Michael Pennala
- Brianna Elise Ralston
- Joseph D Schallmo
- Connor Joseph Schefferly - Summa Cum Laude
- Andrew M Schultz
- Thomas Lee Sjöholm - Magna Cum Laude
- Grant Eugene Sorrell
- Sydney Rose Streveler - Magna Cum Laude
- Luke Christopher Sturm - Cum Laude
- Kylee Rae VanBeck
- Megan Nicole Wielgus - Summa Cum Laude
- Andrew E Wyble - Cum Laude
- Casey Margaret Zampaloni

Bachelor of Science in Computational Biology

- Lucille Grace Arbanas - Cum Laude

Bachelor of Science in Computer Engineering

- Connor John Anderson
- Drew Kennedy Berish
- Benjamin M Boelens - Cum Laude
- Justin Llyod Bowmer
- Samuel William Breuer - Magna Cum Laude
- Deborah Fern Brink - Magna Cum Laude
- Liam James Cacioppo - Summa Cum Laude

Formal Session of the Board of Trustees - Agenda

- Edward Alexander Dewald - Summa Cum Laude
- Devin James Farmer - Summa Cum Laude
- Jacob Raymond Gareau - Magna Cum Laude
- Benjamin Jeffrey Gietek
- Abriel Justine Ginman - Cum Laude
- Alexander Julius Gougeon - Summa Cum Laude
- Evan Conrad Grahs - Summa Cum Laude
- Benjamin W Grumann
- Thomas Klay Kinjorski
- Charles Sebastian Knipper
- Thoren T Lexvold - Magna Cum Laude
- Shawn Randall Pyykola
- Rachel Marie Richardson - Magna Cum Laude
- Isaac Ramses Rodriguez Almanzar - Magna Cum Laude
- Elisabeth Ann Salter - Cum Laude
- Rithik Sawant - Cum Laude
- Ethan Michael Sommerfield
- Nathan Hunter Soule
- Ryan Eugene Sweeney
- Zakary T Wessels - Summa Cum Laude
- Nathan Gregory White
- Shelby Elizabeth Wills

Bachelor of Science in Computer Network and System Administration

- Kamil Bartoszek
- Kayla Marie Blunt
- Nathan Barry Butgereit
- Nicholas Djoljevic
- Kevin M Doerr
- Daniel Darell Douglas
- Adam Douglas Fulton - Summa Cum Laude
- Jacob Peter Goodroe
- Zachary Curt Heimer - Magna Cum Laude
- Russell Alan LaBeau - Cum Laude
- Rory Robert Michael LaBine - Summa Cum Laude
- Evan Robert Rixom - Magna Cum Laude
- David M Scott

Bachelor of Science in Computer Science

- Vincent Skylar Barfield - Magna Cum Laude
- Trent L Betters
- Conner Edward Bodell - Summa Cum Laude
- Kyler David Bomhof - Cum Laude
- Cayden Budz
- Reese J Bunker
- Justin Michael Carlson - Cum Laude
- Ryan Christopher Cole - Magna Cum Laude
- Brayden Allen Coyer
- Benjamin Thomas Drees - Summa Cum Laude
- Logan James Eerdmans
- Preston J Foster
- Nickolas Alan Franklin - Magna Cum Laude
- Joshua Edward Hoefs
- Chanpech Hoeng - Magna Cum Laude
- Wilmer Maceda Isip - Summa Cum Laude
- Mia Yi Na Kelly
- Ryan C Klemm - Summa Cum Laude
- Noah Samuel Kolczynski - Summa Cum Laude
- Basia Lee Kornoely
- Hunter Elizabeth Malinowski - Cum Laude
- Ricardo Nunez Cuesta - Cum Laude
- Patrick Leonard Ogden - Summa Cum Laude
- Shane Thammasak Onkeosy
- Matthew R Penoyar - Cum Laude
- Timothy L Perr
- Eli Matthew Pinnoo - Cum Laude
- Tyler Keith Poirier - Summa Cum Laude
- Owen Anthony Quinn
- Nicholas Michael Radakovitz - Magna Cum Laude
- Addison Atomic Rouns - Magna Cum Laude
- Samuel John Russ - Summa Cum Laude
- Leiya Marie Rybicki
- Elyse Lynne Sackrider - Cum Laude
- Anthony David Safford
- Gabriel James Smit - Magna Cum Laude

- Adam Bradley Spayd
- Jacob Aaron Strome
- Kevin DeShawn Usher
- Dominic Simon VandenElzen - Magna Cum Laude
- Daniel Alan VerMulm - Cum Laude
- Ethan Cole Visscher - Cum Laude
- Ellyse Lauren Walker
- Kode Ryan Whitworth - Magna Cum Laude
- Logan J Woznak

Bachelor of Science in Construction Management

- Samuel Anderson Erkkila - Cum Laude
- Dominic Donal Krause - Magna Cum Laude
- Gavin Connor Lawless - Summa Cum Laude
- Devon Harold Prime
- Micah Elias Wilson
- Connor Johnathan Worthington

Bachelor of Science in Cybersecurity

- Gina Barbara Adragna - Summa Cum Laude
- Nicole Andress
- Matthew C Bailey - Cum Laude
- Johnathon Browning Hoffman - Cum Laude
- Ryan Shannon Jaklic - Summa Cum Laude
- Cole August Kahrhoff - Summa Cum Laude
- Zoe Rae Knoper
- Kyle Anthony Koenig - Cum Laude
- Caleb Adam Leavesley - Summa Cum Laude
- Devon John Midkiff - Summa Cum Laude
- Aston M Purdom - Summa Cum Laude
- Trevor William Sepanik
- Jerrold Dwight Shafor
- Artem Sharkota
- Audrey Jo Sondergeld
- Sean Padraig Ulicny - Magna Cum Laude
- Dawson Lee Utley
- Joseph Anthony Vargo

Bachelor of Science in Ecology and Evolutionary Biology

- Aleksander Jovan Milosevic

- Jack T Racignol - Summa Cum Laude
- Kailyn Grace Smith - Cum Laude

Bachelor of Science in Economics

- Andrew F Nie
- William Tate Romano - Summa Cum Laude
- Nolan Matthew Smith - Summa Cum Laude
- Reese Nevan Wagner
- Miles Robert West - Summa Cum Laude
- Alexander Jacob White - Magna Cum Laude

Bachelor of Science in Electrical Engineering

- Emmeline Louise Beck
- Moira Elizabeth Broestl
- Kyle John Bruursema
- Bryce Mary Elizabeth Burke
- Alec Joseph DeMaria
- Gracie Ann Elizabeth Dilworth - Summa Cum Laude
- Nathaniel Stephen Green
- Jonathon M Hannahs - Magna Cum Laude
- Diego Alejandro Hernandez
- Marshall Janies - Cum Laude
- Kachanat Laverne Johnson - Cum Laude
- Ryan Thomas Korby - Summa Cum Laude
- Mathias David Koski - Magna Cum Laude
- Mitchell James Krueger
- Justin Scott McNeil - Cum Laude
- Miranda Irene Meyers - Cum Laude
- Nathan M Morris
- Olivia Rose O'Brien - Cum Laude
- Patrick Leonard Ogden - Summa Cum Laude
- Eric J Old
- John E Philp
- Nicholas Alan Piper - Magna Cum Laude
- August C Rasmussen
- Alex P Riebe - Summa Cum Laude
- Christopher S Romero
- Kallen James Romska
- Olivia Katherine Rouleau

- Ryan James Sieffert
- Mitchell J Stanchina
- Ben Curtis Steinbach - Magna Cum Laude
- Julia K Stonelake - Cum Laude
- Drew Sacris Sturos
- Michael James Thoresen
- Evan Eugene Tyrrell - Magna Cum Laude
- Michael James VanHovel
- Vaughn Alexander Werdon - Cum Laude
- Benjamin Orion Wittrup - Summa Cum Laude
- Ian James Wyngarden - Magna Cum Laude
- Joel Alan Wyngarden - Magna Cum Laude

Bachelor of Science in Electrical Engineering Technology

- Eddie W Carrothers
- Sierra Ashley Derusha - Magna Cum Laude
- Henry Michael Inyang - Summa Cum Laude
- Landon John-Germaine Knight
- Brandon Michael Webb

Bachelor of Science in Engineering

- Samuel Ian Ahern - Summa Cum Laude
- Jack Edward Ashburn - Cum Laude
- Paul Thomas MacDonald Boes

Bachelor of Science in Engineering Management

- Nathan J Caister
- Vitor Galdino Jordao - Summa Cum Laude
- Margret Elizabeth Gallup
- Anna Olivia Laven - Summa Cum Laude
- Andrew Michael Maiers - Magna Cum Laude
- Jacob S Maurer - Cum Laude
- Jonathan Richard Mazur
- Joshua David Nolan
- Caitlin L O'Reilly - Magna Cum Laude
- Kieran Murray Rowan - Magna Cum Laude
- Eliza Louise Stone - Magna Cum Laude
- Owen James Watson - Magna Cum Laude

Bachelor of Science in Environmental Engineering

- Seth Michael Aho

- Arlethia Gina Marie Bell
- Tania Bernal
- Cailin Brianna Bishop - Cum Laude
- Molly Elizabeth Bolang
- Erin Marie Browne - Magna Cum Laude
- Claire Helen Christen - Cum Laude
- Ellen Rose Coppernoll
- Joseph Frank Dlugos - Magna Cum Laude
- Allison E Dodd - Summa Cum Laude
- Gibson Edward Erchul
- Clark Lawrence Fadoir
- Erin Jean Ganschow - Summa Cum Laude
- Elaine Paige Girbach
- Leah Elaine Harazin - Cum Laude
- Matthew James Harmon
- Madison Marie Krzciok - Summa Cum Laude
- Grant Thomas Nemecek
- Allison Marie Olson - Cum Laude
- Jared Andrew Parker
- Austin Michaels Platz
- Adiah Jaide Powell - Cum Laude
- Leena Nathir Rawashdeh
- Averi Lorraine Reno - Cum Laude
- Sawyer N Richards
- Francine Maria Rosinski - Magna Cum Laude
- Matthew Steven Sabatini
- Angela Noel Salmeto
- Jake R Schiller - Cum Laude
- Sophia Grace Schroeder
- Jarod Christopher Siguenza - Cum Laude
- Eden Elizabeth Traub - Magna Cum Laude
- Ciara Marie Urbanek

Bachelor of Science in Exercise Science

- Masyn Leigh Alexa - Summa Cum Laude
- Lillian Margaret Baker - Summa Cum Laude
- Jamie E Hendrickson
- D'Andra Margaret Elaine Kero - Cum Laude

- Grace YanJun Laurence - Cum Laude
- Mira Jane Pietila - Cum Laude
- Bradley Norman Sanregret
- Elizabeth Joan Swajanen - Summa Cum Laude
- Dalton Dakota Ulland
- Dalton Jacob Williams - Cum Laude

Bachelor of Science in Finance

- Kevin Joseph Bostwick - Cum Laude
- Arvid Lars Caderoth - Magna Cum Laude
- Collin Jon Hicks - Cum Laude
- Brady Robert Ingbretson
- Megan M Lee - Summa Cum Laude
- Blais Allen Richartz - Magna Cum Laude
- Nicholas Thomas Schwartz - Magna Cum Laude
- Bradley Michael Simonsen
- Levi P Stauber

Bachelor of Science in Forestry

- Will River Anderson - Summa Cum Laude
- Jonathan Richard Baker
- Emily M Bergman - Magna Cum Laude
- Braden Jesse Berridge
- Shawna Marie Carr - Summa Cum Laude
- Katherine Rose Dorvinen - Cum Laude
- Cole Frederick Hoffman
- Jasper Lee Johnston - Magna Cum Laude
- Kathleen M Krieger
- David Alan Kromholz - Summa Cum Laude
- Andrew Richard Niemi
- Evan Garrett Platzke - Cum Laude
- Sierra Sadie Rosten - Cum Laude
- John Mason Siskaninetz - Magna Cum Laude
- Jorja Leigh Smolinski
- Elle Louise Soderberg - Cum Laude
- Tryg Loren Solberg - Summa Cum Laude
- Mitchell S. Stacey - Cum Laude
- Stuart Howard Tolsma - Summa Cum Laude
- Olivia Christine Witting - Magna Cum Laude

Bachelor of Science in Geological Engineering

- Karina K Constant
- Braxton Joseph Murphy

Bachelor of Science in Geospatial Engineering

- Rabecca Nicole Bakker - Summa Cum Laude
- Brayden Joseph Brincks - Summa Cum Laude
- Ian Michael Erickson - Cum Laude
- Wesley Daniel Hyslop - Cum Laude
- Matthew Brian Janowski
- Andrew Easton Olson
- Owen Gregory Seppanen
- Sydney Rose Streveler - Magna Cum Laude

Bachelor of Science in Human Biology

- Alyssa L Church
- Jae C Curtis - Magna Cum Laude
- Mya Marie Ghazale - Summa Cum Laude
- Olivya R Graham - Cum Laude
- Lucille Rosalia Jaloszynski - Summa Cum Laude
- Tessa Lynn Leece
- Courtney Grace Romes - Summa Cum Laude
- Madison Margaret Marie Taylor
- Frida Alessandra Visser - Magna Cum Laude
- Katherine Barbara Walch - Magna Cum Laude
- Enioluwa Daniel Wright - Magna Cum Laude

Bachelor of Science in Human Factors

- Jane M Sinclair - Magna Cum Laude

Bachelor of Science in Management

- Jonathon James Edward Bader
- Nina E Baker
- Tyrone Heath Bronte - Cum Laude
- Hunter Scott Chambers
- Ashley Elizabeth Haen
- Kevin Daniel Hoefler - Summa Cum Laude
- Ethan S Kennedy
- Logan Howard Daniel Latvis - Magna Cum Laude
- Casey Nicholas Lentowich
- Garrett James Miserlian

- Davis Edward Nunnally
- Meredith S Raasio
- Olivia Danielle Von Holtz - Cum Laude

Bachelor of Science in Management Information Systems

- Jordan Ruth Craven
- Joseph Michael Gherardi - Summa Cum Laude
- Sarah Michelle Gilbreath - Cum Laude
- Hanna E Hiltunen
- Ryan Scott Miller
- Nikolai Pavel Prosjanykov Gonzalez
- Patrick M Schubert

Bachelor of Science in Marketing

- Elizabeth R Ament
- Ryland Borden Mosley
- Stephanie Lynn Ollila - Summa Cum Laude
- Jed Michael Pietila
- Margaret O Zimmermann

Bachelor of Science in Materials Science and Engineering

- Abigail G Armstrong
- Victoria Dolores Berger
- Anna Christine Cole
- Lauren Olivia Cornell
- Carly Lynn Delor
- Seth Allen Eacker - Magna Cum Laude
- Margaret Grace Ensminger - Summa Cum Laude
- Caleb John Genter
- Seth Austin Johnson
- Joshua Ryan King - Summa Cum Laude
- Christopher Allen Kluka
- Daniel A Linley
- Skylar William Patten - Magna Cum Laude
- Keith Ross Pickelmann - Magna Cum Laude
- Greta Frances Rickauer
- Jack Francis Schaller - Magna Cum Laude

Bachelor of Science in Mathematics

- Noah R Painter - Magna Cum Laude
- Tristan K Singleton

- Benjamin Gray Wireman - Summa Cum Laude

Bachelor of Science in Mathematics and Computer Science

- Annika Jordan Price - Magna Cum Laude

Bachelor of Science in Mechanical Engineering

- Nicolas Joseph Abbott - Cum Laude
- Kenneth Hyre Abraham - Magna Cum Laude
- Joshua Martin Andary
- Ryan Thomas Bal - Summa Cum Laude
- William Andrew Blacketor
- Jack R Blake
- Sophia Rose Bollin - Cum Laude
- Thomas R Bonner - Magna Cum Laude
- Caleb Alan Borns - Cum Laude
- Parker Sekaquaptewa Bradshaw - Magna Cum Laude
- Kelsey Joy Brinks - Summa Cum Laude
- Nathan Daniel Bruchman
- Katelyn Marie Burmeister - Magna Cum Laude
- Jacob Alexander Byron
- Aaron James Carlson
- Steven Thomas Carson
- Christopher James Chalmers - Cum Laude
- Kaleb James Coble - Cum Laude
- Chase Henry Cummings - Magna Cum Laude
- Kyle John DeNeef - Cum Laude
- Tristan Alexander DeYoung - Cum Laude
- Nicholas G Drechsler - Summa Cum Laude
- Sarah Luchenbill Eastman - Cum Laude
- Kayley Christine Elmblad - Magna Cum Laude
- Brantley Donald Ernat
- Marina Fernandez Gutierrez - Magna Cum Laude
- Faith Domino Gaertner - Magna Cum Laude
- Vitor Galdino Jordao - Summa Cum Laude
- Zachary John Gegare
- Heather Lael Goetz - Magna Cum Laude
- Conner J Gorte - Magna Cum Laude
- Richard Dale Grow
- Brady C Haas - Magna Cum Laude

Formal Session of the Board of Trustees - Agenda

- Conner J Haines - Summa Cum Laude
- Matthew P Halonen
- Kara Grace Hardy - Magna Cum Laude
- Divyesh Hariram - Cum Laude
- Leo B Helppi
- Ronald Christian Henderson
- Matthew Carlton Hewitt
- Louis James Hindman - Summa Cum Laude
- Jack Shannon Holmes
- Linda Jiao - Magna Cum Laude
- Wesley John Johnson - Cum Laude
- Sean Matthew Jones
- Gregory Carl Jowett
- Christopher Alan Karns
- John Randall Lacina
- Christi A LeCaptain - Magna Cum Laude
- Karson John Linders
- Ethan Riley Loiselle - Cum Laude
- Hayden C Long - Magna Cum Laude
- Michael Dennis Loucks - Summa Cum Laude
- Brent A Loukus
- Scott Robert Loukus
- Jenna Yanbo Lubahn - Cum Laude
- Nathan D Luczak - Cum Laude
- Catherine Marie Luty
- Holden Robert MacFarland - Magna Cum Laude
- George Mason Mackey
- John Andrew Martin - Magna Cum Laude
- Maximos M Messina
- Troy Metz - Summa Cum Laude
- Michael H Miller
- Sean Kevin Miller
- Jacob Leo Moreau
- Aubriann Louise Chunying Neumann
- Harmon H Nieuwstadt - Cum Laude
- Robert John Parker
- Aaron Michael Peaslee

Formal Session of the Board of Trustees - Agenda

- Matt Bernard Persha - Summa Cum Laude
- Alexander Charles Poe - Cum Laude
- Garrett Joseph Quante
- Andrew Michael Quillan - Magna Cum Laude
- Lucas R Rechsteiner - Cum Laude
- Hunter James Reinke - Cum Laude
- Keegan Michael Ripper
- Claire A Ristow - Cum Laude
- Thomas Scott Ross
- Meghan A Rotole
- Timothy David Sandford
- Ryan James Schulte - Cum Laude
- Ryan Alexander Schwartz - Cum Laude
- Christopher Paul Sirois
- Abigail R Smith - Cum Laude
- Noah Michael Smith - Magna Cum Laude
- Henry Steven Snider
- David John Storm
- Thomas D Tunison - Cum Laude
- Julia Rose VerBoort - Cum Laude
- John Wagner
- David Burke Wallis - Cum Laude
- Ethan W Wallis
- Rylee Quan Walters - Summa Cum Laude
- James Christopher Wayne - Cum Laude
- Amanda Sarah West
- Ryan Christopher Wilson
- Christopher David Wozniak - Cum Laude
- Matthew August Yeates - Magna Cum Laude
- Kyle M Zerbel - Cum Laude
- Olivia Zimanek
- Eleanor L Zimmermann - Summa Cum Laude

Bachelor of Science in Mechanical Engineering Technology

- Donovan James Choa
- Ryan James Collick
- Nathaniel Landis Eastman - Summa Cum Laude
- Ethan Thomas Eckerle

- Cheyenne Lin Goff
- Dallas Preston Hall
- Lukas William Hensley
- Teresa Christiana Hoving - Summa Cum Laude
- Tate McMillan Newlin
- Nicholas Robert Rees
- Oliver Jack Shakal - Cum Laude
- Jack Raymond Shepherd
- Isaac William Steers
- Elliot S Vironda

Bachelor of Science in Mechatronics

- Erik Timothy Everse
- Kyle John Ledermann - Magna Cum Laude

Bachelor of Science in Medical Laboratory Science

- Danika Sue Billeck
- Elaina Marie Krings - Magna Cum Laude*
- Ella Joy Kunitzer - Magna Cum Laude
- Caroline M Ott - Summa Cum Laude
- Britney F Peel
- Jaida Carrie Trevethan - Cum Laude

Bachelor of Science in Medicinal Chemistry

- Samantha Elizabeth Ludwick - Summa Cum Laude

Bachelor of Science in Mining Engineering

- Ian Galen Repic - Cum Laude
- Olivia Katherine Rouleau
- Nathan John Seidel
- Maxx Dylan Tartamella - Cum Laude

Bachelor of Science in Natural Resources Management

- Laura Elaine Jacobs

Bachelor of Science in Nursing

- Jennifer Theresa Cooper - Magna Cum Laude
- Jari E Juntti - Magna Cum Laude
- Rachael Amanda Kostick - Summa Cum Laude
- Sarah Lynn Kuiper - Summa Cum Laude

Bachelor of Science in Pharmaceutical Chemistry

- Cameron Keith Crozier - Summa Cum Laude
- Jenna Michelle Cunnien

- Kaitlyn Marie Fletcher

Bachelor of Science in Physics

- Caleb R Counts
- Grant Matthew Lambert
- Michael Rose Martin - Magna Cum Laude
- Dylan Scott Richards
- Daniel John Watson
- Cong Yu - Magna Cum Laude

Bachelor of Science in Psychology

- Hunter Elizabeth Malinowski - Cum Laude
- Jayden N Middlecamp
- Makenna Paige Nuttall - Magna Cum Laude
- Kyla Ann Richardson - Summa Cum Laude
- Jenna Ann Rose-White
- Katherine H Ulinski - Magna Cum Laude

Bachelor of Science in Robotics Engineering

- Nathan Patrick Fisher - Magna Cum Laude
- Joshua Philip Parkinson

Bachelor of Science in Scientific and Technical Communication

- Elsie R Burton - Cum Laude
- Joshua Ray Jongema
- Austin Drew McFarlane
- Grace Marguarite Parsekian
- Mindy Rhona Pierre
- Daniel-August Michael George Ryan - Summa Cum Laude

Bachelor of Science in Social Sciences

- Jenna Marie Messer - Cum Laude
- Jenna Gabrielle Weiler
- Mary M Wiggins - Magna Cum Laude

Bachelor of Science in Software Engineering

- Wesley Richard Alberg - Magna Cum Laude
- Nathan James Allsop - Magna Cum Laude
- Kevin Arthur Bak - Cum Laude
- Jordan Patrick Bramer
- Brendan T Fuhrman - Summa Cum Laude
- Ian G Hanby - Cum Laude
- Peter LaMantia - Cum Laude

- Roger Edwin Lind - Summa Cum Laude
- Sean Phillip McFall - Cum Laude
- Siddhartha Saurav Regmi
- Jacob Cyprian Smith - Magna Cum Laude
- Jack Robert Snowden
- Nicholas Albert Zimanski

Bachelor of Science in Statistics

- Adam Douglas Hobson - Magna Cum Laude

Bachelor of Science in Sustainability Science and Society

- Arabella Lorelei Brodowski - Summa Cum Laude
- Elizabeth Brown
- Clare Cedar Fidler - Magna Cum Laude
- Travis Robert Ojala

Bachelor of Science in Sustainable Bioproducts

- Nicole Ann McGinn - Summa Cum Laude
- Hannah Katherine Moody - Magna Cum Laude

Bachelor of Science in Theatre and Entertainment Technology

- Sommerdai T Kier - Cum Laude
- Danelle Lynn Leinonen - Magna Cum Laude
- Chloe Grace Oelfke - Cum Laude
- Audrey Evelyn Schulte

Bachelor of Science in Wildlife Ecology and Conservation

- Maddison Kylie Allen - Summa Cum Laude
- Nicole Marie Bennett - Summa Cum Laude
- Evan Daniel Hartl
- Amy Nichole Householder
- Michele Elizabeth Powell - Summa Cum Laude
- Zoie Louise Schafer - Summa Cum Laude
- Joseph Edward Spindler
- Travis Ryan Taylor

Doctor of Philosophy in Applied Cognitive Science and Human Factors

- Shruti Mohan Amre
- Elizabeth Lehman
- Darnishia Lashalle Morris
- Anne Inger Mortvedt
- Brittany L Nelson

Doctor of Philosophy in Applied Physics

- Justin Cassell

Doctor of Philosophy in Biological Sciences

- Catherine Rono

Doctor of Philosophy in Biomedical Engineering

- Nikhil Mittal
- Lea M Morath

Doctor of Philosophy in Chemistry

- Komal Chillar
- Adelina Oronova

Doctor of Philosophy in Civil Engineering

- Yingtong Tan

Doctor of Philosophy in Electrical Engineering

- Gaurish Shreedhar Gokhale

Doctor of Philosophy in Engineering - Environmental Engineering

- Lauren Kimberly Mancewicz

Doctor of Philosophy in Environmental and Energy Policy

- Dong Min Kim

Doctor of Philosophy in Materials Science and Engineering

- Jacob Belke
- Daniel Scott Freiberg

Doctor of Philosophy in Mathematical Sciences

- Yue Kang
- Zazil Santizo Huerta
- Kyle James Schwiebert

Doctor of Philosophy in Mechanical Engineering - Engineering Mechanics

- Alexander Hoth
- Behrouz Khoshbakht Irdmoussa
- Jason Noe
- Divya Kamlesh Pandya
- Shashank Pathrudkar
- Abhishek Patil

Doctor of Philosophy in Physics

- Rishi Babu
- Daniel James Kestner

Doctor of Philosophy in Rhetoric, Theory and Culture

- Tori Claudette Reeder

Doctor of Philosophy in Statistics

- Praveen Tharuka Wijewardana Perera Hettige
- Lirong Zhu

Master of Business Administr. in Business Administration

- Phebe Akosua Asafo Agyei
- Jacob W Behler
- Carissa Lee Beyer
- Justin Isaiah Davis
- Sara Renee Dax
- Grace Eland
- David Scott Hall
- Benjamin Houck
- Damon Paul Huotari
- Maxwell Douglas James
- Isabella Therese Kanasty
- Samuel Kinne
- Katie Patricia McInnis
- Rudi Russell Miller
- Ryan Gerald O'Connell
- Blake Douglas Pietila
- Logan Pietila
- Elijah Raphael Soumis
- Nicholas Logan Stankovich
- Peter VanDerKolk
- Walter Reynolds White
- Joseph K Williams
- Cameron Michael Young

Master of Engineering Mgmt in Engineering Management

- Michael Patrick Bersin
- Sanskriti Naresh Bokde
- Karansinha Vijaysinha Desai
- Shivkumar Ravindra Gaikwad
- Bayle LaDawn Golden
- Delix Matongo Kebaso
- Ashitha Rohi Kondru
- Anusha Kovi
- Alexandra Jordan Marcyan

- Dane Alexander Marvin
- Mithil Manoj Masutage
- Liam James McDonough
- Kjia Jaiden Moore
- David Petersen
- John Pluta
- Nehal Ravidas Sheware
- Daulatrao Shahaji Shahaji Suryawanshi

Master of Forestry in Forestry

- Michael David Arkwright
- Melina Breen Hurin
- Jordan Linn Zych

Master of Geographic Info Sci in Geographic Information Science

- Erin Renee Mauk
- Sumedh Sanjay Vidwans
- Carly Marie Zielinski

Master of Science in Accounting

- Myles Carey
- John Paul Moody
- Irene Lee Trierweiler

Master of Science in Applied Cognitive Science and Human Factors

- Katrina Carlson
- Anusha Kannan
- Brandon Robert Woolman

Master of Science in Applied Ecology

- Cassandra Reed-VanDam

Master of Science in Applied Physics

- Mohammadmahdi Alizadeh
- Aleister Wilhelm Kerr
- Kumar Neupane
- Do Nguyen Khoa Nguyen
- Fnu Raksha
- Join Uddin

Master of Science in Applied Statistics

- Jared Daniel Bowerman
- Ezequiel Carrillo
- Roland Fannoh

- William Geoffrey Hass
- Grant Laco
- Ayla Sabic

Master of Science in Biological Sciences

- Aqsa Ahsan
- Dylan Daniel Norris
- William John-Thomas Reehl
- Ellianna Sadie Sempek
- Isabel B Valencia

Master of Science in Biomedical Engineering

- Cole Joseph Hebert
- Laura C Lyons
- Savannah Christian Page

Master of Science in Chemical Engineering

- Colin Donajkowski
- James Franklin Staley
- Olivia Tambellini Umlor

Master of Science in Chemistry

- J Parker Forrest Harstad
- Adenike Olowolagba

Master of Science in Civil Engineering

- Spencer Robert Archer
- Jacob Ryan Cleaver
- Francis Chukwudi Eze
- Sam Frank Gordon
- Tyler Daniel Jacqumain
- Liam Howard Johnson
- Ukasha Tiibu Mohammed
- Dimo Dimo Okeyo
- Thomas Matthew Pastell
- Amber Gwen Strutz
- Sepehr Tavassoli
- Matthew Jared Thompson
- Colin Walker Vander Beek
- Hriatpuii Vanlal

Master of Science in Computer Science

- Akshay Kumar Dosapati

Formal Session of the Board of Trustees - Agenda

- Aakash Gunda
- Maxwell John Jorgensen
- Thanuja Maddali
- Aditya Nilesh Patil
- Ketansingh Anil Patil
- Pawel Pratyush
- Vishnu Vardhan Reddy Rapuru
- Soham Ashish Sheth
- Vrushali Shinde
- Parsharam Reddy Sudda
- Yuguang Wang
- Congling Zhang

Master of Science in Cybersecurity

- Brandon Paul Cox
- Jason Thomas Joseph
- Ryan Kern
- Andrew Paul Martin
- Devanshu Vijaykumar Sanghani

Master of Science in Data Science

- Mackenzie Michael Baker
- Sahithi Bathini
- Rahul Teja Bolloju
- Swapan Chakrabarty
- Karen Maria Fernandes
- Shalaka Dinkar Gaidhani
- Blake Anthony Hawes
- Alexander Nicholas Hromada
- Vaishnavi Jangili
- Sneha Karki
- Audrey Elizabeth LaCost
- Viraj Laxman Mane
- Bester Mangisoni
- Sri Rayaleswar Mondrety
- John Munene Mware
- Dhanush Biligiri Narsipur Harshavardhana
- Michael Kirkland Ngala
- Pradnya Vivek Pendse

- Rachana Satyanarayana Tanneeru
- Goutham Thota
- Jaya Surya Thota
- Venkat sairam Veeranki

Master of Science in Electrical and Computer Engineering

- Yash Baliram Adhao
- Spencer Eugene Crawford
- Stephen Vincent Gillman
- Vaishnavi Kumbhar
- Ezedin Ali Mohammed
- Jake Edward Muller
- Divya Naidu
- Jacob Anthony Perri
- Tyler Roger Robarge
- Md Abu Bakr Siddique
- Joan Jemutai Some
- Benjamin Joseph Stier
- Alexander Heinrich Stockman
- Abishek Subramanian
- Udayraj Digamber Tawde
- Zerilda Xaka

Master of Science in Engineering Mechanics

- Thomas Riley Draper

Master of Science in Environmental Engineering

- Cathbert Agaba
- Lily Angele Ahlstrom
- Arya Lekshmi Anilkumar
- Avery Margaret Cassel
- Mohana sai Krishna Chinnam
- Molly Greene
- Izabella Mazie Haberski
- Saumik Mallik
- Anabel Mae Needham
- FNU Raliba Hinga Roseline

Master of Science in Environmental Engineering Science

- Lavender Achieng Oyugi

Master of Science in Environmental and Energy Policy

- Anne Marie Greub
- Katherine Huerta Sanchez

Master of Science in Geological Engineering

- Clayton Henry Donajkowski
- William Townsend Webster

Master of Science in Geology

- Hayden Maxine Chaisson

Master of Science in Health Informatics

- Rithika Reddy Baroor
- Maneesha Chowdhary Chittineni
- Venkata Narendra Babu Gude
- Kimaya Avinash Havle
- Chethana Kadirimangalam
- Yogendra Sambasiva Kumar Kanchapu
- Kavya Kasala
- Priya Kaur
- Shravya Kolluri
- Sunil Joshi Komaragiri
- Anuragh Koppula
- Sai Narayana Das Makarapu
- Pavan Saiteja Marturu
- Siva Sai Naga Venkata Durga Prasanth Namburi
- Venkata Durga Sesha Sai Anusandeeep Pamarthi
- Kelsie Feira Richards
- Manpreet Singh Sandhu
- Rahul VallapuReddy
- Abhinav Vuppala

Master of Science in Industrial Heritage and Archaeology

- Josef Thomas Iwanicki
- Timothy J Maze

Master of Science in Integrated Geospatial Technology

- John Robert Lutchko

Master of Science in Kinesiology

- Felix Emile Cottet-Puinel
- Tyler Chenhall Hampton
- Katelyn D Meister

- Armando James Motz
- Alexandria Rondorf
- Gracie Anna VanLangevelde

Master of Science in Manufacturing Engineering

- Dillon Ronald Harry Bennetts

Master of Science in Materials Science and Engineering

- Oloruntoba Samuel Agbelusi
- Hemanth Kumar Reddy Basireddy
- Andrew Mark Bunge
- Sophie Alexis Mehl
- Henry Dean Summers

Master of Science in Mathematical Sciences

- Philip Edward Cuthbertson
- Boluwaji Dennis Obideyi

Master of Science in Mechanical Engineering

- Peter Afriyie
- Umema Ali
- Kadiresh Ashokkumar
- Rahul Vitthal Badade
- Noah Baliat
- Ruchi Jayant Bhalerao
- Mayur Keshav Bhure
- Sai Kalyan Bollina
- Prithvi Challa
- Sriniket Chavan
- Delaney Tea' Compeau
- Charan Prasad Dava
- Narendra Singh Deora
- James Henry Duer
- Stanley Joseph Elder
- Aditya Vijay Gawale
- Prajwal Avinash Gawali
- Shreyas Sanjay Ghodake
- Ananth Venkatesh Iddum
- Prathamesh Nivrutti Jadhav
- Shreeprasad Sanjay Jadhav
- Suhas Vasant Jadhav

Formal Session of the Board of Trustees - Agenda

- Ishan Jaitley
- Chaitanya Dhananjay Jaolekar
- Tanmay Shirish Joshi
- Inderpreet Singh Gurubhej Singh Juneja
- Yash Deepak Kamble
- Raymond Betuel Kamgba
- Melissa Rose Karas
- Abhishek Gajanan Keripale
- Sai Sheshank Reddy Kondakindi
- Pawan Kumar
- Nazanin Mahjourianmoghaddam
- Ryan Daniel Mahoney
- Sushrut Suresh Mali
- Atchutha Rama Raju Mandapati
- Sumanth Mittapally
- Sai Sampath Reddy Nagireddy
- Nithish Kumar Nalla
- Sai Tarun Pabbisetty
- Viraj Rajendra Pai
- Shyam Sasi Pallissery
- Manjiri Pramod Patil
- Deepak Pawar
- Nihar Ashok Pednekar
- Prakhar Rai
- Kyle Samluk
- Pranav Rajendra Sathaye
- Colin J. Schaefer
- Shreyash Sharma
- Sudharsan Subramanian
- Soham Suhas Surve
- Himanshu Thakrey
- Harish Varma Tirumalaraju
- Sai Venkateswar Reddy Udayagiri
- Anirudh Udipi
- Madelyn Grace VanWieren
- Ryan Vandiepen
- Courtney Elizabeth Vanwagoner

- Ratnajeet Shrikrushna Wadile
- Darryl Anthony Weaver

Master of Science in Mechatronics

- Hemant Raj Abbugari
- Yared Moges Abraha
- Sai Karthik Alluri
- Shreyas Bharadwaj Bangalore Guruprasad
- Ujwal Goulikar
- Srija Gummadi
- Varun Kulkarni
- Brendon Lakenen
- Hemanth Nanabala
- Alexander David Nedvidek
- Punyokti Vinod Patil
- Mason Thomas Petersen
- Karthik Rao Racharla
- Mohinuddin Shaik
- Sathuryaa Vasudevan

Master of Science in Mining Engineering

- Emmanuel L Wolubah
- Alfred Yeboah

Master of Science in Physics

- Alan L Larson
- Mahsa Najafi
- Lakshmi Sarma Krishna Teja Vedula
- Daniel Yeager

Master of Science in Rhetoric, Theory and Culture

- Genevieve Delali Antonio

Master of Science in Statistics

- Vivian Chidinma Anyanwu
- Kristoffer Adrian Larsen
- Shuo Sun

* Addendum to Conferral Report

- Degree Awarded 202308

C. Resignations, Retirements, and Off-Payroll

BOARD OF TRUSTEES OFF-PAYROLL REPORT
(March 31, 2024 – June 30, 2024)

RETIRED					
Name	Class	Department	Title	Most Recent Hire Date	Term Date
Nicholas Sirdenis	PF	Mont Ripley	General Manager	07/31/2000	04/19/2024
David Chard	PP	Deputy Chief Information Officer	Director of Media Technology Services	02/16/1997	06/03/2024
Kimberly Geiger	PP	College of Engineering	Director of Communications	08/15/2005	06/21/2024
John Hackmeier	AF	Facilities Management	Maintenance Mechanic	09/18/1990	06/28/2024
Jacob Guter	PF	Facilities Management	Director of Engineering Services	03/17/2014	06/30/2024
Katherine Kallio	UF	Public Safety & Police Services	Senior Dispatcher	04/08/2009	06/30/2024
Michael Laajala	AF	Wadsworth Hall Food Service	Cook	08/01/2016	06/30/2024
Jay Meldrum	PF	Vice President for Research	Executive Director, Grand Traverse Area Initiative	07/13/1997	06/30/2024
Chris Miller	FR	College of Forest Resources & Environmental Science	Assistant Teaching Professor	01/14/2014	06/30/2024
Ibrahim Miskioglu	FF	Mechanical Engineering – Engineering Mechanics	Associate Professor	09/02/1985	06/30/2024
David Reed	EX	Vice President for Research	Vice President for Research	09/27/1982	06/30/2024
Lorri Reilly	PF	Chemistry	Laboratory Supervisor	08/11/1991	06/30/2024
Christopher Roussi	PF	Michigan Tech Research Institute	Senior Research Scientist/Engineer	10/01/2006	06/30/2024
Debra Strieter-Baril	UF	Admissions	Senior Administrative Aide	06/13/1988	06/30/2024

OFF-PAYROLL					
Name	Class	Department	Title	Most Recent Hire Date	Term Date
Kim Brubaker	AF	Wadsworth Hall Food Service	Food Service Helper	02/05/2024	03/31/2024
Brian Burroughs	PP	Advanced Power Systems Research Center	Research Associate & Mechanical Technician	01/09/2023	03/31/2024
Jamie Smith	UF	Registrar's	Administrative Aide	07/10/2023	03/31/2024
Michelle Meneguzzo	PF	Sponsored Programs Accounting	Manager of Sponsored Programs Accounting	11/19/2018	04/08/2024
Jacqueline Heikkinen	UF	Admissions	Senior Office Assistant	07/21/2014	04/12/2024
Ashley Nakkula	AF	Facilities Management	Custodian	01/08/2024	04/22/2024
Sara Cambensy	PF	Office of Advancement	Director for Charitable Giving	08/21/2023	04/23/2024
Tammy Tambellini Umlor	UP	Van Pelt & Opie Library	Office Assistant	07/11/2022	04/24/2024
Emmitt Forbush	PF	Cognitive & Learning Sciences	Department Coordinator	01/10/2022	04/26/2024

Formal Session of the Board of Trustees - Agenda

Sarah Oberloier	UF	Equal Opportunity Compliance & Title IX	Senior Office Assistant	07/26/2021	04/27/2024
Anita Riemer	AF	Wadsworth Hall Food Service	Baker	01/22/2024	04/29/2024
Leah Joy	PF	Student Leadership & Involvement	Coordinator/Advisor of Registered Student Organizations	01/09/2023	04/30/2024
Mary Jennings	PF	Rozsa Center for Performing Arts	Rozsa Director	07/07/2013	05/02/2024
Carl Blair	FC	Social Sciences	Teaching Professor	08/15/2011	05/03/2024
William Breffle	FF	College of Business	Associate Professor	08/12/2007	05/03/2024
Skylar LaPine	UF	Registrar's	Senior Administrative Aide	11/28/2022	05/03/2024
Breana Hewitt	AF	Wadsworth Hall Food Service	Baker	08/12/2019	05/05/2024
Isaac Gaddis	NF	Catering	Events & Concessions Supervisor	10/03/2022	05/12/2024
Yin-Yin Tan	PP	Manufacturing & Mechanical Engineering Technology	Program Development Specialist	08/21/2017	05/11/2024
Alexis Straub	PF	Residence Housing	Residence Education Coordinator	07/12/2021	05/17/2024
Kevin Lassila	AF	Residential Dining	Stores Clerk	09/02/2008	05/20/2024
Emily Ruonavaara	PF	Alumni Engagement	Assistant Director of Alumni Engagement Communications Program	07/25/2022	05/23/2024
Kristin D'Agostini-Yep	CF	General Athletics	Head Coach, Men & Women's Tennis/Manager of Gates Tennis Center	02/10/2020	05/25/2024
Jessica Barish	PF	Kinesiology/Integrative Physiology	Department Coordinator	04/05/2021	05/31/2024
Katrina King	UF	Graduate School	Senior Office Assistant	09/05/2023	05/31/2024
Jade Driscoll	PF	Residence Housing	Housing Operations Coordinator	12/13/2021	05/31/2024
Kristina Owen	CF	General Athletics	Head Coach, Cross Country, and Track & Field	08/24/2020	06/01/2024
April DePaulis	UP	Associate Provost for Undergraduate Education	Office Assistant	03/07/2022	06/07/2024
Megan Jarvi	UF	Center for Educational Outreach	Senior Administrative Aide	04/08/2019	06/12/2024
Josh Gostlin	PF	Residence Housing	Assistant Director of Housing Operations	07/12/2021	06/14/2024
Frank Pergande	PF	Center for Educational Outreach	Academic Coordinator	06/25/2023	06/14/2024
Ronald Edwards	AF	McNair Hall Food Service	Cook	12/18/2023	06/25/2024
Susan Hill	PP	College of Engineering	Digital Content Manager	08/4/2000	06/28/2024
Aaron Hoover	UF	Financial Services & Operations	Senior Office Assistant	02/06/2023	06/28/2024
Christopher Gelety	CF	General Athletics	Assistant Director/Coach of Esports	01/10/2022	06/30/2024
Dukka KC	FF	Computer Science	Professor	08/09/2021	06/30/2024
Kellen O'Neill	CF	General Athletics	Assistant Football Coach, Wide Receivers	12/26/2022	06/30/2024

D. Funding Productivity Report

Placeholder

E. Michigan Tech Fund Agreement

VII-F. AGREEMENT BETWEEN MICHIGAN TECHNOLOGICAL UNIVERSITY AND THE MICHIGAN TECH FUND

This Agreement made July 1, 2024 between Michigan Technological University (“University”) and the Michigan Tech Fund (“Fund”).

WHEREAS, the Fund’s work in receiving and managing charitable gift assets for the University is critical to its ability to fulfill its mission and strategic direction, and

WHEREAS, the Fund’s advocacy of the University’s mission and priorities constitutes a valuable service, and

WHEREAS, fundraising is a joint priority of the University and the Fund, and

WHEREAS, the University and the Fund desire to continue a heretofore existing arrangement:

IT IS AGREED:

1. In consideration of the support directly inuring to the benefit of the University from the activities of the Michigan Tech Fund, the University will provide to the Fund:
 - a. supporting services including mail services, limited printing services, access to the phone network, and internal audit services;
 - b. access to the CRM Advance system for maintenance and upkeep of the alumni/development database;
 - c. access to the Banner Finance system for accounting and endowment records.
2. The Fund agrees to continue its various fundraising administrative support and asset management functions for the betterment and advancement of the University. The Fund also agrees to support consulting services as done in the past.
3. This agreement shall terminate on June 30, 2025 and will be considered for renewal for successive one-year periods. The grant or denial of such renewal shall be at the sole discretion of the Board of Trustees of Michigan Technological University.

Michigan Technological University

Michigan Tech Fund

By: Richard J. Koubek
Its: President

By: Richard J. Koubek
Its: President

By: Steven M. Tomaszewski
Its: Chair, Board of Trustees

By: James J. Parm
Its: Chair, Board of Directors

- F. **Board Policy 4.3 - Employment Policy for Professional Staff - Satisfaction or at Will**

Placeholder

VIII. Action and Discussion Items

VIII-A. EMPLOYEE RECOGNITION

For our employees that have worked for Michigan Tech for 35 or more years and in recognition of their distinguished service and outstanding contributions to Michigan Tech, the Board would like to honor them with a resolution of appreciation.

RECOMMENDATION: That the Board of Trustees adopts the Resolution of Appreciation for the following individuals:

Ibrahim Miskioglu, Associate Professor, Mechanical Engineering – Engineering Mechanics – 39 years of service

David Reed, Vice President for Research, Vice President for Research Office – 42 years of service

Debra Strieter-Baril, Senior Administrative Aide, Admissions - 36 years of service

VIII-B. EMERITUS RANK

Recommendation for the granting of faculty emerita/emeritus status originates within the retiree's academic department and proceeds through the respective college. Once approved, the recommendation is presented to the provost, and if successful, to the president of the University for presentation to the Board of Trustees.

RECOMMENDATION: It is recommended that the Board of Trustees approves the following emeritus appointments:

Dr. Guy Meadows, Professor & Director Emeritus
Department of Geological and Mining Engineering and Sciences and
Great Lakes Research Center

Mr. Chris Miller, Teaching Professor Emeritus
College of Forest Resources & Environmental Science

Dr. Robert Shuchman, Professor & Director Emeritus
Department of Geological and Mining Engineering and Sciences and
Michigan Tech Research Institute

Dr. Nikola Subotic, Professor & Director Emeritus
Department of Electrical and Computer Engineering and
Michigan Tech Research Institute



Michigan Tech

OFFICE MEMO

TO: Michigan Technological University Board of Trustees
FROM: Aleksey Smirnov, Department of GMES, Chair
DATE: June 25, 2024
SUBJECT: Recommendation for Emeritus Status for Dr. Guy A. Meadows

In following departmental procedures, the Department of Geological and Mining Engineering and Sciences (GMES) is requesting that the Michigan Technological University Board of Trustees name Guy A. Meadows as Professor Emeritus.

Dr. Meadows has made significant contributions to MTU as the founding Director of the Great Lakes Research Center (GLRC). Alongside his directorial duties, he has served as an adjunct professor and graduate faculty member in the Department of GMES, and as a research professor in the Department of MEEM. In 2014, he was appointed the Robbins Professor of Sustainable Marine Engineering. Before his tenure at Michigan Tech, Dr. Meadows had a notable career at the University of Michigan, where he advanced to the rank of professor and directed the Ocean Engineering Laboratory. At MTU, he played a crucial role in the strategic development and integration of the GLRC, establishing internal policies and fostering the center's growth. Over his career, Dr. Meadows has supervised 16 Ph.D. students, secured over \$9.8 million in research funding, and published 18 papers in esteemed journals. Dr. Meadows' leadership and contributions make him a deserving candidate for emeritus status.

Approved

Department Chair

Date

College Dean

Date

Provost and Senior Vice President for Academic Affairs

Date

President

Date



June 26, 2024

Andrew Storer
Provost and Senior Vice President for Academic Affairs

Dear Andrew:

Dr. Guy Meadows served Michigan Tech with great distinction, joining the university as founding Director of the Great Lakes Research Center (GLRC), and serving as an adjunct professor and member of the graduate faculty in the Department of Geological and Mining Engineering and Sciences, and research professor, Department of Mechanical Engineering – Engineering Mechanics. He was appointed Robbins Professor of Sustainable Marine Engineering in 2014. It is therefore recommended that Dr. Meadows be granted emeritus status at the University, and the title Director Emeritus, Great Lakes Research Center (GLRC).

Dr. Meadows received his PhD in Marine Science from the University of Purdue. Prior to joining Michigan Tech he had a distinguished career as a faculty member at the University of Michigan, rising to the rank of professor, and serving as the Director of the Ocean Engineering Laboratory in the Department of Naval Architecture and Marine Engineering at the University of Michigan. At Michigan Tech, Dr. Meadows served as founding Director of the Great Lakes Research Center. In that role he led strategic planning efforts for the GLRC, worked to integrate the GLRC as a new unit at Michigan Tech, and developed internal policies and procedures to position the GLRC for growth as an independent research center. He also developed and taught MEEM 4850/ENT 3987: Naval Systems and Platforms. Today, the GLRC has over \$8 million in annual research expenditures and approximately 20 staff members entirely supported by these research expenditures.

In his career Dr. Meadows has advised 16 successful PhD students, taught numerous short courses for agencies such as the Defense Mapping Agency, and while at Michigan Tech received over \$9.8 million in research funding from 2012 through 2024. While he has been at Michigan Tech he has authored or co-authored 18 publications in journals such as the Journal of Marine /Technology and the Journal of Great Lakes Research. As an outstanding example of his public service, Dr. Meadows led a team of researchers from several institutions to develop a risk assessment of the Line 5 pipeline beneath the Straits of Mackinac. This complex project was successfully completed and delivered to the State of Michigan in approximately six months, an exemplary example of scientific coordination and leadership.

It is a great pleasure to nominate Dr. Meadows for emeritus status at the university, and the title Director Emeritus, Great Lakes Research Center (GLRC).

Sincerely,

David D. Reed
Vice President for Research



Michigan Tech

OFFICE MEMO

TO: Michigan Technological University Board of Trustees

FROM: Interim Dean David Flaspohler

DATE: 4-23-2024

SUBJECT: Recommendation for Emeritus Status- Chris Miller

The faculty of the College of Forest Resources & Environmental Science voted on 4/12/2024 to request that the Michigan Technological University Board of Trustees name Chris Miller as Teaching Professor Emeritus upon his retirement on 6/30/2024. The vote was overwhelmingly supportive of giving Chris this status. Chris has been teaching in CFRES since 2014 and has taught a variety of foundational courses to hundreds of MTU students.

He has received the following recognition for his teaching: CFRES Student Award for Outstanding Faculty Member 2020, 2021, 2023, and 2024, and the Dean’s Teaching Showcase nomination, 2020. Chris is also a member of the Xi Sigma Pi National Forestry Honor Fraternity, Alpha Eta Chapter, and the Advisor to the Wildland Fire Club.

Approved

n/a

Department Chair

Date

David Flaspohler

College Dean

23 April 2024

Date

Provost and Senior Vice President for Academic Affairs

Date

President

Date



Michigan Tech

OFFICE MEMO

TO: Michigan Technological University Board of Trustees
FROM: Aleksey Smirnov, Department of GMES, Chair
DATE: June 25, 2024
SUBJECT: Recommendation for Emeritus Status for Dr. Robert A. Shuchman

In following departmental procedures, the Department of Geological and Mining Engineering and Sciences (GMES) is requesting that the Michigan Technological University Board of Trustees name Robert A. Shuchman as Professor Emeritus.

Dr. Shuchman has had a distinguished career, making significant contributions to MTU and the broader scientific community. As the founding co-director of the Michigan Tech Research Institute (MTRI), he has been instrumental in developing and managing the institute, ensuring its integration into the university and fostering collaborations. His tenure included roles as adjunct professor and graduate faculty member in the Department of GMES and adjunct professor in the Department of Biological Sciences. Dr. Shuchman has supervised numerous graduate students, secured substantial research funding, and published extensively. His research focused on remote sensing techniques and in situ measurements to understand the Earth's biosphere, particularly the Great Lakes Basin. Dr. Shuchman's leadership and contributions make him a deserving candidate for emeritus status.

Approved

Department Chair

Date

College Dean

Date

Provost and Senior Vice President for Academic Affairs

Date

President

Date



June 26, 2024

Vice President for Research

Andrew Storer
Provost and Senior Vice President for Academic Affairs

Dear Andrew:

Dr. Robert Shuchman served Michigan Tech with great distinction, joining the university in 2006 as a founding co-director of the Michigan Tech Research Institute until 2022, and as an adjunct professor and member of the graduate faculty in the Department of Geological and Mining Engineering and Sciences. He has also held an adjunct appointment in the Department of Biological Sciences. It is therefore recommended that Dr. Shuchman be granted emeritus status at the University, and the title Director Emeritus, Michigan Tech Research Institute (MTRI).

Dr. Shuchman holds a PhD in Oceanic Science/Natural Resources from the University of Michigan, which led to a long career as a research scientist in the predecessors of MTRI. The development of MTRI provided a major opportunity for Michigan Tech to develop a presence in lower Michigan. Based in Ann Arbor, MTRI originated from the acquisition of parts of the Altarum Institute which was developed from the Environmental Research Institute of Michigan. The development and management of MTRI presented many challenges, all of which were overcome during Dr. Shuchman's tenure as a co-director. These include establishing and overseeing a separate campus for MTRI operations, developing and growing the infrastructure of MTRI as research activity grew at a rapid rate, and development of policies to ensure that the institute operated as an integrated part of the University. Dr. Shuchman's efforts have developed and enhanced collaborations among scientists at MTRI and with other faculty and research scientists at Michigan Tech, including many on the main campus. Many of these collaborations have involved graduate student education leading to master's and doctoral degrees. Dr. Shuchman's contributions to the administration of MTRI warrant the title of Director Emeritus.

As a scientist, Dr. Shuchman made contributions to five books, over 50 refereed technical papers, and some 75 technical reports. He also presented some 100 papers at technical society meetings. His work focusses on the basic and applied research into the use of remote sensing techniques and specialized *in situ* measurements to better understand the earth's biosphere, and has included significant emphasis on the Great Lakes and the Great Lakes Basin.

It is a great pleasure to nominate Dr. Shuchman for emeritus status at the University, and the title Director Emeritus, Michigan Tech Research Institute (MTRI).

Sincerely,

David D. Reed
Vice President for Research



Michigan Tech

OFFICE MEMO

TO: Michigan Technological University Board of Trustees

FROM: Jin Choi, Department Chair of Electrical and Computer Engineering

DATE: June 25, 2024

SUBJECT: Recommendation for Emeritus Status

The committee representing the faculty of the Department of Electrical and Computer Engineering voted on June 24, 2024 to request that the Michigan Technological University Board of Trustees name Dr. Nikola Subotic as Professor Emeritus following his retirement on June 30, 2023.

Dr. Subotic has been an adjunct faculty member of the ECE department for 15 years from 2006 and advised a number of PhD students. Dr. Subotic's specific interests include distributed RADAR, RADAR waveform design, multi-access sensing systems, estimation and detection theory, and using higher-order statistics for sensing and communication. Dr. Subotic has made significant contributions in time-frequency distributions, sensor fusion, optical processing, RADAR waveform design, and adaptive Synthetic Aperture Radar processing. He holds seven patents and has been an invited speaker at various conferences, universities, and government workshops. His publications include contributions to three books, over 30 technical papers, 60 technical reports, and presentations at 25 technical society meetings.

Approved

Department Chair

Date

College Dean

Date

Provost and Senior Vice President for Academic Affairs

Date

President

Date



Vice President for Research

June 26, 2024

Andrew Storer
Provost and Senior Vice President for Academic Affairs

Dear Andrew:

Dr. Nikola S. Subotic served Michigan Tech with great distinction, joining the University in 2006, serving as a founding co-director of the Michigan Tech Research Institute until 2022 and director until 2023. He also served as a research professor in the Department of Electrical and Computer Engineering. It is therefore recommended that Dr. Subotic be granted emeritus status at the University, and the title Director Emeritus, Michigan Tech Research Institute (MTRI).

Dr. Subotic holds a PhD in Electrical Engineering from the University of Wisconsin, Madison, which led to a long career as a research scientist in the predecessors of MTRI. The development of MTRI provided a major opportunity for Michigan Tech to develop a presence in lower Michigan. Based in Ann Arbor, MTRI originated from the acquisition of parts of the Altarum Institute which was developed from the Environmental Research Institute of Michigan. The development and management of MTRI presented many challenges, all of which were overcome during Dr. Subotic's tenure as a co-director. These include establishing and overseeing a separate campus for MTRI operations, developing and growing the infrastructure of MTRI as research activity grew at a rapid rate, and development of policies to ensure that the institute operated as an integrated part of the University. Dr. Subotic's efforts have developed and enhanced collaborations among scientists at MTRI and with other faculty and research scientists at Michigan Tech, including many on the main campus. Many of these collaborations have involved graduate student education leading to master's and doctoral degrees. Dr. Subotic's contributions to the administration of MTRI warrant the title of Director Emeritus.

In addition to administration of MTRI, Dr. Subotic was responsible for applied research and implementation of novel concepts in sensing systems, signal processing, and communications. His specific interests are in distributed RADAR, RADAR waveform design, multi-access sensing systems, estimation and detection theory, and the use of higher order statistics for sensing and communication. Dr. Subotic holds seven patents in the areas of real-time optical processing, multi-frequency antenna design, high speed framing cameras and novel signal reconstruction techniques.

It is a great pleasure to nominate Dr. Subotic for emeritus status at the University, and the title Director Emeritus, Michigan Tech Research Institute (MTRI).

Sincerely,

David D. Reed
Vice President for Research

C. Appointment with Tenure - Andrew Barnard, Mechanical Engineering-Engineering Mechanics

Andrew Storer, Provost and Senior Vice President for Academic Affairs

V-C. APPOINTMENT WITH TENURE – ANDREW BARNARD

Dr. Andrew Barnard is being recommended for appointment as Professor with tenure in the Department of Mechanical Engineering – Engineering Mechanics effective July 1, 2024. The Department and College of Engineering Promotion and Tenure Committees, the Dean, the Provost, and the President have endorsed the recommendation for this appointment and tenure. Dr. Barnard most recently served as Professor and Director of the Graduate Program in Acoustics, as well as Director for the Center for Acoustics and Vibration at The Pennsylvania State University before assuming the role of Vice President for Research at Michigan Technological University July 1, 2024. Dr. Barnard earned his PhD from The Pennsylvania State University in 2010 following the completion of his MS and BS degrees from Michigan Technological University.

RECOMMENDATION: It is recommended that the Board of Trustees approve the appointment of Dr. Andrew Barnard as Professor with tenure in the Department of Mechanical Engineering – Engineering Mechanics effective July 1, 2024.

INFORMATION SHEET FOR BOARD OF TRUSTEES
ANDREW R. BARNARD
Michigan Technological University

Andrew R. Barnard, who last served as an associate professor with tenure in the Department of Mechanical Engineering–Engineering Mechanics at Michigan Tech from 2019 to 2021, is returning to the university as the new Vice President for Research. He is also being considered for promotion to professor with tenure in the same department within the College of Engineering.

Academic Degrees:

Ph.D.	2010	The Pennsylvania State University, State College, PA – Acoustics
M.S.	2004	Michigan Technological University – Mechanical Engineering
B.S.	2002	Michigan Technological University – Mechanical Engineering (<i>summa cum laude</i>)

Professional Record:

2023 – present	Director, Center for Acoustics and Vibration, Penn State
2022 – present	Director, Graduate Program in Acoustics, Penn State
2022 – present	Professor, Graduate Program in Acoustics, Penn State
2020 – present	Co-Founder: Nano Sound, Inc.
2019 – 2021	Director: Great Lakes Research Center, Michigan Technological University
2019 – present	Co-Founder: SwimSmart Technology, LLC
2019-2021	Associate Professor, ME-EM, Michigan Technological University
2014-2019	Assistant Professor, ME-EM, Michigan Technological University
2014 – present	Barnard Acoustics LLC

Summary of Accomplishments:

• Teaching

Dr. Barnard was nominated for the 2023 INCE-USA Outstanding Educator Award, given every four years to honor individuals who have significantly advanced noise control engineering through education. This award recognizes excellence in teaching, developing educational tools, disseminating principles beyond universities, conducting seminal research, and providing leadership in noise control engineering education.

Dr. Barnard stopped teaching for the ME-EM department at Michigan Tech in the Fall semester of 2020. Before that, his average ratings across seven dimensions consistently exceeded 4.25 out of 5.00, reflecting outstanding performance. He earned numerous awards for his teaching excellence during his time at Tech (see below).

- 4/2020 - Top 10% of student evaluations for similarly sized sections, Michigan Tech.
- 5/2019 - Distinguished Teaching Award WINNER (Tenure Track), Michigan Tech.
- 4/2019 - Two Top 10% of student evaluations for similarly sized sections, Michigan Tech.
- 1/2019 - Distinguished Teaching Award Nominee (Tenure Track), Michigan Tech.
- 4/2018 - Member of Academy of Teaching Excellence, Michigan Tech.
- 4/2018 - Two sections: Top 10% of student evals for similarly sized sections, Michigan Tech.
- 1/2018 - Distinguished Teaching Award Nominee (Tenure Track), Michigan Tech.
- 4/2017 - Two sections: Top 10% of student evals for similarly sized sections, Michigan Tech.

• Research/Scholarly Activity

Dr. Barnard’s research portfolio includes government, industry, foundation, and entrepreneurial funding as both a non-tenure-line research faculty member and a tenure-line academic faculty member. He has

led 83 funded projects totaling \$28.53M. The vast majority of his research grants and contracts are collaborative and interdisciplinary, which is a key to research success. He collaborates with other researchers to develop funded research programs and is a tireless networker with institutional insight into a broad range of research opportunities and experiences. He has worked with executive leadership at all levels of the university in developing research opportunities focused on university, state, regional, and national research priorities.

- Service

- Participates in College of Engineering leadership committees (2022 – Present)
- College of Engineering budget task force (2023 – Present)
- Organized 2023 CAV 2-day workshop for university and industry participants (Oct. 2023)
- Led 2022 CAV 2-day workshop for university and industry participants (Oct. 2022)
- External member for Early Career Management committee for Sarah Hoy (CFRES), (2021-2022)
- Member of the Autonomy Tech Forward initiative team at Michigan Tech, (2020 – 2022)
- Participated in Husky Bites evening lecture sponsored by the COE, (Mar. 2021)
- Guest lecturer for MEEM 4850: Naval Systems and Platforms, (Dec. 2020)
- Supported MTU/NMC partnership through development of a new freshwater research institute in Traverse City, MI (2020 – 2021)
- Participated in Husky Bites evening lecture sponsored by the College of Engineering, (Jun. 2020)
- Member of MTU ADVANCE Advocates team, acting as an advocate for female and under-represented faculty, (Jun. 2020 – Dec. 2021)

- Recent and Significant Publications/Exhibitions/Performances/Etc.

1. Thomas M. Evans, Lars G. Rudstam, Suresh A. Sethi, David M. Warner, S. Dale Hanson, Benjamin Turschak, Steven A. Farha, Andrew R. Barnard, Daniel L. Yule, Mark R. DuFour, Timothy P. O'Brien, Kevin N. McDonnell, James M. Watkins, Scott R. Koproski, Susan E. Wells, Patricia M. Dieter, Erik Kocher, James J. Roberts, Steven A. Senczysyn, Peter C. Esselman, "Fish avoidance of ships during acoustic surveys tested with quiet uncrewed surface vessels in the Great Lakes," Fisheries Research, 267, <https://doi.org/10.1016/j.fishres.2023.106817>, Nov (2023).
2. Sunit Girdhar, Andrew Barnard, Jason Blough, John LoVerde, Wayland Dong, "Input force and floor impedance measurement for the standard tapping machine and the standard impact ball," Noise Control Engineering Journal, 71(1), 57-74, <https://doi.org/10.3397/1/37716>, (2023).
3. Steven Whitaker, Andrew Barnard, George Anderson, Timothy Havens, "Through-ice Acoustic Source Tracking Using Vision Transformers with Ordinal Classification," Sensors, 2022, 22, 4703. <https://doi.org/10.3390/s22134703>, (2022)
4. Steven Whitaker, Andrew Barnard, Timothy Havens, "Recurrent networks for direction-of-arrival identification of an acoustic source in shallow water using a single vector sensor," Journal of the Acoustical Society of America, 150(1), 111-119, (2021).
5. Tristan Cullom, Cody Lough, Nicholas Altese, Douglas Bristow, Robert Landers, Ben Brown, Troy Hartwig, Andrew Barnard, Jason Blough, Kevin Johnson, Edward Kinzel, "Frequency Domain Measurements of Melt Pool Recoil Force using Modal Analysis," Scientific Reports in Nature, 11, 10959, <https://doi.org/10.1038/s41598-021-90423-z>, (2021)
6. Miles Penhale, Andrew Barnard, "Direction of Arrival Estimation in Practical Scenarios using Moving Standard Deviation Processing for Localization and Tracking with Acoustic Vector Sensors," Applied Acoustics, 168, November 2020, <https://doi.org/10.1016/j.apacoust.2020.107421>, (2020).
7. Sunit Girdhar, Andrew Barnard, "Improved Low-Frequency Sound Measurements for Impact Insulation Class (IIC) Rating Using a Comparison Technique," Noise Control Eng. J., 68(1), 72-86, (2020).

D. Appointment with Tenure - Michelle Scherer, Civil, Environmental, & Geospatial Engineering

Andrew Storer, Provost and Senior Vice President for Academic Affairs

V-D. APPOINTMENT WITH TENURE – MICHELLE SCHERER

Dr. Michelle Scherer is being recommended for appointment as Professor with tenure in the Department of Civil, Environmental, and Geospatial Engineering effective July 1, 2024. The Department and College of Engineering Promotion and Tenure Committees, the Dean, the Provost, and the President have endorsed the recommendation for this appointment and tenure. Dr. Scherer most recently served as Distinguished Chair and Professor and Director of the College of Engineering's Hanson Center for Communication at the University of Iowa. She assumed the duties of Dean of the College of Engineering at Michigan Technological University July 1, 2024. Dr. Scherer earned her PhD from Oregon Graduate Institute in 1998 following the completion of her MS from the University of Connecticut and BS from the University of Virginia.

RECOMMENDATION: It is recommended that the Board of Trustees approve the appointment of Dr. Michelle Scherer as Professor with tenure in the Department of Civil, Environmental, and Geospatial Engineering effective July 1, 2024.

INFORMATION SHEET FOR BOARD OF TRUSTEES
MICHELLE M. SCHERER
Michigan Technological University

Michelle M. Scherer, who is currently a Distinguished Chair and Professor of Environmental Engineering with tenure in the Department of Civil and Environmental Engineering College of Engineering at the University of Iowa, is being considered for appointment with tenure in the Department of Civil, Environmental, and Geospatial Engineering in the College of Engineering.

Academic Degrees:

Ph.D.	1998	Environmental Science & Engineering, Oregon Graduate Institute
M.S.	1994	Civil and Environmental Engineering, University of Connecticut
B.S.	1989	Systems Engineering, University of Virginia

Professional Record:

2010 – present	Professor, University of Iowa
2010-2018	Department Chair, Civil and Environmental Engineering, University of Iowa
2004-2010	Associate Professor, University of Iowa
1998-2004	Assistant Professor, University of Iowa

Summary of Accomplishments:

• Teaching

Has taught for over 25 years and was recognized by the CEE graduating class for excellence in teaching and dedication to student success (2015) at the University of Iowa

• Research/Scholarly Activity

Dr. Schere has over 80 peer-reviewed publications with an h-index of 54 and over 10,000 citations. She has won the following research awards:

University of Iowa College of Engineering Faculty Excellence Award for Research (2008)

University of Iowa Faculty Scholar Award (2006-2009)

University of Iowa Obermann Scholar (2006)

Environmental Science & Technology Reviewer Award (2004)

National Science Foundation CAREER Awardee (2000)

• Service

Member of Strategic Environmental Research and Development Program (SERDP) Science Advisory Board (2016 –2017) (SERDP is DoD’s Environmental Research Program)

Member of EPA’s Environmental Engineering Scientific Advisory Board (2014 –2018)

Associate Editor, *Environmental Science & Technology* (2008 – 2012).

Chair, Association of Environmental Engineering and Science Professors (AEESP) Bi-Annual National Conference 2009
Founder of Telluride Workshop on Fe Biogeochemistry (Chair or Co-Chair 2006, 2014, 2018)

• Recent and Significant Publications/Exhibitions/Performances/Etc.

1. Drew E. Latta, Kevin Rosso, and Michelle M. Scherer. **2023**. Tracking initial Fe(II)-driven ferrihydrite transformation: A Mossbauer spectroscopy and isotope investigation. *ACS Earth & Space Chemistry*. 7 (10), 1814-1824. DOI: [10.1021/acsearthspacechem.2c00291](https://doi.org/10.1021/acsearthspacechem.2c00291).
2. Thomas C. Robinson, Drew E. Latta, Johna Leddy, and Michelle M. Scherer. **2022**. Redox potentials of magnetite suspensions under reducing conditions. *Environ. Sci. Technology*. DOI: [10.1021/acs.est.2c05196](https://doi.org/10.1021/acs.est.2c05196)
3. Notini, L., M.R. Nagorzanski, and M. M. Scherer, and A. Kappler. **2021**. Looking Ahead: Student's perceptions of diversity before and after a diversity workshop. *Advances in Engineering Education*. 9(4).
4. Robinson, T., D.E. Latta, L.A. Notini, K.E. Schilling, and Michelle M. Scherer. **2021**. Abiotic reduction of nitrite by Fe(II): A comparison of rates and N₂O production. *Environ. Sci. Proc. Impact*. 23:1531. [doi.org/10.1039/d1em00222h].
5. O'Loughlin, E.J., M.I. Boyanov, C.A. Gorksi, M. M. Scherer, and K.M. Kemner. **2021**. Effects of Fe(III) mineralogy and phosphate on Fe(II) secondary mineral formation during microbial iron reduction. *Minerals*. 11(149). [doi.org/10.3390/min11020149]

E. Appointment with Tenure - Lillian LaReesa Wolfenbarger, Biological Sciences

Andrew Storer, Provost and Senior Vice President for Academic Affairs

V-E. APPOINTMENT WITH TENURE – LILLIAN LAREESA WOLFENBARGER

Dr. Lillian LaReesa Wolfenbarger is being recommended for appointment as Professor with tenure in the Department of Biological Sciences effective July 1, 2024. The Department and College of Sciences and Arts Promotion and Tenure Committees, the Dean, the Provost, and the President have endorsed the recommendation for this appointment and tenure. Dr. Wolfenbarger most recently served as Associate Dean of Natural Sciences and Research, Professor of Biology, and Director of the Animal Care and Use Program in the College of Arts and Sciences at the University of Nebraska at Omaha. She assumed the duties of Dean of the College of Sciences and Arts at Michigan Technological University on July 1, 2024. Dr. Wolfenbarger earned her PhD from Cornell University in 1996 and her BSc from the University of California at Los Angeles.

RECOMMENDATION: It is recommended that the Board of Trustees approve the appointment of Dr. Lillian LaReesa Wolfenbarger as Professor with tenure in the Department of Biological Sciences effective July 1, 2024.

INFORMATION SHEET FOR BOARD OF TRUSTEES

L. LaReesa Wolfenbarger
Michigan Technological University

L. LaReesa Wolfenbarger, who is currently Dean of the College of Sciences and Arts, with an appointment as professor of biology without tenure in the Department of Biological Sciences, is being considered appointment with tenure in the Department of Biological Sciences in the College of Sciences and Arts.

Academic Degrees:

Ph.D.	1996	Cornell University, Ithaca, New York
B.S.	1987	University of California at Los Angeles

Professional Record:

2024 – present	Dean, College of Sciences and Arts, Michigan Technological University
2020-2024	Associate Dean of Natural Sciences and Research, College of Arts and Sciences, University of Nebraska at Omaha
2019-2024	Director of Animal Care and Use Program, University of Nebraska at Omaha
2016-2021	Chair of Biology, Department of Biology, University of Nebraska at Omaha
2016-2024	Professor of Biology, Department of Biology, University of Nebraska at Omaha
2008-2009	Fulbright Research Scholar, Center for Ecological and Evolutionary Synthesis, University of Oslo, Norway
2004-2016	Associate Professor of Biology (2004-12, 50% FTE non-tenure track, 2012-2016 (100% FTE, tenure-track), Department of Biology, University of Nebraska at Omaha
2001-2004	Prairie Manager and Adjunct Associate Professor of Biology, Department of Biology, University of Nebraska at Omaha
2001-2003	Senior Program Associate, Information Systems for Biotechnology, Department of Biochemistry, Virginia Polytechnic Institute and State University
2001	Ecologist, U.S. Environmental Protection Agency, Office of Research and Development, National Center for Environmental Assessment, Washington, DC
1999-2001	Science and Policy Fellow, U.S. Environmental Protection Agency, Office of Research and Development, National Center for Environmental Assessment, Washington, DC
1997-2000	National Science Foundation/A.P. Sloan Foundation Postdoctoral Research Fellow, Research Associate and Instructor, Department of Biology, University of Maryland, College Park, Maryland
1989-1996	Graduate Student and Doctoral Candidate, Field of Neurobiology and Behavior, Cornell University, Ithaca, New York

Summary of Accomplishments:

• Teaching

Dr. Wolfenbarger has a strong record of teaching that includes working with introductory and advanced undergraduates, as well as graduate students. As a professor of biology at the University of Nebraska Omaha, she helped lead the redesign of the introductory biology course sequence, and developed and

taught introductory, advanced, and graduate courses in biology and environmental science. As Associate Dean at UNO, she worked to successfully improve student success in courses with low success rates across the college and led the development of a new inter-campus degree program in Pharmaceutical Sciences. In the future, Dr. Wolfenbarger will continue to focus on student success through the development of strategies to increase student retention and completion and through efforts to incorporate innovative teaching techniques in individual courses and across the curriculum.

• Research/Scholarly Activity

Dr. Wolfenbarger's research focuses on ecology and conservation biology, with an emphasis on producing research to support decision makers. Dr. Wolfenbarger is a highly collaborative researcher and has emphasized working with decisions makers ranging from policy-makers at the federal level to land managers working on place-based conservation efforts.

- Dr. Wolfenbarger is an author of 37 peer-reviewed papers, books and book chapters.
- These publications are widely read, with over 2000 citations.
- Her work has received support from ca. \$2 million in research funding.
- Dr. Wolfenbarger was named a Fulbright Research Scholar in 2008 and spent one year at University of Oslo, Norway.

As a senior researcher, Dr. Wolfenbarger has broadened her impact as a valued mentor, working with undergraduates, graduate students, and early career faculty. Among her accomplishments in her leadership roles, she was successful in more than doubling start-up funds for College hires and improved research mentoring, contributing to a consequent three-fold increase in grant submissions and awards by new faculty in Biology and Neurosciences. Looking to the future, Dr. Wolfenbarger continues to focus on the role of science in informing decision-making and will continue to work as a research leader and mentor, facilitating the broad advancement in research and creative activity across the college.

Service

In service, Dr. Wolfenbarger has made valuable contributions to her university, profession, and community. Noteworthy contributions to her community include serving as a Member of the Board of Trustees for the Nebraska Chapter of The Nature Conservancy and as Treasurer for the Nebraska Junior Academy of Sciences. A highlight of her service to her profession has been her role as an Associate Editor for the journal *Ornithology* (formerly *The Auk: Ornithological Advances*). Dr. Wolfenbarger's service to her university has been extensive. Noteworthy has been her role over multiple years as Graduate Program Chair and Department Chair for the Department of Biology. At the university-level she served as the inaugural Director of the Animal Care and Use Program at UNO, planning and implementing the development of an independent IACUC and of a restructured business plan. In this role she secured \$1M in funding for improvements to facilities and operations supporting animal research. Dr. Wolfenbarger looks forward to serving Michigan Tech as Dean of the College of Sciences and Arts and Professor of Biology.

• Recent and Significant Publications/Exhibitions/Performances/Etc.

Young, AC², WA Cox¹, JP McCarty, and LL Wolfenbarger. 2019. Postfledging habitat selection and survival of Henslow's Sparrow: management implications for a critical life stage. *Avian Conservation and Ecology* 14 (2):10 <https://doi.org/10.5751/ACE-01418-140210> (16 citations to date)

Geest, EA², LL Wolfenbarger, JP McCarty. 2019. Recruitment, survival, and parasitism of monarch butterflies (*Danaus plexippus*) in milkweed gardens and conservation areas. *Journal of Insect Conservation* 23:211-224. doi.org/10.1007/s10841-018-0102-8 (36 citations to date)

(Coauthor footnotes designate ¹ Postdoctoral researcher, ² Graduate student working in my lab.)

National Research Council, et al. *The impact of genetically engineered crops on farm sustainability in the United States*. National Academies Press, 2010. Lead author for Chapters 1, 3, 5. (304 citations to date)

F. Doctor of Philosophy (PhD) in Manufacturing Engineering

Andrew Storer, Provost and Senior Vice President for Academic Affairs

VIII-F. PROPOSAL FOR A DOCTOR OF PHILOSOPHY (PHD) IN MANUFACTURING ENGINEERING

The faculty in the Department of Manufacturing and Mechanical Engineering Technology (MMET), under the umbrella of the College of Engineering, seek to establish a Doctor of Philosophy (PhD) degree in Manufacturing Engineering. This degree, which supports Michigan Tech's strategic plan, will prepare students at the doctoral level who can then continue their research through post-doctoral training, assume positions in academia, industry, or governmental agencies and be prepared to grow into positions of advanced manufacturing leadership. Courses will allow for specialization in Industry 4.0 topics, some of which include additive manufacturing, manufacturing systems and operations, and advanced materials and manufacturing processing. The degree will emphasize research of the most viable and efficient processes used during fabrication, shaping, machining, and assembly.

Designs that are realized by engineers need to be manufactured with the end goal of producing a better product at a lower cost. This degree will cut across traditional disciplines to make advancements in manufacturing processes for forming, joining, casting, molding, producing composites, micromachining, and additive methodologies used in those disciplines.

The proposal has been approved by the University Senate and University administration. The University is seeking Board of Trustees approval to advance the proposal to the State Academic Affairs Officers.

RECOMMENDATION: It is recommended that the Board of Trustees approves the Doctor of Philosophy (PhD) degree in Manufacturing Engineering.




Michigan Tech

Office Memo

Office of the Provost and
Senior Vice President for Academic Affairs

Phone: (906) 487-2440
Fax: (906) 487-2935

TO: Richard Koubek, President

FROM: Andrew Storer, Provost & Senior Vice President for Academic Affairs 

DATE: May 31, 2024

SUBJECT: Senate Proposal 14-24

Attached is Senate proposal 14-24, "Establishment of a Doctor of Philosophy in Manufacturing Engineering" and a memo stating the Senate passed this proposal at their April 3, 2024 meeting. I have reviewed this memo and recommend approving the proposal and sharing with the Senate that the administration appreciates the content relating to resource needs for this program and anticipates resource allocation to be consistent with existing resourcing plans and the university budgeting process.

If you concur with my recommendation, the provost's office will seek the following approvals.

- Board of Trustees
- Michigan Association of State Universities (MASU)
- Higher Learning Commission (HLC); screening required for all degree programs as well certificates

Programs cannot be fully advertised until all noted approvals are obtained. Limited advertising to make prospective students aware of the planned program may be conducted so long as any outstanding regulatory approvals are noted, e.g., "pending final administrative, state and Higher Learning Commission approval".

I concur do not concur _____ with the provost's recommendation as stated in this memo.

Richard Koubek, President

Date



Michigan Tech

University Senate

DATE: April 4, 2024
TO: Richard Koubek, President
FROM: Robert Hutchinson
University Senate President
SUBJECT: Proposal 14-24
COPIES: Andrew Storer, Provost & Senior VP for Academic Affairs

At its meeting on April 3, 2024, the University Senate approved Proposal 14-24, "Establishment of a Doctor of Philosophy in Manufacturing Engineering." Feel free to contact me if you have any questions.

The University Senate of Michigan Technological University

Proposal 14-24

Establishment of a Doctor of Philosophy in Manufacturing Engineering

Submitted by: Manufacturing and Mechanical Engineering Technology (MMET) Department

I. Background:

The Manufacturing and Mechanical Engineering Technology (MMET) department currently offers an MS in Manufacturing Engineering which includes core manufacturing courses along with options for coursework that specialize in Industry 4.0 topics like additive manufacturing. The Manufacturing Engineering PhD program will emphasize research of the most viable and efficient processes used during fabrication, shaping, machining, and assembly and will provide an ability for students with an MS degree to further their domain knowledge and expertise in the field.

The MMET department was formed as a new department in the College of Engineering in fall of 2019. At the undergraduate level the MMET department administers the BS Mechanical Engineering Technology (MET) program and the Minor in Manufacturing Systems. MET students learn the fundamentals of machining, manufacturing processes, and quality control methods. With this manufacturing emphasis in the degree many employers hire MET students as Manufacturing Engineers, Process Engineers, Production Engineers, and Quality Engineers. There are approximately 200 undergraduate MET program students and eight faculty members associated with the department. The MMET department manages the MMET Machine Shop located in the M&M building. The MMET Machine Shop is used for several manufacturing courses, enterprise course fabrication, and for developing undergraduate projects. This lab facility is also a resource for faculty research project fabrication and testing that will be available for PhD students as well.

In addition to the MS in Manufacturing Engineering degree, the MMET department currently offers an online certificate in Manufacturing Engineering. The two graduate offerings include core manufacturing courses along with options for coursework that specialize in Industry 4.0 topics like additive manufacturing. Students pursuing this PhD can earn the MS in Manufacturing Engineering along the way. MMET department also supports the interdisciplinary MS in Mechatronics degree and associated certificates. The faculty in MMET have manufacturing industry experience, and most teach courses and conduct research in manufacturing. MMET faculty have a long record of advising graduate students from departments on campus inside and outside of the College of Engineering.

Basic Program Information

1. **Proposal date:** January, 2023.
2. **Proposer primary contact:** John L. Irwin, Professor/Chair, MMET department
3. **Program Degree Type:** PhD
4. **Program Title:** Doctor of Philosophy in Manufacturing Engineering

5. **Program Implementation Date:** Fall 2024.

6. **Program location/modality:** On campus

7. **New Target Student Population:** New Target Student Population

The Manufacturing Engineering PhD will attract various degree majors that otherwise would not necessarily pursue research in manufacturing within a PhD in Mechanical Engineering because those generally are designed for students with a mechanical engineering degree. Students with degrees in biomedical, electrical, chemical, robotics or material science may desire to pursue advanced manufacturing research related to their area of specialty. But, the primary source of interest will be from manufacturing related program students.

Recruiting will target the numerous accredited manufacturing bachelor's degree program students in the US at the undergraduate level, including (27) ABET EAC Manufacturing Engineering degrees and (28) ABET ETAC Manufacturing Engineering Technology degrees. Institutions in Michigan offering EAC or ETAC Manufacturing degrees are; Grand Valley, University of Michigan Dearborn, Lake Superior State, and Lawrence Tech. There are many other undergraduate programs with a manufacturing focus or minors within their departments like those at Michigan Tech (e.g. ME_EM, MMET, & Applied Computing).

There are also several universities in Michigan offering master's programs in Manufacturing Engineering including Michigan Tech's MMET department MS degree that can serve as a pipeline into the PhD program. Others include Western Michigan University, Wayne State University, and the University of Michigan. Regionally, MS programs are offered at the University of Wisconsin-Stout, Illinois Institute of Technology, and the University of Wisconsin-Madison. Other programs of note are Arizona State, and Clemson. The existence of these and other similar Manufacturing Engineering MS degree programs reinforce the need for this PhD, and will provide sources for potential recruiting of students.

The marketing plan for the PhD program will target the Michigan Tech MS Manufacturing Engineering and related degree program students, as well as undergraduate students in several related majors. The Michigan Tech MS in Manufacturing Engineering had eight students enrolled in fall 2023 after just being introduced in fall 2021, and the related interdisciplinary program, MS in Mechatronics, had 46 students enrolled in fall 2023. The Graduate School will also be encouraged to actively market this degree with international students, especially those with an interest in manufacturing over traditional mechanical design research and development.

8. **General description and characteristics of program:**

a. **Description:**

Our goal is to prepare students at the doctoral level who can continue their research in post-doctoral training, assume positions in academia, industry, or governmental agencies and be prepared to grow into positions of advanced manufacturing leadership. This goal is supportive of Michigan Tech's strategic plan's goals for education, scholarship, and people:

Education: Expand programs in response to social and economic needs and challenges.

- Increase both scholarly productivity and number of doctoral and master’s degrees awarded.

Scholarship: Grow research, scholarship, and creativity.

- Increase external support for research, scholarly, and creative activities, including leadership of interdisciplinary multi-institutional collaborations.

People: Foster and support an exceptional and diverse community of students, faculty, and staff.

- Optimize numbers of tenured, tenure-track, and instructional-track faculty and staff to foster growth of University programs.

Courses will allow for specialization in Industry 4.0 topics like additive manufacturing, Manufacturing Systems and Operations, Product Tooling and Assembly Engineering, Quality Engineering, and Advanced Materials and Manufacturing Processes. The Manufacturing Engineering PhD program will emphasize research of the most viable and efficient processes used during fabrication, shaping, machining, and assembly (see Figure 1).

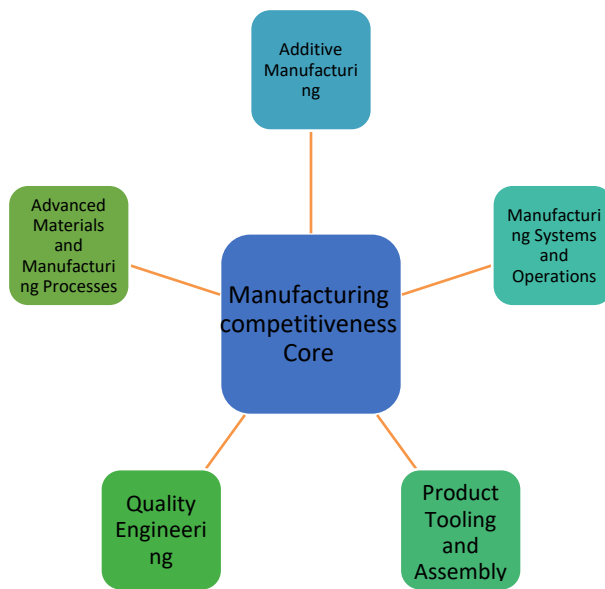


Figure 1. MS & PhD core and emphasis areas

Michigan Tech faculty members possess considerable expertise in advanced manufacturing engineering fields. Current research projects in the MMET Department include work in Whirlpool - Refrigerator Door Gasket Verification Fixture, Machinability of Solution Strengthened Ferritic Ductile Iron, LIFT- IMP Machining Samples, Manufacturing Workforce Development - Fluid Power Training, MET Students in the Pilot-Scale Metal/Steel Processing Facilities at Michigan Tech, and CTE Mechatronics Education. Interdisciplinary collaborative faculty from the Colleges of Engineering, Business, and Computing have expertise in printed circuit board production, systems simulation, robotics, biomechanics, industrial automation, and mechatronic systems among others.

b. **Characteristics:**

The National Center for Education Statistics (NCES) defines the detail for CIP Code 14.3601, Title: Manufacturing Engineering as:

“A program that prepares individuals to apply scientific and mathematical principles to the design, development, and implementation of manufacturing systems. Includes instruction in materials science and engineering, manufacturing processes, process engineering, assembly and product engineering, manufacturing systems design, and manufacturing competitiveness.”

The Four Pillars of Manufacturing Engineering were developed by the Society of Manufacturing Engineers (SME) through its Center for Education and revised by the SME Manufacturing Education and Accreditation Committee. Chair of this Committee, Dr. Irwin, has led the revision of the Four Pillars process that started in 2021 preparing for its dissemination in June 2024. The Four Pillars model builds on the topics in the SME body of knowledge for the certification of manufacturing engineers. The Four Pillars model defines topics in the categories of:

- 1) Materials and manufacturing processes;
- 2) Product, tooling and assembly engineering;
- 3) Manufacturing systems and operations; and
- 4) Manufacturing competitiveness.

The graphic representation of the Four Pillars is depicted as a structure including foundation, and the supporting pillars (see Figure 2).

The Four Pillars is used to guide the research areas for this manufacturing engineering PhD degree. Faculty in the MMET department have expertise in each of the Four Pillars categories that will support the student’s research while pursuing their degrees. The categories in the Four Pillars cross disciplines that will lead to collaborations with dissertation committee support from faculty across the university. For instance, the Materials and Manufacturing Process category is associated most closely with the MSE Department research interests, Product Tooling and Assembly Engineering with ME-EM and ECE Departments, Manufacturing Systems and Operations with ChE, Applied Computing, and CS, while the Manufacturing Competitiveness category is aligned with research areas in Engineering Management.

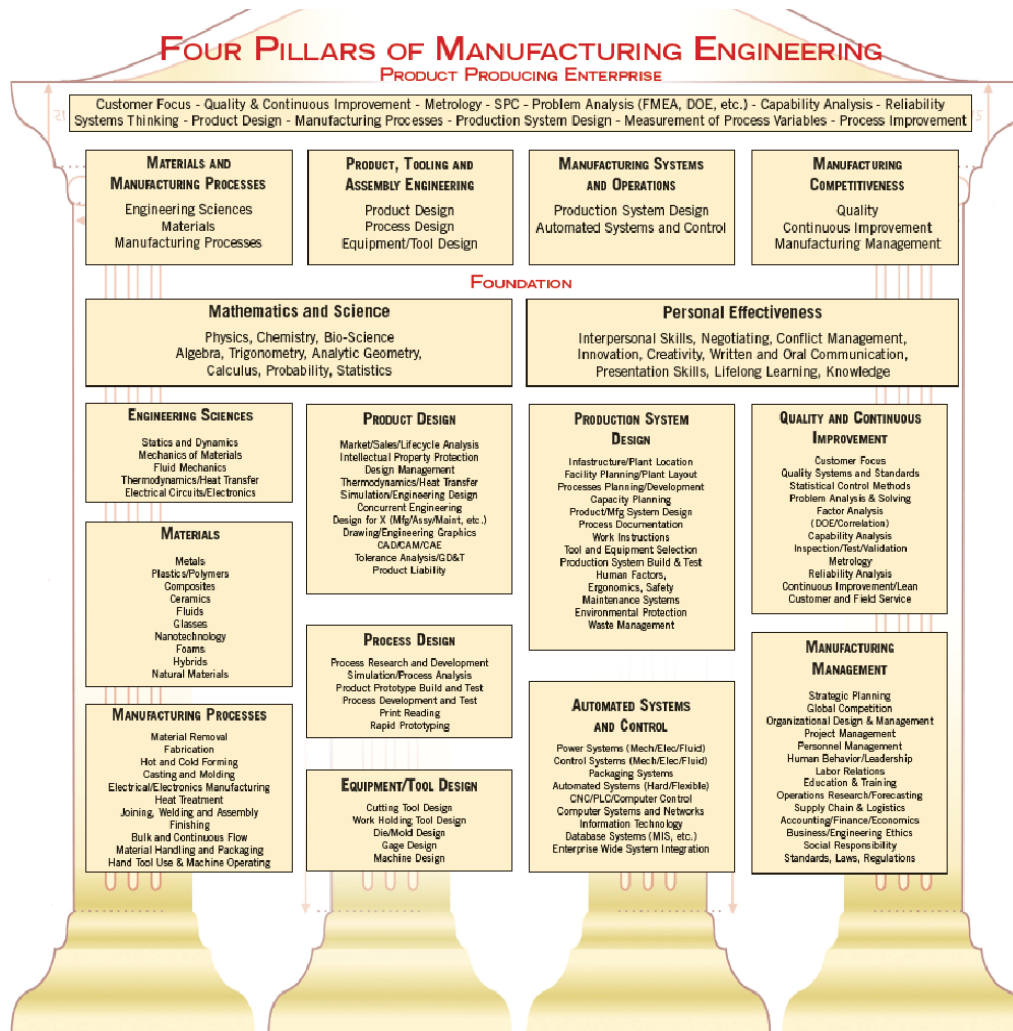


Figure 2. SME Four Pillars

9. Rationale:

a. Need:

Designs that are realized by engineers need to be manufactured with the end goal of producing a better product at a lower cost. This degree will cut across traditional disciplines (e.g., material science, mechanical engineering, electrical engineering, robotic engineering, biomedical engineering, and chemical engineering, etc.) to make advancements in manufacturing processes for forming, joining, casting, molding, producing composites, micromachining, and additive methodologies used in those disciplines.

The 2023 NAE Report¹, “Infusing Advanced Manufacturing into Undergraduate Engineering Education”, is a consensus report of the National Materials and

¹ National Academies of Sciences, Engineering, and Medicine. 2023. Infusing Advanced Manufacturing into Undergraduate Engineering Education. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26773>

Manufacturing Board, Division on Engineering and Physical Sciences, and National Academy of Engineering. The report has recommendations aimed at undergraduate engineering education's lack of exposure to or teaching about the use of advanced manufacturing technologies (or manufacturing technologies in general), and that few students are prepared to design for those technologies. This has implications for Manufacturing Engineering PhD programs, because for higher education institutions to educate undergraduate students there is the need for manufacturing engineering faculty who are experts in advanced manufacturing to deliver the material.

The recommendation from the NAE report is presented in two categories, which include those for undergraduate engineering education and for industry and government. The recommendations for education suggest that all engineering disciplines should cover realization of designs and that professional societies should advocate that accreditation criteria should include manufacturing. The report advocates for industry sponsored experiential learning throughout the engineering curriculum and that capstone designs should emphasize advanced manufacturing. The recommendations for industry and government are that the DOD and NSF should support programs that facilitate the collaboration of industry and academia. One example is that NSF should sponsor projects to develop advanced manufacturing curricula. It will be necessary to have more manufacturing engineering PhDs to accomplish these goals that are of great interest to the nation's defense industrial base.

b. Funding:

There are several federal funding sources for manufacturing engineering research. Some of those funding agencies are the National Science Foundation (NSF), Department of Defense (DOD), and the National Institute of Standards and Technology (NIST) that solicit proposals regularly. The NSF FY23 program titled, Future Manufacturing (FM), with the funding amount of \$27M is aimed to support research in new manufacturing technologies and education to grow production and employment in the US manufacturing sector. The DOD Manufacturing Technology (ManTech) Program FY23/24 is seeking proposals for the Manufacturing Science and Technology Program (MSTP) project. The MSTP works to stimulate the early development of manufacturing to achieve the largest cost-effective impact. For example, one priority area is Solid State Joining (SSJ) which is a manufacturing technology used for mechanical joining with the goal of removing risks associated with design, manufacturing, inspection, and use of SSJ components. The Advanced Manufacturing Technology Roadmap (MFGTech) Program is run by the NIST Office of Advanced Manufacturing. MFGTech has funding opportunities to establish new industry-driven consortia that address high-priority research challenges to grow advanced manufacturing in the US.

c. Career Outlook:

The NCES CIP Code 14.3601 is defined as Manufacturing Engineering, but the U.S. Bureau of Labor Statistics does not have an occupational category specifically for this

title. According to Recruiter.com² the career outlook shows 14% growth for manufacturing engineering jobs through 2030 and predicts that 35,600 new jobs will be filled by 2029, resulting in an annual increase of 1.36 percent over the next few years. These manufacturing job increases will require additional faculty at academic institutions holding PhD degrees to provide manufacturing related education, as well as the need for research engineers in industry to continue to accelerate the growth of innovative technologies.

The BLS shows that the median salary for engineering post-secondary teachers is \$80,840 per year, and that this occupation has projected 8% (Faster than average) change in employment from 2022 to 2032 compared to the average growth rate for all occupations of 3 percent. According to various online employment sources, the average pay scale for manufacturing engineers with a PhD is \$106-110k. Also, the skills that are most desired are in process engineering.

The National Center for Science and Engineering Statistics (NCSES), within the NSF serves as a clearinghouse for the collection, interpretation, analysis, and dissemination of objective science and engineering data. The data indicates that over the last 20 years there has been no significant change in the percentage of Industrial and manufacturing engineering research doctorate recipients in the US in relation to all engineering PhD graduates (see Table 1).

Furthermore, the category of Industrial and manufacturing engineering is broken down into four subcategories of Industrial engineering, Industrial and systems engineering, Operations research, and Systems and manufacturing engineering. The Systems and manufacturing engineering doctorate recipients make up the second smallest percentage of this category at 134 (20.5%), which has the potential to increase with graduates from this PhD program. This group is the least diverse in terms of gender at 14.2 % female (see Table 2). To increase the diversity of Systems and manufacturing engineering PhD recipients there is an opportunity to recruit from the MMET department Manufacturing Engineering MS degree which is currently 37.5% female.

Table 1. NCSES Research doctorate recipients, by historical major field of doctorate: Selected years, 2002–2022

Field of doctorate	Engineering	Industrial and manufacturing engineering
	Number/percent	Number/percent
2002	5,081 /12.7	230/0.6
2007	7,749/16.1	279/0.6
2012	8,469/16.6	226/0.4
2017	9,776/17.9	249/0.5

² <https://www.recruiter.com/careers/manufacturing-engineers/outlook/>

2022	11,530/20.0	381/0.7
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Table 2. NCSES Research doctorate recipients, by detailed field of doctorate and sex: 2022

Field of doctorate	Total	Male	Female	% female
Industrial engineering and operations research	655	469	186	28.4
	Total/%			
Industrial engineering	211/32.2	144	67	31.8
Industrial and systems engineering	127/19.4	84	43	33.9
Operations research	183/27.9	126	57	31.1
Systems and manufacturing engineering	134/20.5	115	19	14.2

10. Related programs:

Often a PhD degree is achieved in an area other than manufacturing such as mechanical engineering, with a focus in manufacturing. This degree path is more commonly found in universities throughout the US. For instance, Michigan Tech offers a Mechanical Engineering PhD with a focus in manufacturing. Due to this general practice, many researchers with the title of Manufacturing Engineer do not have a degree in manufacturing. There is a shortage of Manufacturing Engineering PhD programs dedicated solely to advance research and innovation in advanced manufacturing topics.

For instance, manufacturing is one of thirteen different research areas of specialization in the UofM Mechanical Engineering PhD program. The UofM manufacturing research group has fourteen related faculty with 10 different specialty areas. UofM has a long history of manufacturing going back to 1921 with the first Production Engineering Department in the US that later merged into the Mechanical Engineering Department. Facilities include a PANDA laser metal powder bed fusion machine, friction stir welder, and a Gleeble System physical simulation machine. There are several 500 level graduate courses offered in three areas which are Machine Design and Mechatronics, Manufacturing Processes, and Manufacturing Systems & Data Analysis. PhD research is grouped into areas of Cyber-Physical Systems & Smart Manufacturing, Additive Manufacturing, Machine and Part Design, Low Carbon Materials Processing, Biomedical/Nano/ICME Manufacturing, and Forming and Joining.

Additional regional doctoral programs that have Manufacturing Engineering specializations are the University of Illinois (Illinois) at Champaign and Northwestern University in Evanston, Illinois. Illinois has two PhD options in the department of Industrial & Enterprise Systems Engineering which are a PhD in Industrial Engineering, and a PhD in Systems and Entrepreneurial Engineering. Each program requires 32 hours of coursework beyond the MS degree, plus 32 hours of thesis research. Northwestern has a Mechanical Engineering PhD with seven areas of research including the Advanced Manufacturing research area. The Advanced Manufacturing research subtopics are Additive Manufacturing Processes and Systems, Deformation-based Manufacturing Processes and Systems, Micro/nano and Precision Manufacturing, Physics-based Data-driven Process Design and Control, and Digital Twins in the Connected World.

A standout program in the US is the Manufacturing Engineering PhD program at Arizona State University. The degree requires 84 total credits, which include 30 credits maximum from a previous MS degree, 15 credits in coursework, 12 credits minimum in research, 12 credits in dissertation, and the remaining as electives. Research thrusts are described as Digital Manufacturing, Additive Manufacturing, and Robotics and Automation which are supported by eighteen research faculty.

Within all the PhD degrees that fall under the manufacturing engineering discipline, the prerequisites are fairly common. The programs are primarily intended for individuals who possess a BS or MS degree in a technical field such as manufacturing engineering or closely related field, and possess a grade point average of 3.0 or higher. The Graduate Record Exam (GRE) is not required in all instances.

11. Projected Enrollment:

We anticipate that two students will enter the program in FY25 & FY26. Thereafter, we expect three new students per year. Within seven years the program will have 14 students and average two PhDs awarded annually with the eventual goal of five per year to be sustainable (see Table 3).

Table 3. PhD Anticipated Enrollment

Enrollment	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY##
Attrition = 25%>yr.3 Planning	Planning and recruiting							
New students		2	2	3	3	3	3	3
Returning students			2	4	6	7	10	11
Total enrollment		2	4	7	9	10	13	14
PhDs awarded					1	1	2	2

At least one student will be supported with a GA allocation; remaining students will be supported by external research funds; and the remainder will be self-supported. External

funding is anticipated to come primarily from federal agencies of NSF and DoD as discussed previously in the Rationale section.

12. Specialized Accreditation Requirements:

None.

13. Professional Licensure Requirements

None.

Curriculum Details

14. Learning Goals:

Upon graduation students will be able to:

1. Conduct research aimed at analyzing and formulating innovative technologies to advance the manufacturing body of knowledge.
2. Communicate effectively in written, graphic, and oral formats for audiences in industry, academia, and research.
3. Apply responsible, legal, and ethical codes of conduct to uphold and advance the integrity of the manufacturing engineering profession.

15. Assessment Plan

Each learning outcome is aligned with multiple performance indicators that will be assessed using rubrics. The assessment data will be analyzed to determine the percentage of students attaining the learning outcomes to determine if the target has been met. Action items will be developed based on the assessment data analysis and department feedback for continuous improvement.

16. Scheduling plans:

The program will be a regular on-campus offering. The 2024-2025 academic year will be used for student recruiting. All core courses will be offered regularly (either annually or biennially), beginning Fall 2024.

17. Curriculum design:

The requirements for the proposed degree follow University guidelines. There are 16 hours of core courses for students with a bachelor’s degree that can be taken as electives by students with a master’s degree with approval from an advisor. There are 12 credits minimum of dissertation research or practicum credit required. Maximum of 12 credits may be at the 3000 or 4000 level (see Table 4).

Table 4. PhD credits Required

Course requirements	Credits required with a Bachelor’s degree	Credits required with a Master’s degree
Core courses	16	0

Electives	14-32	0-18
Dissertation Research	12-30	12-30
Total	60	30

Core Courses: Bachelor’s degree students take the 16 credits from this list. Master’s degree students can include the 16 credits (with advisor approval) as electives where appropriate.

MA 5701 - Statistical Methods (3)

MFGE 5000 - Organizational Leadership (3)

MFGE 5100 – Tolerance Analysis with Geometric Dimensioning & Tolerancing (3)

MFGE 5200 - Industry 4.0 Concepts (3)

MFGE 5400 – Industrial Safety (1)

MFGE 5010 – Professional Engineering Communication (3)

Manufacturing Emphasis Area Electives: The remaining courses are subject to advisor approval, with the limitation of a maximum of 12 credits at the 3000-4000 level. Example courses are shown below; other courses/areas may be suitable as well.

- **Additive Manufacturing**
- **Manufacturing Systems and Operations**
- **Product Tooling and Assembly Engineering**
- **Quality Engineering**
- **Manufacturing Sustainability**
- **Advanced Materials and Manufacturing Processes**

Additive Manufacturing

MFGE 5300 - Design for Additive Manufacturing (3)

MFGE 5400 - Additive Manufacturing Lab (3)

MEEM 5695 – Additive Manufacturing (3)

Manufacturing Systems and Operations

MEEM 5656 - Advanced Production Planning (3)

BA 5610 - Operations Management (3)

MET 4355 - Industrial Systems Simulation (3)

MET 4510 - Lean Manufacturing and Production Planning (3)

MET 4585 - Facilities Layout and Safety Design (3)

EET 5373 - Advanced Programmable Controllers (4)

SAT 4343 - Network Engineering (3)

Product Tooling and Assembly Engineering

MET 4550 – Computer Aided Manufacturing (3)

Or

MEEM 4430 - Advanced Computer Aided Design and Manufacturing Methods (3)
 MEEM 5670/ENG5670 - Experimental Design in Engineering (3)

Quality Engineering

MEEM 5650 - Advanced Quality Engineering (3)
 MEEM 5655 – Introduction to Lean Manufacturing (3)
 MEEM 5670 – Experimental Design in Manufacturing (3)

Manufacturing Sustainability

ENG 5515 - Introduction to Sustainability and Resilience (3)
 ENG 5525 - Systems Analysis for Sustainability and Resilience (3)
 ENG 5540 - Sustainable Forest-Based Biofuel Pathways (3)

Advanced Materials and Manufacturing Processes

MET 4780 - Advanced Manufacturing (3)
 MET 4377 - Applied Fluid Power (3)
 MET 4378 - Advanced Hydraulics: Electro-hydraulic Components & Systems (3)
 MET 5400 - Key Factors of Holistic Safety (1)
 MSE 5100 - Introduction to Materials Science and Engineering with Advanced Topics (3)
 MSE 5400 - Statistical Quality Control in Materials Manufacturing (3)
 EET 5144 - Real-Time Robotics Systems (3)
 EET 5147 - Industrial Robotic Vision System and Advanced Teach Pendant (3)

Other Requirements: Students will complete all of the University milestones for a PhD

- Pass Qualifying Examination
- Pass Research Proposal Examination
- Prepare and Submit Approved Dissertation
- Pass Final Oral Defense

18. New course descriptions:

MFGE 6999 – Dissertation Research (12-30 credits)

Fundamental and applied research in Manufacturing Engineering. Taken by doctoral students in partial fulfillment of the PhD research requirement.

19. Model Schedule

Table 5. 30 Credit Coursework MS plus 30 Credit PhD Research

Year 1- fall semester: 9 credits	Year 1- spring semester: 9 credits
MFGE 5000 - Organizational Leadership (3)	Emphasis Area Course (3)
MA 5701 - Statistical Methods (3)	MFGE 5200 - Industry 4.0 Concepts (3)
MFGE 5010 - Professional Engineering Communication (3)	MFGE 5100 – Tolerance Analysis with Geometric Dimensioning & Tolerancing (3)
Year 2- fall semester: 9 credits	Year 2- spring semester: 9 credits

MFGE 5400 – Industrial Safety (1)	Emphasis Area Course (3)
Emphasis Area Course (3)	MFGE 6999 (6)
Emphasis Area Course (3)	
Emphasis Area Course (2)	
Year 3- fall semester: 9 credits	Year 3- spring semester: 9 credits
MFGE 6999 (9)	MFGE 6999 (9)
Year 4- fall semester: 6 credits	
MFGE 6999 (6)	

Table 6. 30 Credits Report MS plus 30 credits PhD research

Year 1- fall semester: 9 credits	Year 1- spring semester: 9 credits
MET 5000 - Organizational Leadership (3)	MFGE 5100 – Tolerance Analysis with Geometric Dimensioning & Tolerancing (3)
MA 5701 - Statistical Methods (3)	MFGE 5200 - Industry 4.0 Concepts (3)
Emphasis Area Course (3)	MEEM 6010 - Engineering Research Communication (3)
Year 2- fall semester: 9 credits	Year 2- spring semester: 9 credits
Emphasis Area Course (3)	MFGE 5999 - Graduate Research in MfgE (3)
Emphasis Area Course (3)	MFGE 5400 – Industrial Safety (1)
MFGE 5999 - Graduate Research in MfgE (3)	MFGE 6999 (5)
Year 3- fall semester: 9 credits	Year 3- spring semester: 9 credits
MFGE 6999 (9)	MFGE 6999 (9)
Year 4- fall semester: 7 credits	
MFGE 6999 (7)	

Table 7. 30 Credits Thesis MS plus 30 credits PhD research

Year 1- fall semester: 9 credits	Year 1- spring semester: 9 credits
MET 5000 - Organizational Leadership (3)	MFGE 5100 – Tolerance Analysis with Geometric Dimensioning & Tolerancing (3)
MA 5701 - Statistical Methods (3)	MFGE 5200 - Industry 4.0 Concepts (3)
Emphasis Area Course (3)	MEEM 6010 - Engineering Research Communication (3)

Year 2- fall semester: 9 credits	Year 2- spring semester: 9 credits
Emphasis Area Course (3)	MFGE 5999 - Graduate Research in MfgE (4)
MFGE 5999 - Graduate Research in MfgE (6)	MFGE 5400 – Industrial Safety (1)
	MFGE 6999 (4)
Year 3- fall semester: 9 credits	Year 3- spring semester: 9 credits
MFGE 6999 (9)	MFGE 6999 (9)
Year 4- fall semester: 6 credits	
MFGE 6999 (6)	

20. Program specific policies, regulations and rules:

No special regulations and rules

21. Faculty resumes:

The MMET faculty that will teach the graduate courses are listed, but all MMET faculty with graduate faculty appointments will be eligible to advise PhD students. Each has five plus years of experience in the manufacturing industry in areas of: operations/facilities management, process engineering, quality management, plant engineering/maintenance supervision, and manufacturing engineering. Faculty have education in leadership studies, organizational leadership and quality, manufacturing operations, mechanical engineering technology, and mechanical engineering.

Table 8. MMET Faculty

Faculty Teaching with link to webpage	Link to Webpage	Course(s)
Scott Wagner, PhD Associate Professor	Scott Wagner	MET 5400 - Key Factors of Holistic Safety (1), MET 4510 - Lean Manufacturing and Production Planning (3), MET 4585 - Facilities Layout and Safety Design (3)
David Wanless, PhD Associate Teaching Professor	David Wanless	MFGE 5000 - Organizational Leadership (3), MET 4780 - Advanced Manufacturing (3), MFGE 5400 – Industrial Safety (1), MET 4355 - Industrial Systems Simulation (3)
Nicholas Hendrickson, MS Professor of Practice	Nicholas Hendrickson	MFGE 5100 – Tolerance Analysis with Geometric Dimensioning & Tolerancing (3), MFGE 5300 - Design for Additive Manufacturing (3), MFGE 5400 - Additive Manufacturing Lab (3), MET 4550 – Computer Aided Manufacturing (3)
Kevin Johnson, MS Assistant Teaching Professor	Kevin Johnson	MET 4377 - Applied Fluid Power (3), MET 4378 - Advanced Hydraulics: Electro-hydraulic Components & Systems (3)

David Labyak, PhD Assistant Professor	David Labyak	MFGE 5200 - Industry 4.0 Concepts (3)
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Resources Needed

22. Library and other learning resources:

Students will have access to all Library resources, Michigan Tech subscription to digital databases, interlibrary loans, and degree specific subscription-based journals and conference proceedings.

Since this degree builds on the foundation of undergraduate degrees in MET, ME-EM, and MSE, additional library and learning resources are expected to be minimal.

23. Suitability of existing space, facilities, and equipment.

The future of manufacturing involves digital technologies as well as physical equipment needs. For instance, Simulation/Process Analysis/Digital Twin is utilized for courses in the Manufacturing Systems and Operations category using software packages such as [Witness Horizon by Lanner](#) (currently available) for simulating industrial systems. The software tools from Siemens, Dassault Systemes, and others that create a digital thread throughout the product lifecycle will need to remain current and available. In addition, advanced manufacturing relies heavily on the evolving computing technologies for artificial intelligence, machine learning, machine vision, data analytics, and others that support Industry 4.0. This program, therefore, represents opportunities for collaboration with other academic units.

The MMET Machine Shop is fully equipped with manual and CNC equipment, as well as additive manufacturing equipment. Equipment needed can be used for undergraduate as well as graduate student research (see Table 6). This equipment can be purchased as lab expenses, faculty startup, and/or partially funded with the online return from graduate student tuition. The online return amounts were FY22 \$27,921, FY23 \$99,310, and fall 23 expected return is \$27,556. The entire return cannot be used for equipment purchases because there are overhead costs for faculty overload instruction, adjunct teacher payroll, and graduate program director stipend costs.

The College is committed to supporting the development and implementation of the manufacturing engineering PhD program.

Table 9. Equipment Needs

Research Category	Equipment Description	Vendor	Approx. Cost
Machinability Studies	CNC multi axis lathe	Haas	200k
	CNC mill with high-speed spindle	MSC	16k

	Machining forces - in spindle force load cells	Kistler	10k
Additive Manufacturing	J8 polymer printer	Stratasys	TBD
	Desktop metal binder jet printer	Markforged	138k
	robot welding cell	Fanuc	TBD
Advanced Manufacturing	Plastic injection mold machine	APSX	13.5k
	Laser table / engraver	Boss Laser	8.5k
	Shadowgraph, CMM 30-100k, profilometer	Mitutoyo	10k
	HVAC unit ET 101 Simple compression refrigeration circuit	G.U.N.T.	6k

24. Program costs:

Marketing is a cost that will be absorbed under the general SS&E budget for the department and college. No other additional costs are associated with this program.

108.1.2: Criteria for Financial Evaluation of Proposed Academic Programs

1. Relation to University Strategic Plan:

The financial implications of this new program align with the University Strategic Plan goals for education, scholarship and people. This is addressed in Section 8.a.

2. Impact on University Enrollment:

The spring 2024 enrollment in the Manufacturing Engineering MS degree is ten students after being initiated in Fall 2022 (after three semesters). The MET undergraduate program in the unit has 198 students. MMET is associated with the interdisciplinary Mechatronics undergraduate degree program (59 students) and the Mechatronics MS (49 students). This PhD will draw from these existing programs as well as from outside Michigan Tech. This PhD program is projected to have similar growth as compared to these existing programs. This is addressed in Section 10 & 11.

3. Impact on Resources Required by Department in Which the Program is housed:

The newly added programs have had a positive impact on resources. Two faculty positions have recently been added in MMET, a Professor of Practice and an Assistant Teaching Professor. In addition, two tenure-track positions are currently in the search phase, one in the MMET department and one shared position to support the Interdisciplinary Mechatronics programs. MMET has a [Parker Lab School](#) designation receiving yearly funding to support the expansion of the Fluid Power courses initiated with these new degree programs. The Manufacturing Engineering courses have a large enrollment outside of the ten students enrolled in the program. The core Manufacturing Engineering degree has five online courses offered in the MMET Department. These courses average approximately 20 students each per semester. Many of these students are coded as online students that provide a tuition return.

The online return funds support the Graduate Program Director workload in reviewing applications, graduate student advising and program assessment. These online returns also support an adjunct faculty member that typically teaches a Professional Practice Seminar and an Applied Dynamics course in both Fall and Spring semesters. This has helped to support the addition of the new programs. The Applied Computing Department in the College of Computing might be impacted because of the interdisciplinary nature of the Mechatronics programs. For instance, the cost of marketing, recruitment and senior capstone support is usually shared for initiatives involving the Mechatronics BS and MS.

Currently, there are five MMET department faculty with full graduate school status to serve as the primary PhD advisors and there are three additional faculty that have associate graduate faculty status. It is anticipated that Applied Computing and other affiliated faculty can support PhD advising needs when appropriate. Other units in the College of Engineering have faculty that research advanced manufacturing methods and they are encouraged to request affiliated faculty appointments to assist with advising Manufacturing Engineering PhD students.

4. Impact on Resources Required By other Units Within the University:

The Mathematics department has been contacted concerning the required MA5701 course and they are able to accommodate the influx of additional students at this time, but if the numbers increase it could cause difficulty for students to enroll in the future.

5. Assessment of the ability to obtain the necessary resources assuming requested funds are obtained:

With the increase of automation and industry 4.0 in the US, there is not difficulty recruiting for faculty in this area.

6. Past proposals. Has the department initiated any other new degree programs in the last five years:

The Manufacturing Engineering graduate certificate, proposal #71-21 and the Manufacturing Engineering MS, proposal #8-22. The enrollment is stated in item 2 which has met the prediction for enrollment in proposal #8-12 of 8 students in year one and 12 in year two.

7. Departmental Budget contribution:

The total general fund budget is \$1,315,806 for FY24. FY20 is the most recent report from Institutional Research for the tuition generated by the department, which is \$1,602,343 by credit hours taught, and \$3,441,090 for tuition generated by the number of credit hours taken by MMET enrolled students. It should be noted that in FY20 the Manufacturing Engineering graduate programs had not yet been implemented.

8. How do the benefits from this program compare to other alternatives that are currently under consideration or development:

The College of Engineering is not considering any other PhD programs at this time.

VIII-G. PRESIDENTIAL COMPENSATION

Placeholder

IX. Reports

A. Athletics Accomplishments

Suzanne Sanregret, Vice President for Athletics and Recreation

Placeholder

- B. Student Affairs Report**
Laura Bulleit, Vice President for Student Affairs

Placeholder

C. Undergraduate Student Government
Cole Pierucki, USG Vice President

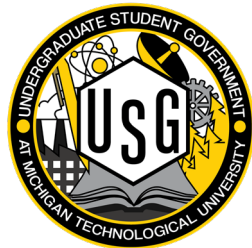
USG Board of Trustees Update

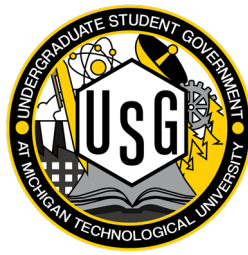
Cole Pierucki, USG Vice President

August 1, 2024



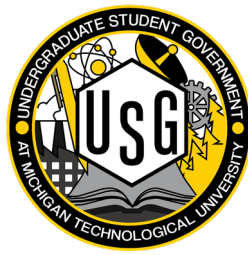
Michigan
Technological
University





Summer Updates

- Executive Board is meeting biweekly to stay up-to-date and plan for next year
- Explored Navengage, an app to help organize RSO activities and engagement (similar to a social media)
 - May pursue next year
- Preparing for Welcome Week and O-Week recruitment and informational events
- Planning out ways to provide voter registration assistance at the USG Office



Committee Updates

Political Affairs - Brendan Leddy

- Preparing for upcoming primary and presidential elections

Events - Konraad VanDyke

- Set Break Bus dates for 2024-2025

Student Affairs - Daniel Branagan

- Narcan items were delivered; working with facilities to set them up

Public Relations - Isobel Bowker

- Transitioned our website to usg.mtu.edu + developing new posts for Instagram

Ways and Means - Lily Ketelsen

- Processed final RSO requests from the 2023-2024 fiscal year



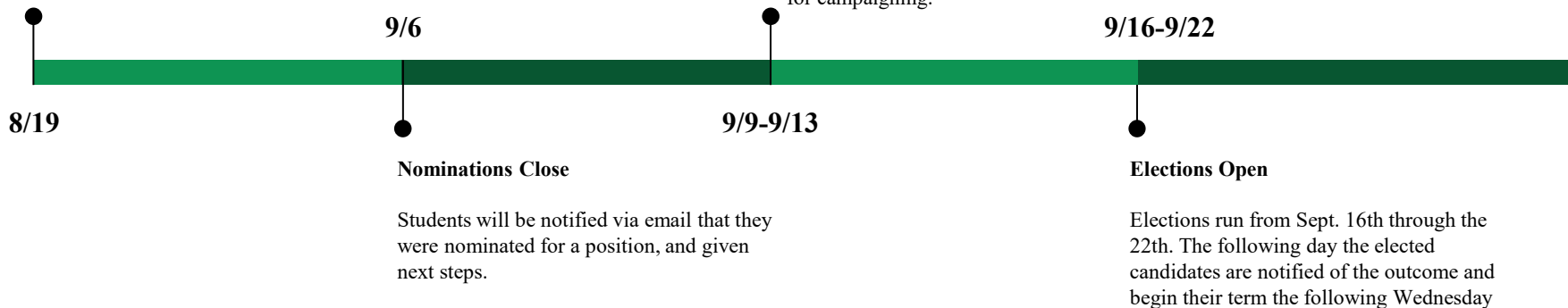
Fall 2024 Member Election Timeline

Nominations Open

Opening nominations during O-Week gives us the opportunity to have incoming students nominate themselves and others in person and ask questions.

Election Info Sessions

Students who are nominated and intend to run are required to attend a short info session which details what USG does, what the election looks like, and basic ground rules for campaigning.





Thank you! Questions or Comments?

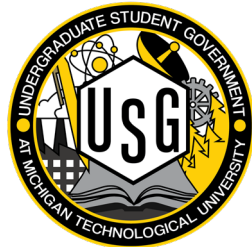
Cole Pierucki

cgpieruc@mtu.edu

usg-vice-president@mtu.edu



**Michigan
Technological
University**



D. Graduate Student Government
Lauren Sprague, President



Presentation to **BOARD OF TRUSTEES**

Lauren Sprague

GRADUATE STUDENT GOVERNMENT

August 1, 2024



GSG SUMMER SOFTBALL LEAGUE

**8 Teams
115 Players**

**Championship &
End of Season
Picnic - July 27th**





GSG SUMMER EVENTS

Graduate Student Interview Workshop



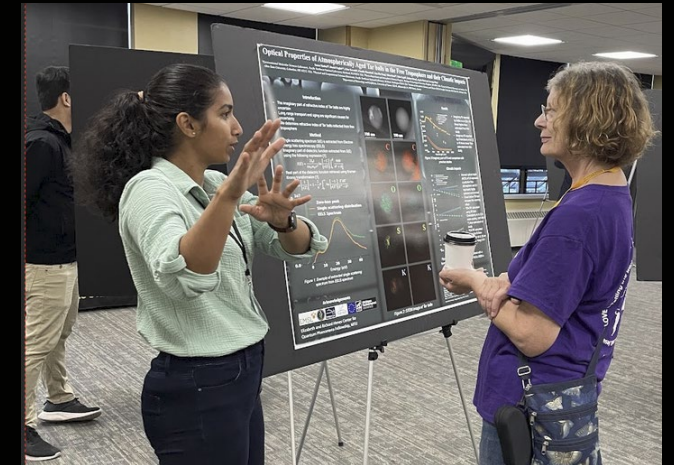
Organized by GSG-ProDev Committee in collaboration with Career Services

Behavioral & Technical Interview Sessions
Resume Review

Kayaking with OAP



Alumni Reunion Poster Session



FRIDAY, AUGUST 2nd | 9:30 AM
MUB Alumni Lounge



GRAD COMMONS

May 1, 2023-July 1, 2024

1,865 swipes*
413 unique students
~32% of graduate student population



Holiday Parties

First Friday Social





TRAVEL GRANTS

Testimonies from graduate students:

I was invited to speak in a special session sponsored by members of my research community. I was able to present a collaborative project to the community and network with a variety of individuals in my research community. Additionally I was able to connect with a few MTU alumni from my graduate program.”

It was my first international conference, which felt like a huge achievement for me. I enjoyed having conversations with attendees that were interested in my research (poster). I mostly met with industry experts in my field that offered a tremendous amount of insight into what a job in health care might look like. I was able to attend workshops and talks that provided different perspectives on health care and what the FDA looks for when approving medical devices.

I am so happy I made that decision as a master’s degree student. I won the best paper award which is the biggest milestone for what I want to focus my research on in machine learning and artificial intelligence in business. I got to network with professionals from both the public and private sector. The Michigan Technological University official representatives were supportive of this journey and saw its success. If given a change I would do it again and encourage others to take on such opportunities as it exposed me to greater knowledge I never knew I needed

#158 Travel grants for 23-24

ADVOCACY AND INITIATIVES



**Growing media
presence**

gsg.mtu.edu

- **Affordability & accessibility of housing**
- **Access to increased transportation routes and hour**
- **Improved career placement for graduate level students**
- **Access to better materials and resources for research**
- **Insurance access**

1 MINUTE VIDEO CAMPAIGN

#GRAD*LIFE*HACKS

MICHIGAN TECHNOLOGICAL UNIVERSITY



THANK YOU



E. University Senate
Robert Hutchinson, President

University Senate Update

Robert Hutchinson, Senate President

August 1, 2024



Michigan Tech

Upcoming Items for Fall

- Continue working to increase staff participation on the Senate
- Preparing to transition to daytime meetings for the 24-25 academic year
- Begin reviewing Senate committees to enhance overall productivity of the Senate
- Continue working with academic departments to approve curriculum proposals
- Constituting a committee to propose Senate Bylaws/Constitution changes



X. Informational Items

A. Proposed 2025 Meeting Dates

X-A. PROPOSED 2025 MEETING DATES

At the August meeting of the Board of Trustees dates are generally set for next year's meetings. In order for members to check their calendars, the tentative dates are presented. If there is a conflict with any of these dates, members are asked to please notify the Board Secretary.

Retreat

Wednesday, February 19, 2025 (half day)

Thursday, February 20, 2025

Formal Session

Friday, February 21, 2025

Friday, April 25, 2025

Thursday, July 31, 2025

Friday, October 10, 2025

Friday, December 12, 2025

Campus events to note:

Winter Carnival – February 5-8, 2025

Spring Break – Friday, February 21, 2025 (starts at 10:00 pm)

Spring Commencement – Friday, April 25 and Saturday, April 26, 2025

Alumni Reunion – July 31-August 2, 2025

Fall Recess – Wednesday, October 15, 2025 (starts at 10:00 pm)

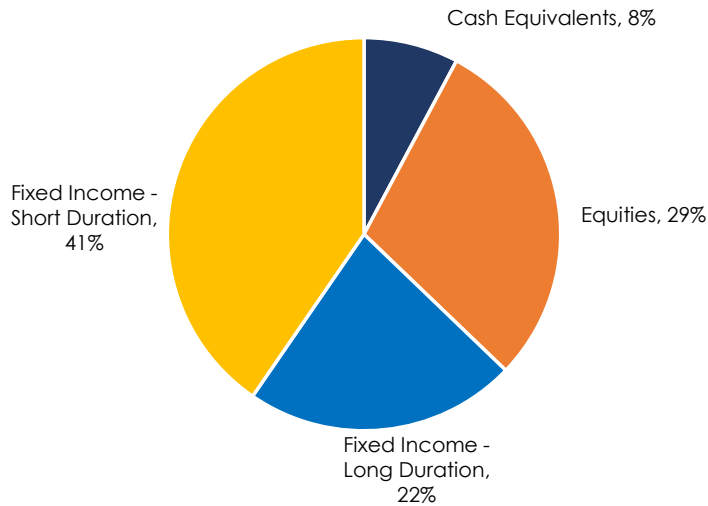
Fall Commencement – Saturday, December 13, 2025

B. Analysis of Investments

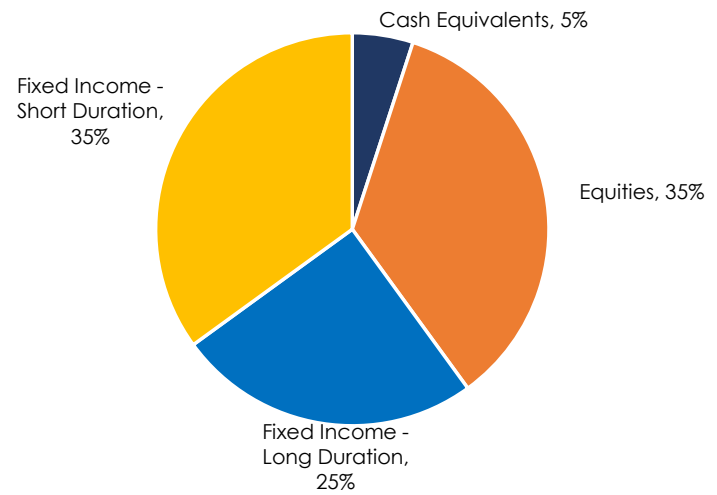
**MICHIGAN TECH UNIVERSITY
INVESTMENT PORTFOLIO
JUNE 30, 2023 THROUGH JUNE 30, 2024**

	Market Value 6/30/2023	Market Value 6/30/24	Fiscal-Year Investment Return	Benchmark Return	Benchmark
Money Market Fund	\$ 1,706,318	\$ 3,786,266	4.29%	4.51%	3-Month T-Bill
Equity Funds:					
Core Equity Fund	7,818,944	8,374,550	24.48%	24.56%	S&P 500
Commonfund OCIO Equity Fund	5,485,594	5,889,451	16.45%	24.56%	S&P 500
Total Equity Funds	13,304,538	14,264,001			
Fixed Income Funds:					
Intermediate Term Fund	7,252,185	8,748,423	5.06%	4.53%	ICE BofA Merrill Lynch 1-3 Yr Treasury
Commonfund Contingent Asset Portfolio	9,594,832	10,872,035	5.66%	4.53%	ICE BofA Merrill Lynch 1-3 Yr Treasury
High Quality Bond Fund	5,230,205	5,775,075	3.23%	2.63%	Bloomberg Barclays US Aggregate Bond Index
Multi-Strategy Bond Fund	5,899,333	5,103,332	3.28%	2.63%	Bloomberg Barclays US Aggregate Bond Index
Total Fixed Income Funds	27,976,555	30,498,865			
Total	\$ 42,987,411	\$ 48,549,132	9.21%		

Current Asset Allocation



Target Asset Allocation



C. Advancement & Alumni Relations

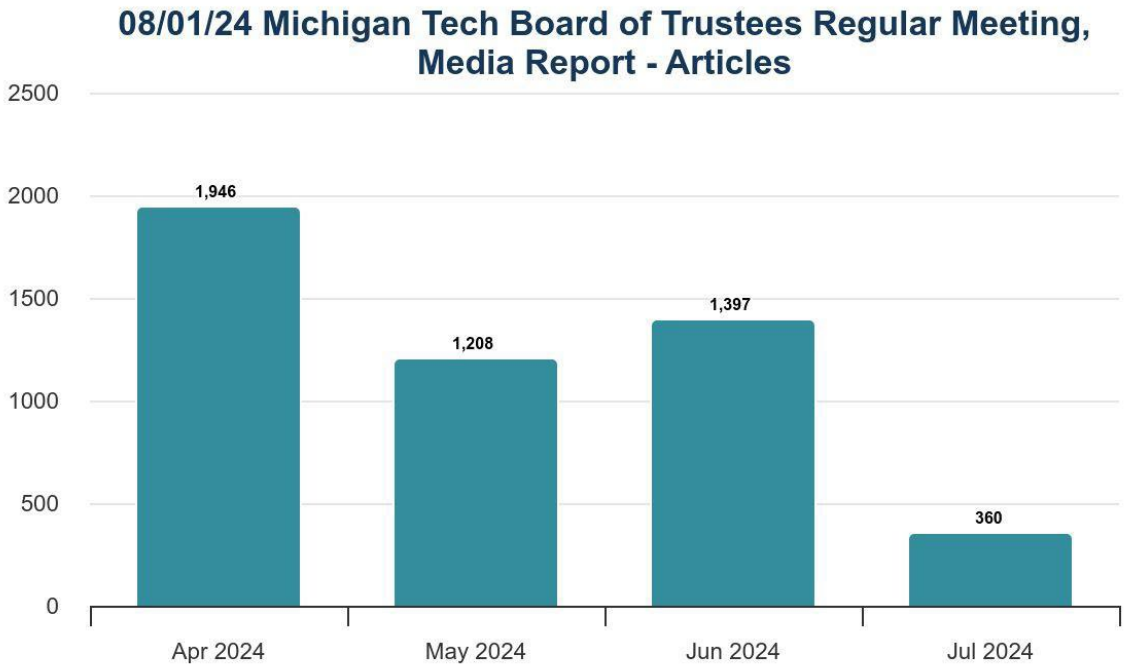
D. Media Coverage

Media Report: April 6 to July 15, 2024
 Michigan Technological University
 Regular Meeting of the Board of Trustees
 Aug. 1, 2024

Overview

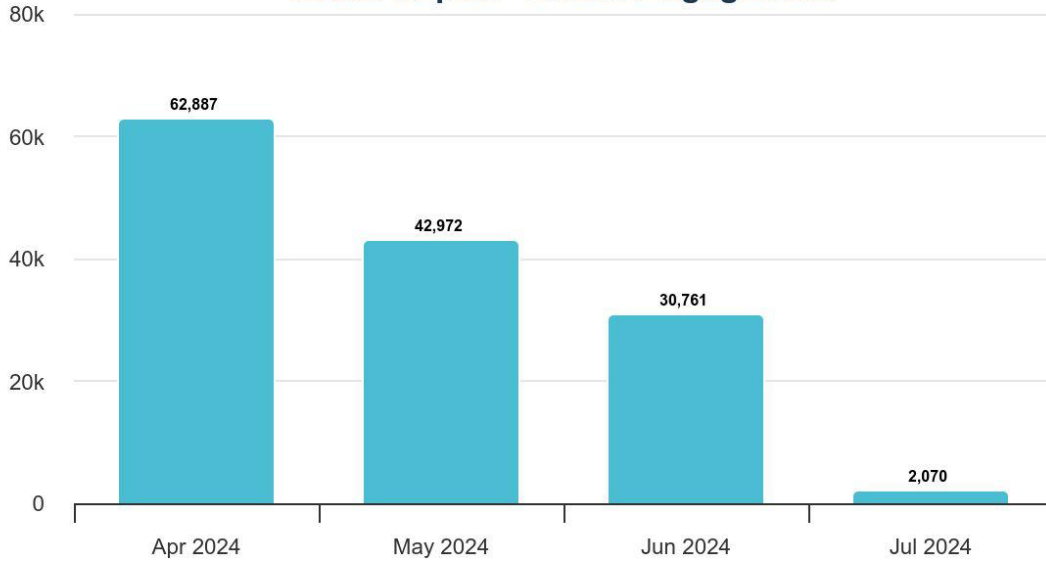
Articles	4,911
Total engagement	~138.7 K
Average engagement	28
Journalist shares	355
Journalist reach	~ 5.14M
Average unique visitors per month (UVM)	~ 4.93M
Total UVM	~ 24.21B

Between April 6, 2024 and July 15, 2024, a total of 4,911 online articles mentioned Michigan Technological University:



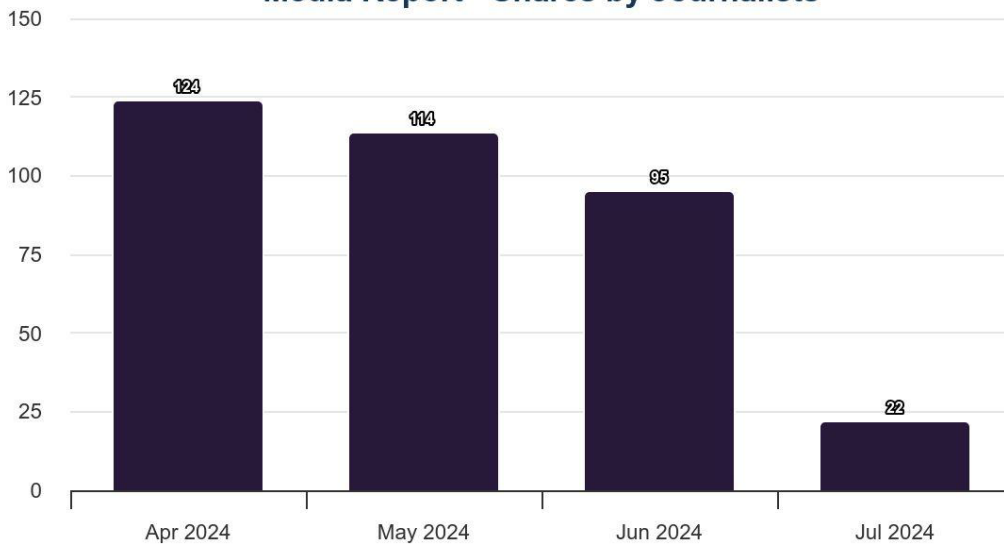
Those 4,911 articles were shared, commented on, or liked on social media roughly 138,700 times, for an average engagement of 28 shares, comments, or likes per article:

**08/01/24 Michigan Tech Board of Trustees Regular Meeting,
Media Report - Article Engagement**



Journalists shared the articles 365 times, resulting in a reach of roughly 3.77 million people:

**08/01/24 Michigan Tech Board of Trustees Regular Meeting,
Media Report - Shares by Journalists**



News Highlights:

Research News

Will Cantrell (GS/Physics/EPSSI) and Jesse Anderson (Physics/EPSSI) were quoted by [WLUC TV6](#) in a story about nearly \$1.5 million in funding from the United Arab Emirates for rain enhancement research using Michigan Tech's Pi Cloud Chamber.

Lei Pan (ChE) was quoted by the [Detroit Metro Times](#) in a story about the Department of Environment, Great Lakes, and Energy's Critical Minerals Recycling Grant Program. The program will offer \$4.75 million in matching grants for research projects focused on recycling critical minerals found in electric vehicle batteries and other technologies. The story was picked up from [Interlochen Public Radio](#).

[Newsweek](#) quoted the [Great Lakes Research Center](#) in a story about a new interactive map released by the National Oceanic and Atmospheric Administration that shows how Illinois would be changed if Lake Michigan water levels rise. The quote was in reference to a [2022 Michigan Tech study](#) that used 3D regional climate modeling to project the rise of Great Lakes water levels due to climate change.

Kristin Brzeski (CFRES) was quoted by [Texas Monthly](#) in a story about the potential conflict between a population of "ghost wolves" on Galveston Island, Texas, and development of a Margaritaville resort. Brzeski's work with the ghost wolves was featured in the [2024 Michigan Tech Magazine](#).

Pasi Lautala (CEGE) was interviewed by [CBS News](#) in a segment about the start of construction on a high-speed railway connecting Los Vegas and Los Angeles. Once finished, the railway will allow passengers to travel between the two cities in about two hours at speeds of 186 miles per hour or higher.

John Vucetich, Sarah Hoy and Rolf Peterson (all CFRES) were quoted by [MLive](#) and the [Duluth News Tribune](#) in stories about the results of Michigan Tech's annual Isle Royale Winter Study — the longest-running predator-prey study in the world. The release of the [annual report](#) for the 65th winter study was announced by [Michigan Tech News](#) on Tuesday (April 30). An [Associated Press](#) story about the winter study results was picked up by [FOX News](#), [Yahoo! News](#), [NewsBreak](#), the [Detroit News](#), [ABC News](#) and more than 200 other outlets.

Guy Meadows (GLRC/ME-EM) was quoted by [Discover Magazine](#) in a story exploring the Great Lakes' shipwreck history and how the lakes' characteristics lead to dangerous winds and waves. The story referenced a 2021 [Michigan Tech News](#) story about a monitoring buoy and high-frequency radar system deployed by MTU researchers in the Straits of Mackinac.

Aimee Marceau (BioSci) and Kristin Brzeski (CFRES) were quoted by [WLUC TV6](#) in a story about the continuation of Michigan Tech's Tick Talk project, a crowdsourced tick collection to aid research on tick populations and tick-borne diseases in the Copper Country.

Mark Rudnicki (CFRES/HMTI) was quoted and Xinfeng Xie (CFRES) was mentioned by [The Cool Down](#) in a story about research at MTU on resins that will allow hardwood timber to be used in making cross-laminated timber. The story was picked up from [Inside Climate News](#).

Professor Emerita Carol MacLennan (SS) and Emeritus Research Professor Charles Kerfoot (BioSci) appeared in a [Great Lakes Now](#) episode titled "Reef Rescue and Wild Edibles." The episode's segment on Buffalo Reef — a high-value fish spawning ground in Grand Traverse Bay threatened by millions of tons of mine tailings, aka stamp sands — summarized the threat to the reef and what's been done so far, and explained the long-term multiphase plan of action decided on by the Buffalo Reef Task Force earlier this year.

Simon Carn (GMES) was quoted by NASA's [Earth Observatory](#) in a story about a June 9 image of Mount Siple, an island volcano in Antarctica with a summit elevation of more than 10,000 feet. The image shows what Carn said is likely an orographic cloud, not a volcanic plume, streaming inland from the volcano's summit.

General News

Tim Havens (CS/ICC/GLRC) and applied mathematics student C. McCarthy were quoted by the [Daily Mining Gazette](#) in a story about the Institute of Computing and Cybersystems' "Art in Silico" computational art exhibition event series. The story ran on the front page of the DMG's printed newspaper dated Saturday/Sunday (April 6/7).

Charles Wallace (CS/CLS) was mentioned by the [Michigan Business Network](#) as one of the Michigan Association of State Universities' 2024 Distinguished Professor of the Year Award recipients. The story was picked up by [ABC 10](#) and the [Keweenaw Report](#).

The [Michigan Economic Development Corporation](#) mentioned Michigan Tech in a story about Chicken Trampler Ultralight Gear, founded by Austin Gongs '18 and Nathan Ackerman '18 (both B.S. Mechanical Engineering). The Hancock business has been named a SmartZone Best Small Business by the Michigan Celebrates Small Business awards program and the MEDC. Chicken Trampler's story was featured in the [2024 Michigan Tech Magazine](#).

The [Daily Mining Gazette](#) and [WLUC TV6](#) covered Michigan Tech's ribbon-cutting ceremony celebrating the official opening of the new H-STEM Health Sciences and Engineering Complex. The ceremony was held last Friday (April 26). MTU President Rick Koubek, Caryn Heldt (ChE/HRI), Travis Wakeham (BioSci) were quoted by the Gazette. Heldt, Koubek and Ph.D. candidate Mohanish Chandurkar (biomedical engineering) were quoted by TV6. The Gazette's story was picked up by the [Iron Mountain Daily News](#).

Don Lafreniere (SS/GRF) and industrial heritage and archaeology Ph.D. student James Juip (GLRC/GRF) were quoted in a [WLUC TV6](#) story about Michigan Tech's receipt of the Governor's Award for Historic Preservation. The award recognized the efforts of the Department of Social Sciences, Geospatial Research Facility and Michigan Tech Archives toward developing the Keweenaw Time Traveler. The award was the subject of a [Michigan Tech News](#) story.

The [Traverse City Record-Eagle](#) mentioned Michigan Tech in a story about the "swim at your own risk" nature of many beaches in northern Michigan. The story mentioned the SwimSmart safety warning system, co-developed by Jacob Soter '19 '20 (B.S. Electrical and Computer Engineering, MBA), currently deployed on the City of Frankfort's Lake Michigan beach. SwimSmart was the subject of a 2021 [Michigan Tech News](#) story.

Michigan Tech was mentioned by [Trains Magazine](#) and [Progressive Railroading](#) as one of the inaugural institutional members of the new National University Rail Center of Excellence (NURail CoE). The University of Illinois hosted a ribbon cutting ceremony on May 29 to celebrate the center's opening.

Sarah Fayen Scarlett (SS) was quoted by [Bridge Michigan](#) in a story about Gov. Gretchen Whitmer's proposal to designate the Keweenaw Peninsula as a national heritage area in recognition of the area's copper mining legacy.

[NASA](#) mentioned Michigan Tech's Planetary Surface Technology Development Lab as one of three teams that "performed exceptionally well" in the excavation portion of the final round of the Break the Ice Lunar Challenge. Along with the two prize-winning teams, NASA invited the PSTDL to use the thermal vacuum chambers at its Marshall Space Flight Center to continue testing and developing their rover.

The A. E. Seaman Mineral Museum and several of its displays were featured in [Rock & Gem Magazine](#) in the story "Exploring Copper and Iron Country: Mines, Museums & Minerals of Michigan's Upper Peninsula" from the July 2024 issue.

The [Associated Press](#), [NBC Sports](#), [Detroit Free Press](#) and [Crain's Detroit Business](#) mentioned Michigan Tech in coverage of the Michigan Sports Hall of Fame's Class of 2024. The inductees include the late [Tony Esposito](#), the legendary Michigan Tech hockey goaltender who went on to become an icon in the net for the Chicago Blackhawks.

[NHL.com](#) mentioned Michigan Tech in a story naming hockey defenseman Chase Pietila as one of six players drafted by the Pittsburgh Penguins during the 2024 NHL Draft. The [Detroit Free Press](#), [College Hockey News](#), the [Keweenaw Report](#) and more than 25 national news outlets also covered Pietila's selection by the Penguins.

[MLive](#) covered Michigan Tech being ranked 33rd in The Princeton Review's list of the Top 50 best value public colleges in the U.S. The ranking was announced by [Michigan Tech News](#).

E. Employee Safety Statistics

Category		Years	Employee Classification								Total
			AFSCME	Faculty	Non-Exempt	POA	Professional	Student	Temporary	UAW	
Number of Recordable Injuries	Injury Only w/Medical - No Lost Time	2023	2	0	0	0	0	3	1	0	6
		2024	0	1	0	0	4	0	1	2	8
	Lost Time Cases	2023	4	0	0	0	1	1	2	0	8
		2024	4	0	0	0	0	2	1	0	7
	Restricted Work Cases	2023	0	0	0	0	0	0	0	0	0
		2024	1	0	0	0	1	0	1	1	4
Occupational Safety and Health Administration (OSHA) Recordable Injuries (Total of above)	2023	6	0	0	0	1	4	3	0	14	
	2024	5	1	0	0	5	2	3	3	19	
Number of Days	Injury Lost Time ³	2023	200	0	0	0	0	2	5	0	207
		2024	242	0	0	0	0	49	6	0	297
	Restricted Work Days ³	2023	233	0	0	0	0	0	0	0	233
		2024	93	0	0	0	7	0	16	38	154
Hours Worked	Total Work Hours	2023	129,296	380,554	40,835	8,569	609,552	519,111	34,904	78,448	1,801,269
		2024	128,710	390,205	40,168	8,672	620,563	466,689	37,074	83,358	1,775,439
	Percentage of Work Hours	2023	7.2%	21.1%	2.3%	0.5%	33.8%	28.8%	1.9%	4.4%	100.0%
		2024	7.2%	22.0%	2.3%	0.5%	35.0%	26.3%	2.1%	4.7%	100.0%
Rates	Lost Time Case Rate ¹	2023	6.2	0.0	0.0	0.0	0.3	0.4	11.5	0.0	0.9
		2024	6.2	0.0	0.0	0.0	0.0	0.9	5.4	0.0	0.8
	Frequency Rate ² (Recordable)	2023	9.3	0.0	0.0	0.0	0.3	1.5	17.2	0.0	1.6
		2024	7.8	0.5	0.0	0.0	1.6	0.9	16.2	7.2	2.1

OSHA has established specific calculations that enable the University to report the Recordable Injuries, Lost Time Case Rates and Frequency Rates. The Standard Base Rate (SBR) calculation is based on a rate of 200,000 labor hours which equates to 100 employees who work 40 hours per week for 50 weeks per year. Using the SBR allows the University to calculate their rate(s) per 100 employees.

- The Lost Time Case Rate is calculated by multiplying the number of Lost Time Cases by 200,000 then dividing by the labor hours at the University.
- The Frequency Rate is calculated by multiplying the number of recordable cases by 200,000 then dividing by the labor hours at the Unive
- The number of days are total days for the life of the cases first reported during this period.

The Bureau of Labor Statics 2022 Injury, Illness, and Fatalities, Table 1 reports for Colleges and Universities; the average LOST TIME CASE RATE of days away from work was 0.6 and the average FREQUENCY RATE was 1.4.

F. Disposal of Surplus Property

**Michigan Technological University
Surplus Property Sales
March 1, 2024 - June 30, 2024**

Date	Description	Amount
03/06/24	Miscellaneous scrap metal	\$ 646.35
04/08/24	2006 Ford Escape	200.00
04/12/24	Surplus Telecommunications Equipment	186.00
05/03/24	Drill Rig, 2011 Epiroc FlexiROC T20 R	95,600.00
06/30/24	Miscellaneous scrap metal	1,342.60
Total		\$ 97,974.95

G. Contracts 500K

X-G. CONTRACTS OVER \$500,000

Board Policy 11.13 requires that all contracts with a value of \$500,000 or greater but less than \$1,000,000 be presented to the Board of Trustees as a subsequent information agenda item.

Placeholder

H. Board of Trustees Policy 8.3 – Waiver of Certain Fees



**Michigan
Technological
University**

University Relations and Enrollment

To: Michigan Technological University Board of Trustees

From: John B. Lehman, Vice President for University Relations and Enrollment

Date: July 15, 2024

Subject: BOT Policy 8.3

In accordance with Policy 8.3 of Michigan Technological University (stated below), I am submitting the fee/tuition waivers granted to students for the 2023-2024 academic year.

	2023-2024
Number of students	27
Total amount waived	\$1,375

BOT Policy 8.3: The Vice President for University, Relations and Enrollment, in special circumstances, is authorized to waive student fees related to admission, registration, continuing enrollment deposit, and the enrollment process. Such waivers shall be reported to the Board annually.